

Monetary Policy Report February 2018

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



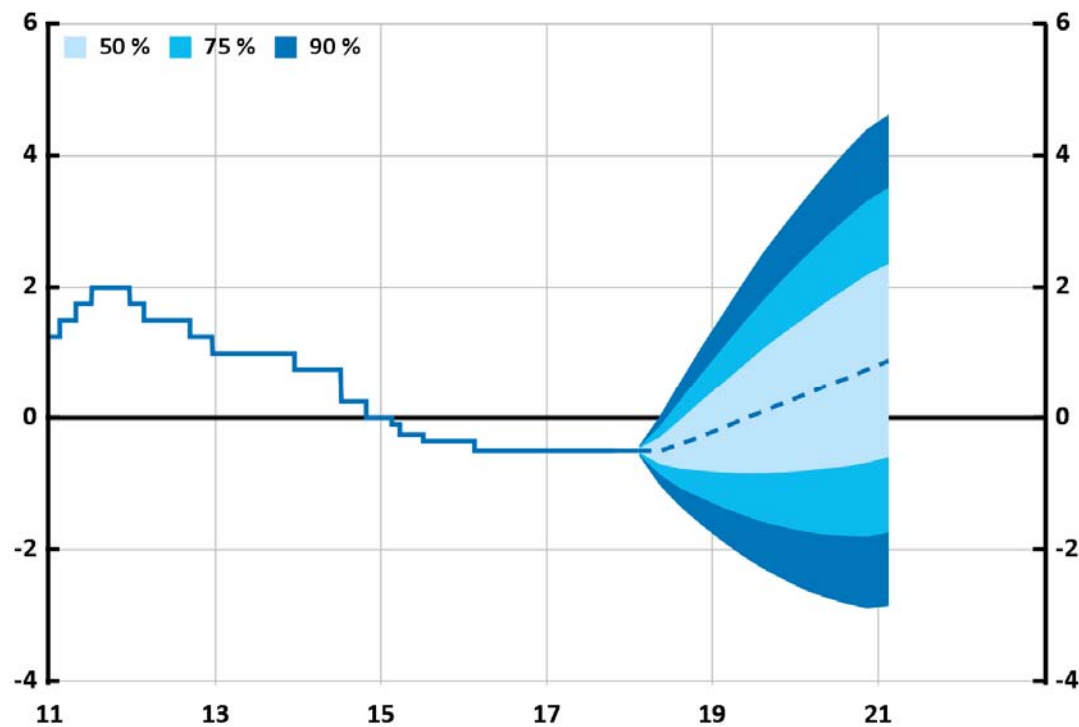
Chapter 1

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

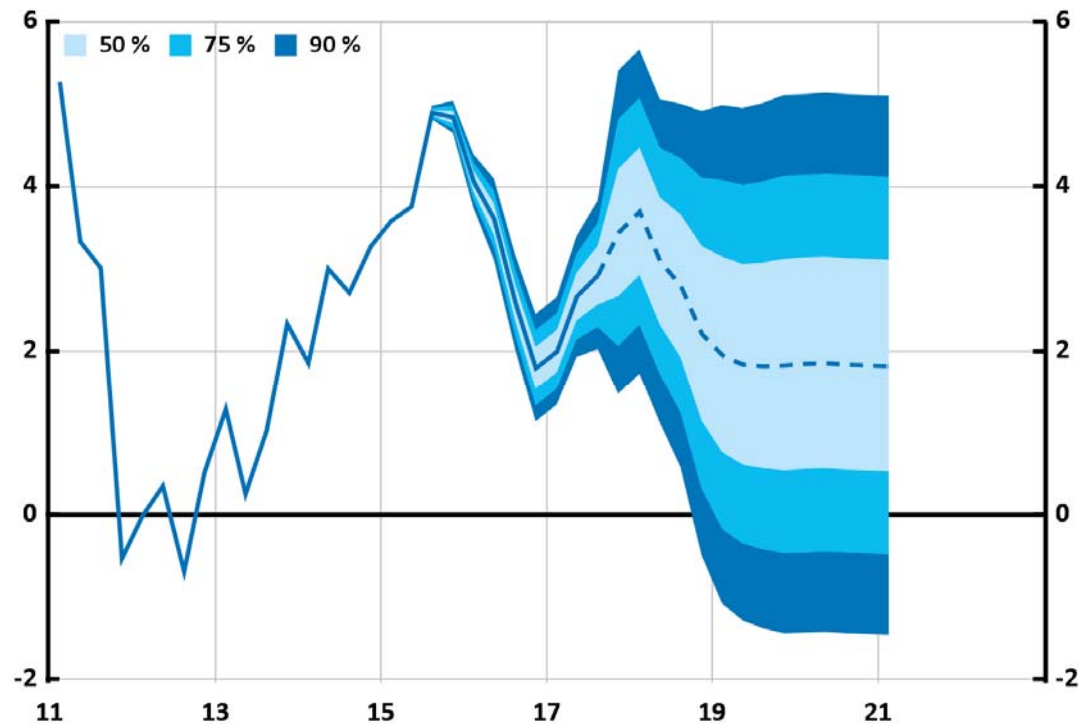


Note. The uncertainty bands for the repo rate are based on the Riksbank's historical forecasting errors and the ability of risk-premium adjusted forward rates to forecast the future repo rate for the period 1999 up to the point when the Riksbank started to publish forecasts for the repo rate during 2007.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

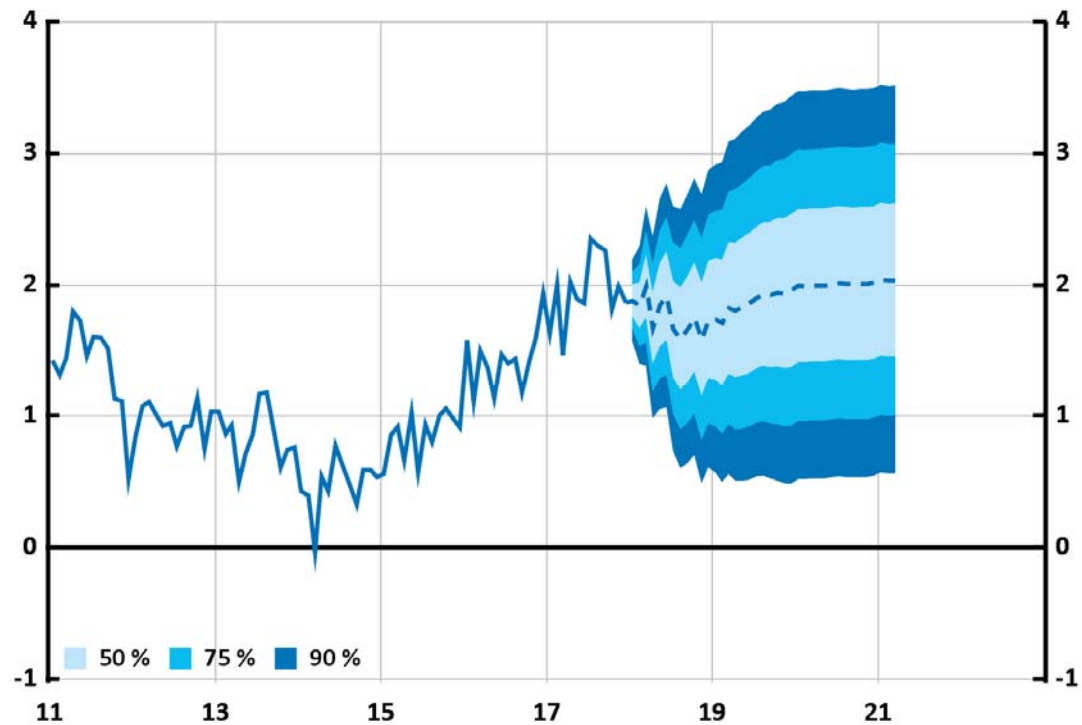


Note. The uncertainty bands are based on the Riksbank's historical forecasting errors. There is also uncertainty for the outcomes for GDP, as the figures in the National Accounts are revised several years after the preliminary publication.

Sources: Statistics Sweden and the Riksbank

Figure 1.3. CPIF with uncertainty bands

Annual percentage change

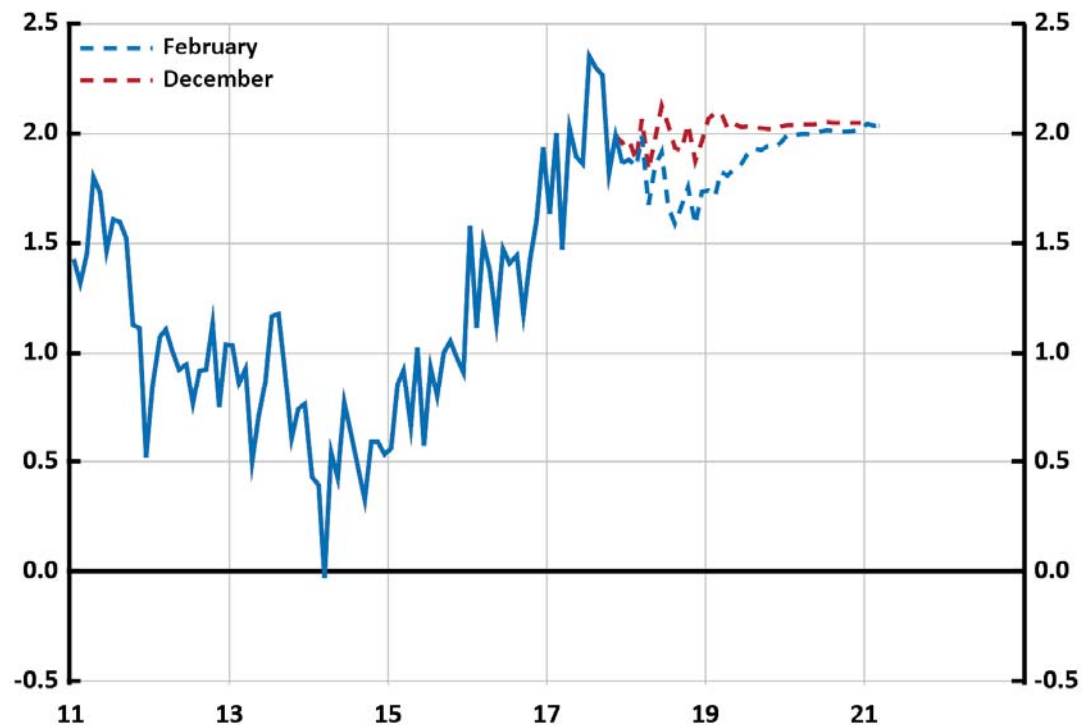


Note. The uncertainty bands are based on the Riksbank's historical forecasting errors.

Sources: Statistics Sweden and the Riksbank

Figure 1.4. CPIIF CPIF

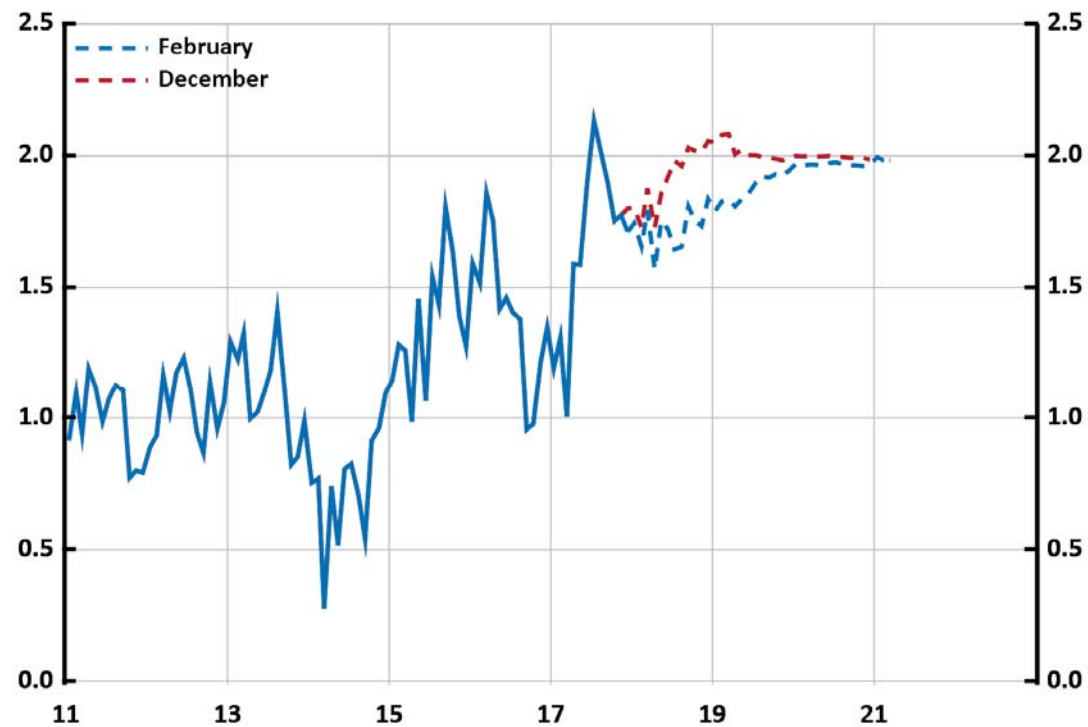
Annual percentage change



Sources: Statistics Sweden and the Riksbank

Figure 1.5. CPIF excluding energy

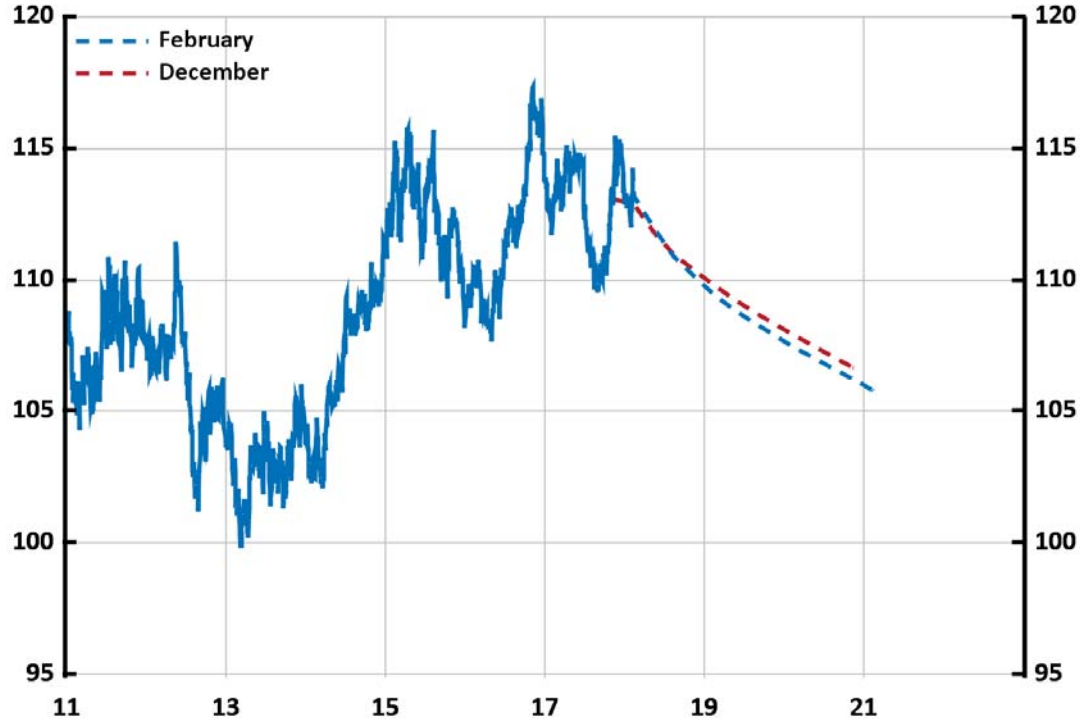
Annual percentage change



Sources: Statistics Sweden and the Riksbank

Figure 1.6. CPIF KIX-weighted nominal exchange rate

Index, 1992-11-18 = 100

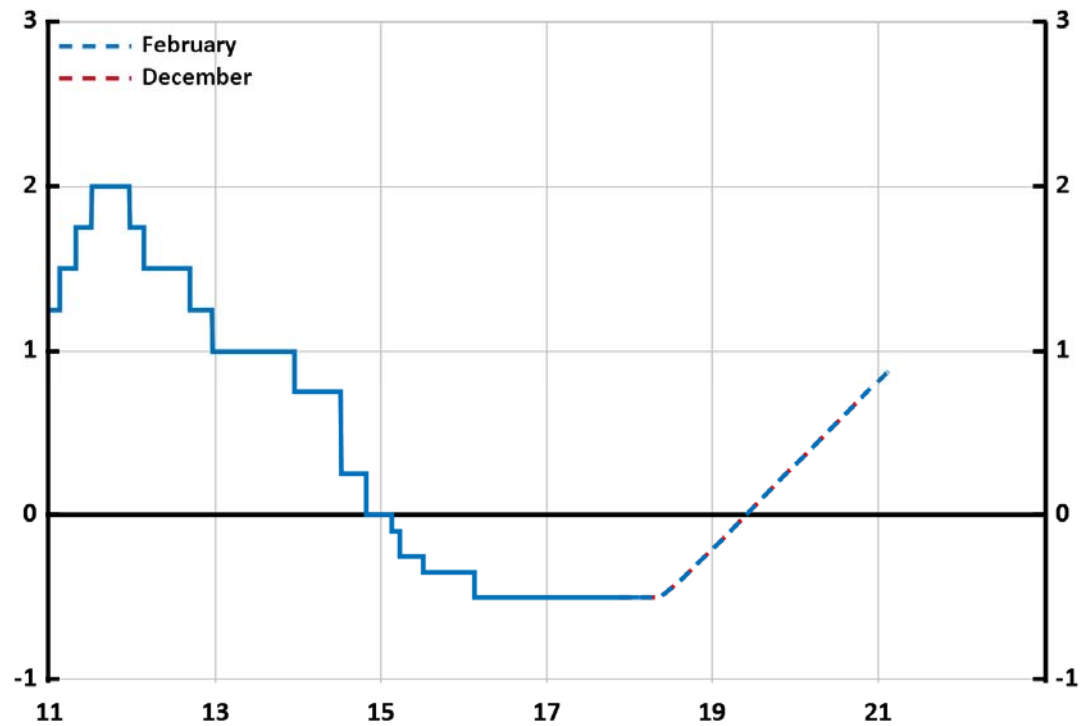


Note. Outcomes are daily rates and forecasts refer to quarterly averages. KIX refers to an aggregate of countries that are important for Sweden's international transactions.

Sources: National sources and the Riksbank

Figure 1.7. CPIF Repo rate

Per cent

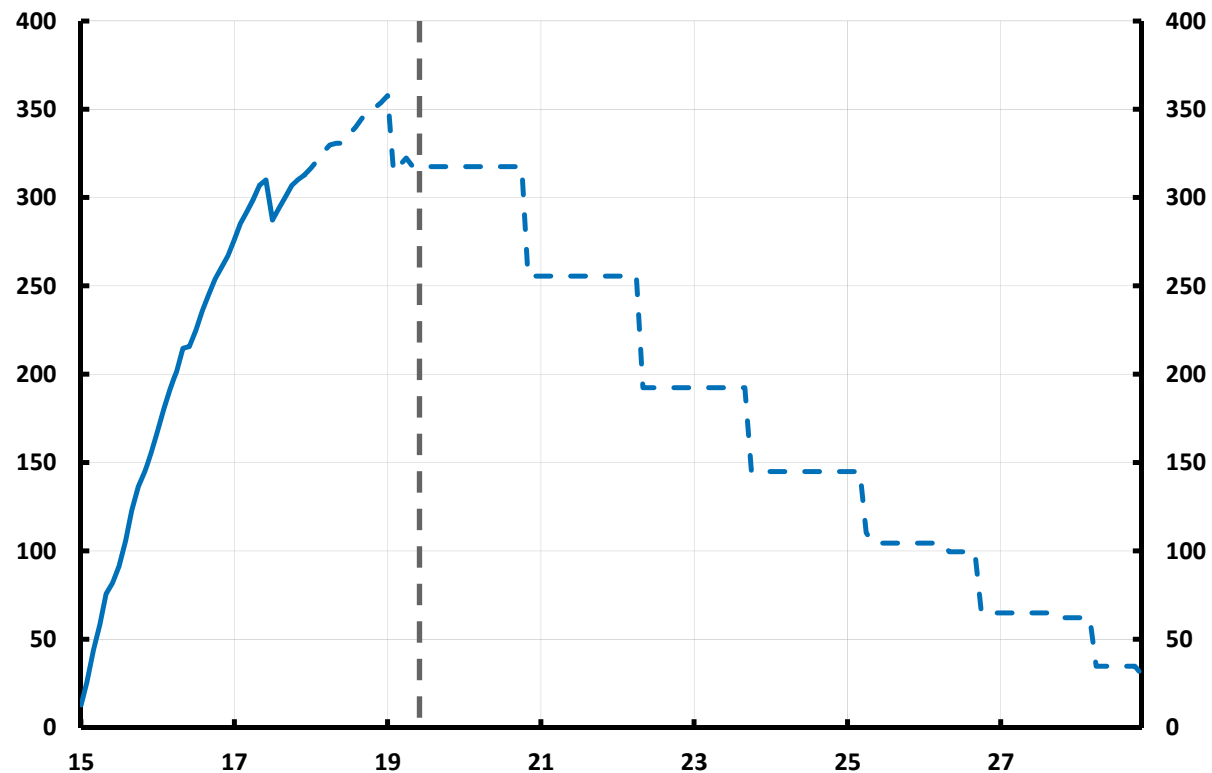


Note. Outcomes are daily data and the forecasts refer to quarterly averages.

Source: The Riksbank

Figure 1.8. The Riksbank's holdings of government bonds

Nominal amounts, SEK billion

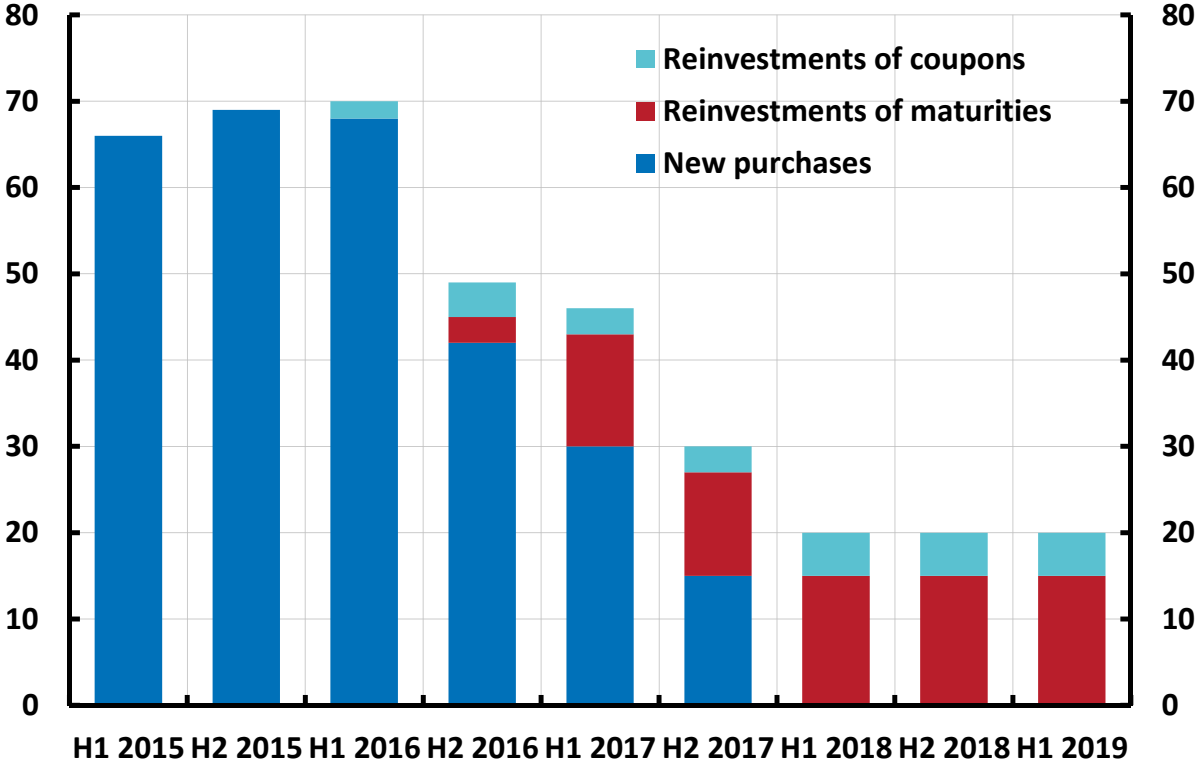


Note. Forecast up until June 2019, after that a technical projection with the assumption that no further reinvestments are made. The development of the holdings is also affected to a certain extent by the bonds' market prices and by which bonds the Riksbank chooses to reinvest in. The vertical line marks the shift between the forecast and technical projection.

Source: The Riksbank

Figure 1.9. The Riksbank's purchases and reinvestments

Nominal amounts, SEK billion

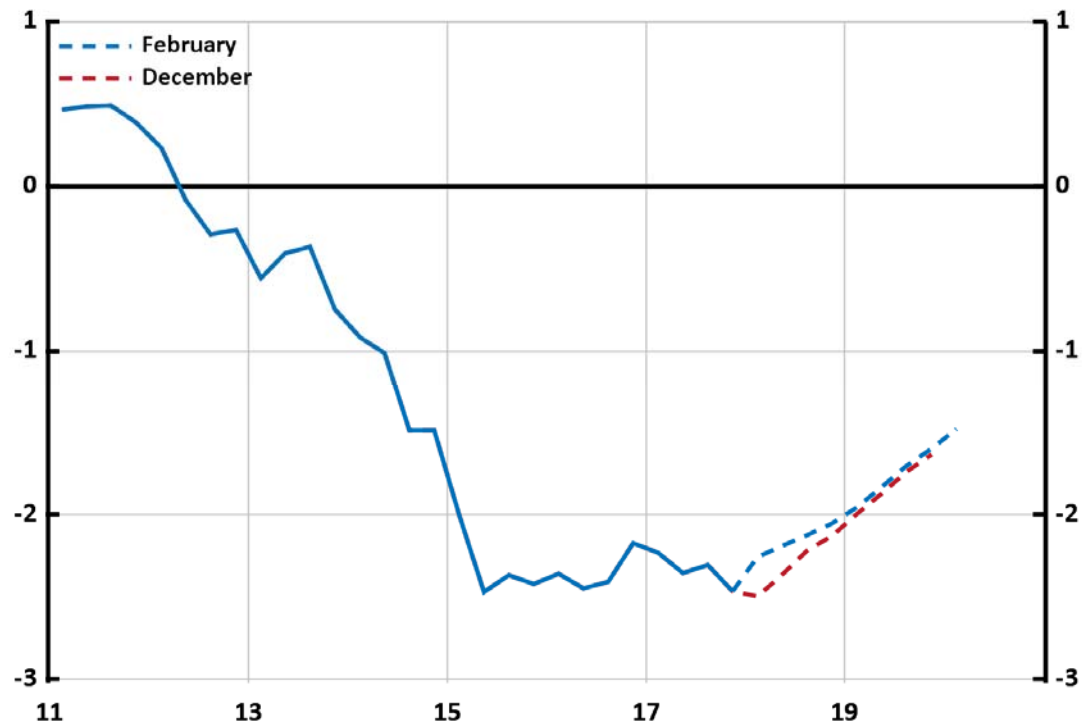


Note. The development for reinvestments from 2018 onwards is a forecast and refers to nominal amounts. The final amounts will depend on current market prices.

Source: The Riksbank

Figure 1.10. Real repo rate

Per cent, quarterly averages

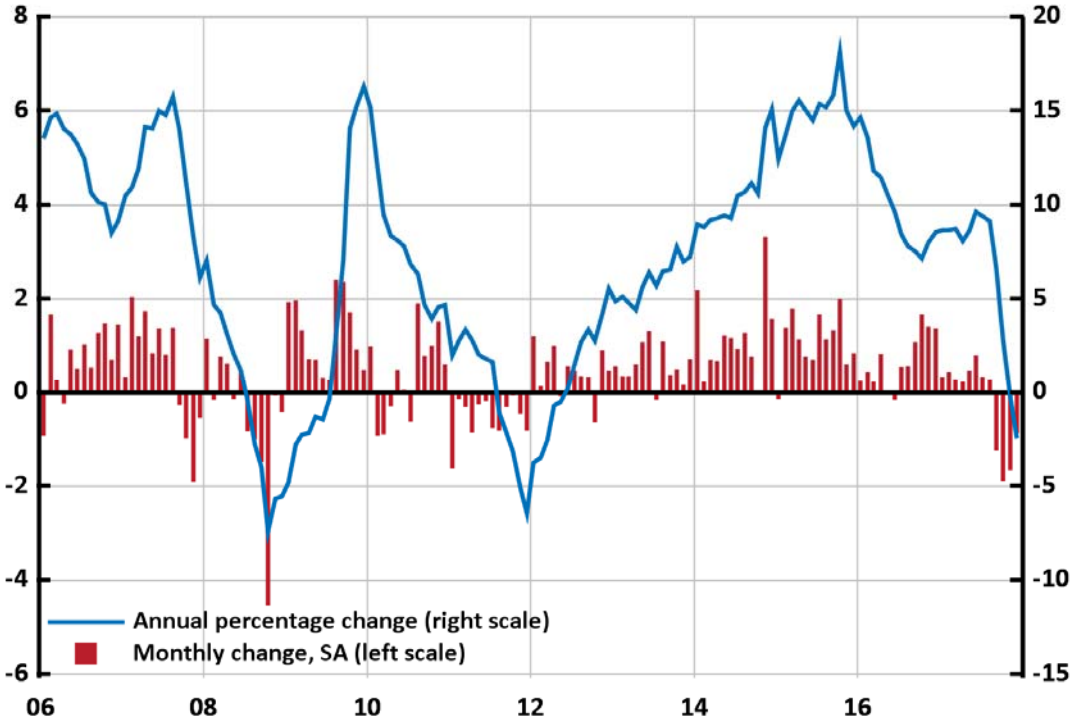


Note. The real repo rate is a mean value of the Riksbank's repo rate forecast for the year ahead minus the inflation forecast (CPIF) for the corresponding period.

Sources: Statistics Sweden and the Riksbank

Figure 1.11. House prices according to HOX Sweden

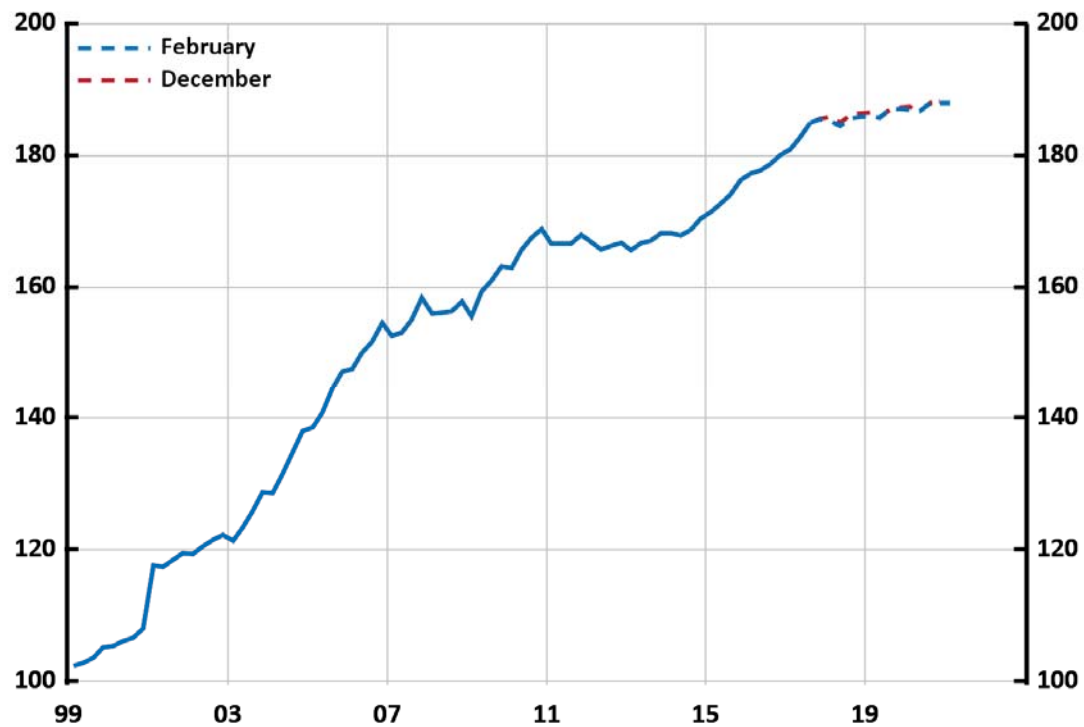
Per cent



Sources: Valueguard and the Riksbank

Figure 1.12. Household debt ratio

Per cent of yearly 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

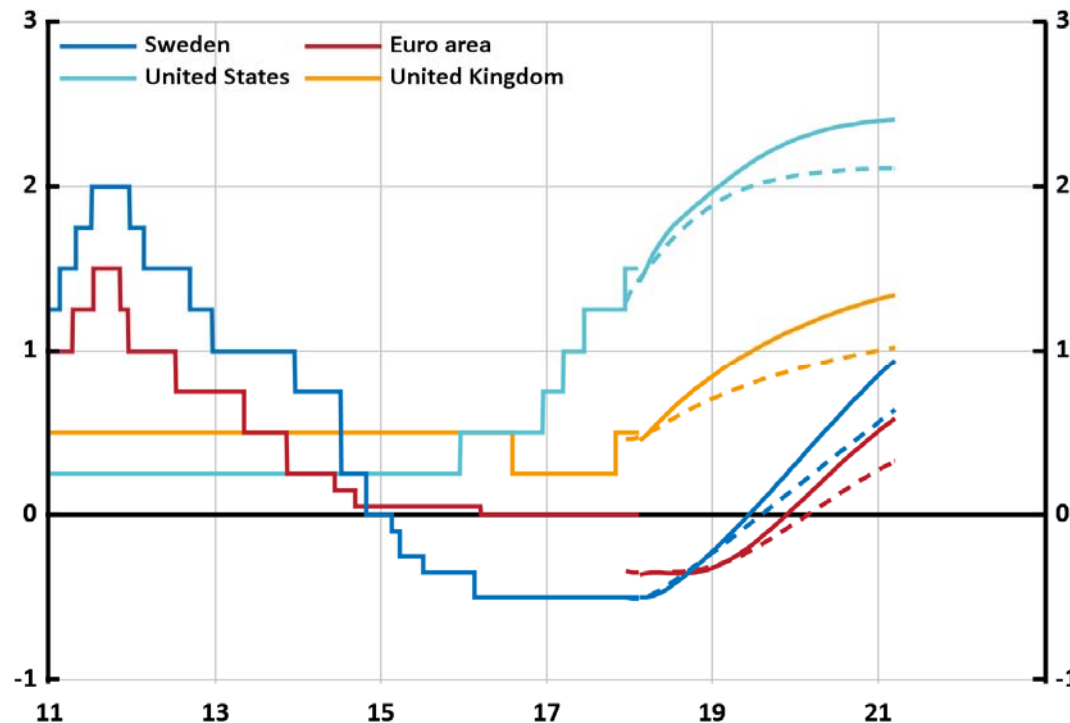
Chapter 2

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



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

Per cent

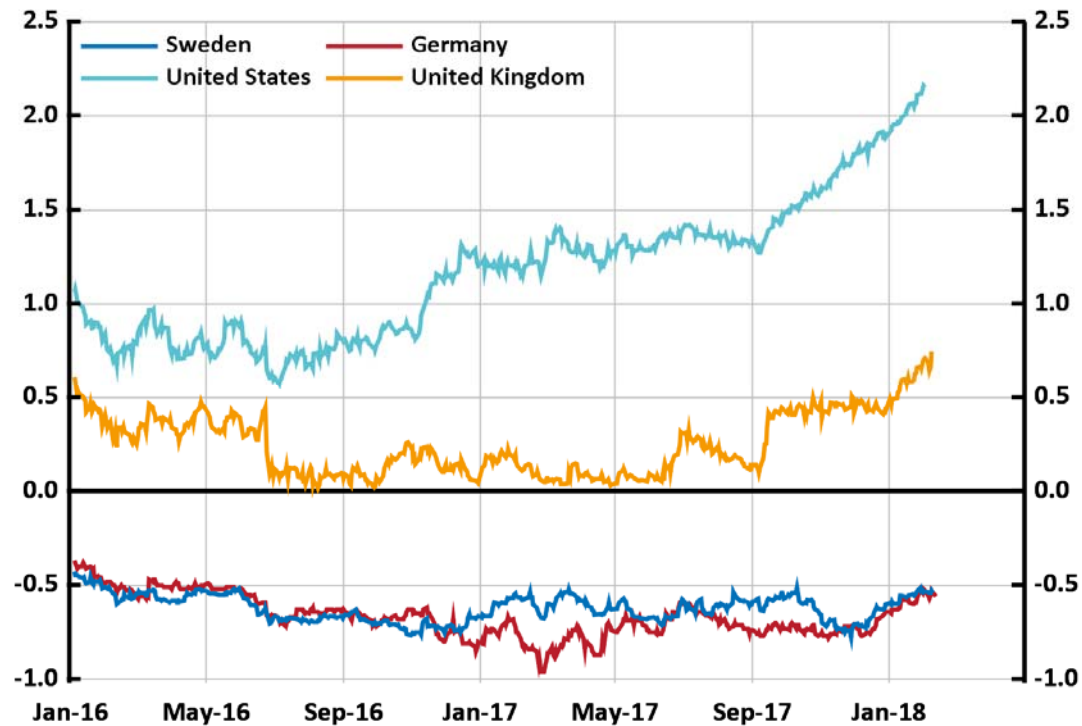


Note. Forward rates describe the expected overnight rate, which does not always correspond to the policy rate (the main refinancing rate for the euro area). Unbroken lines are estimated on 9 February 2018, broken lines are estimated on 18 December 2017.

Sources: The national central banks, Thomson Reuters and the Riksbank

Figure 2.2. Government bond yields with 2 years left to maturity

Per cent

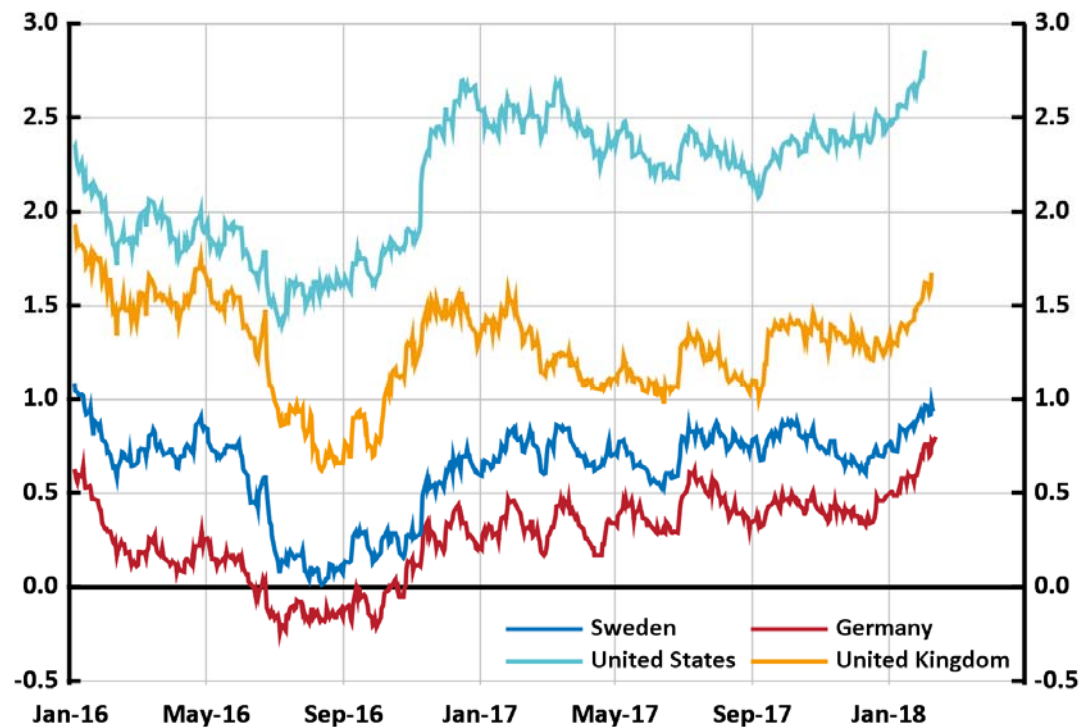


Note. Implied zero-coupon yields from government bonds.

Sources: The national central banks and the Riksbank

Figure 2.3. Government bond yields with 10 years left to maturity

Per cent

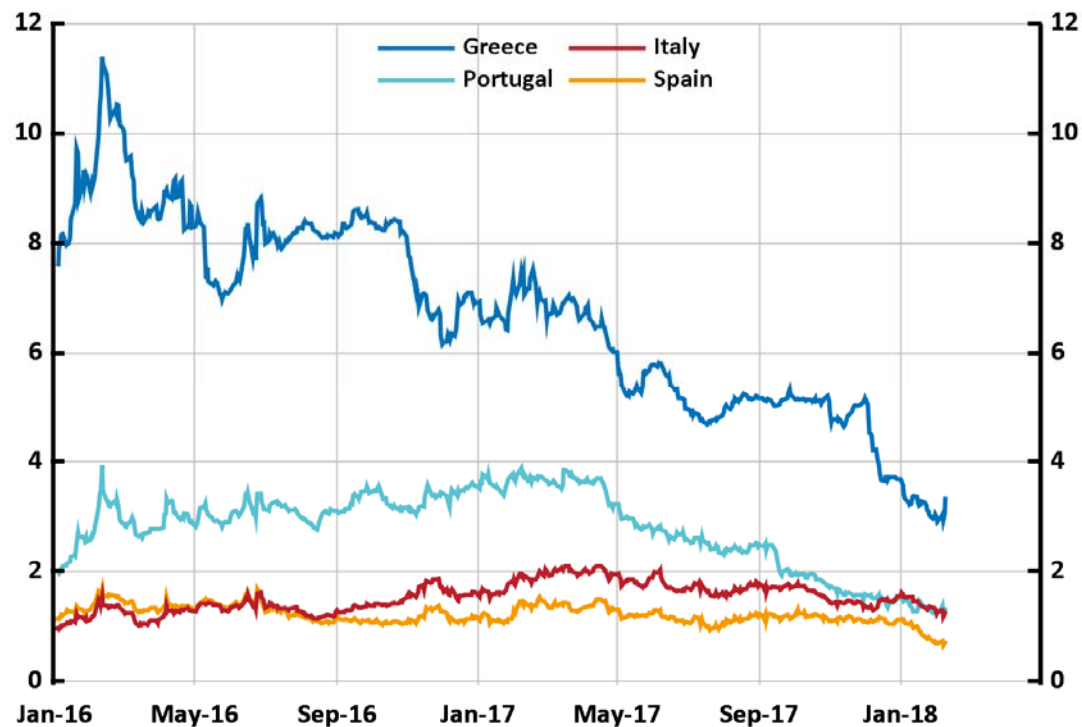


Note. Implied zero-coupon yields from government bonds.

Sources: The national central banks and the Riksbank

Figure 2.4. Differences in government bond yields compared to Germany

Percentage points

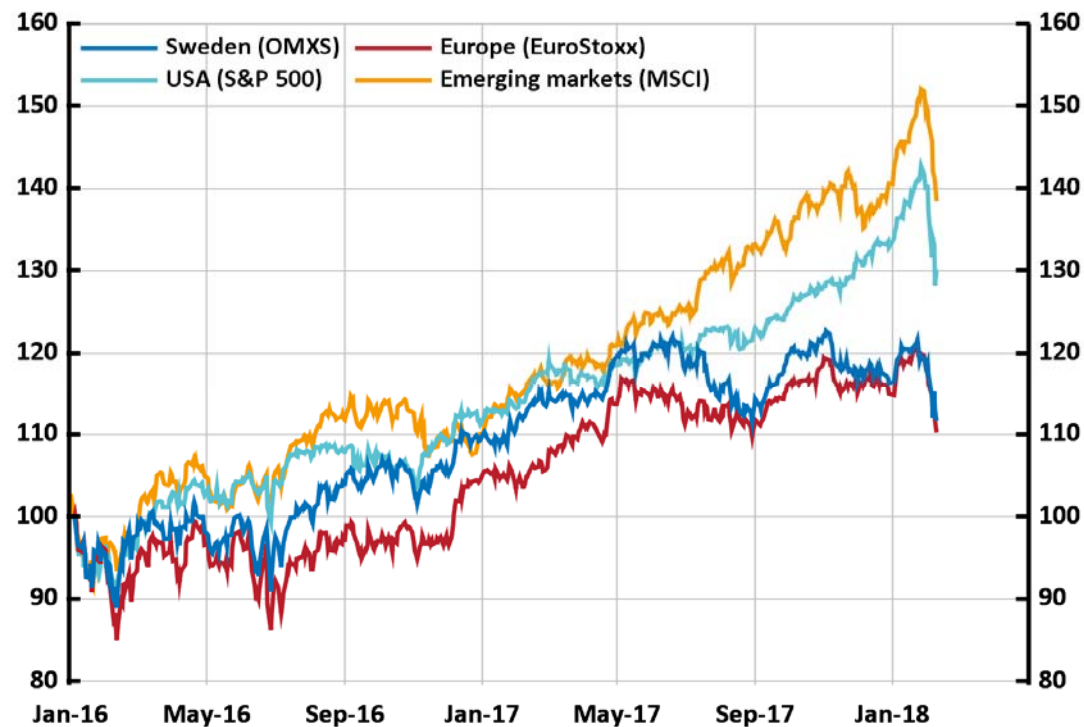


Note. Government bonds with approximately 10 years left to maturity.

Source: Macrobond

Figure 2.5. Stock market movements in local currency

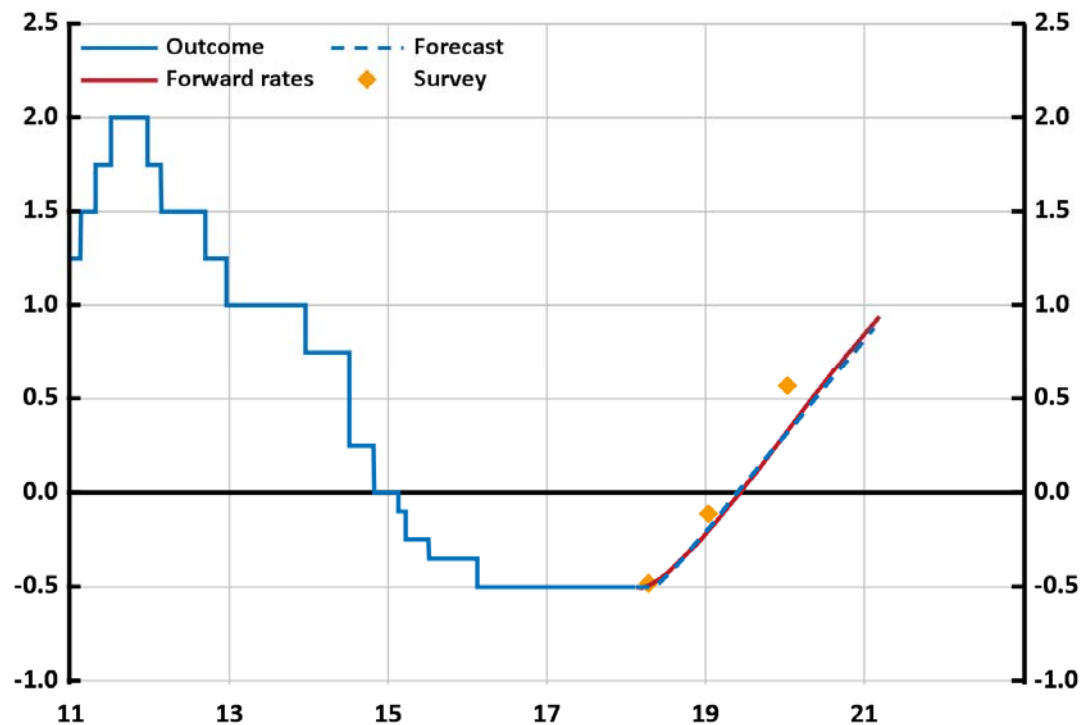
Index, 4 January 2016 = 100



Sources: Macrobond and the Riksbank

Figure 2.6. Repo rate and market expectations

Per cent, average



Note. The forward rates are estimated as of 9 February 2018 and measure the expected repo rate. The survey responses show the average for money market participants on 17 January 2018.

Sources: Macrobond, TNS Sifo Prospera and the Riksbank

Figure 2.7. Yield differential between covered bonds and government bonds with different maturities

Percentage points

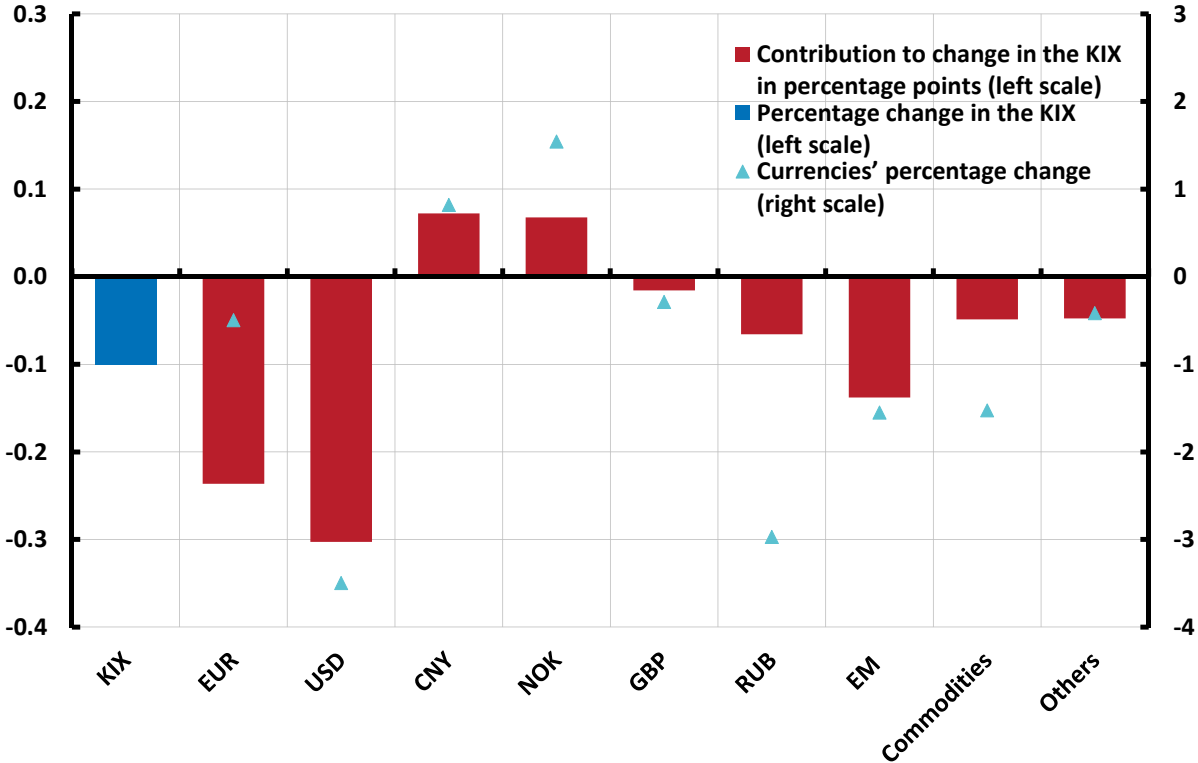


Note. Yields on covered bonds and government bonds are zero coupon yields calculated using the Nelson-Siegel method.

Sources: Macrobond and the Riksbank

Figure 2.8. Changes to KIX exchange rates

Per cent and percentage points

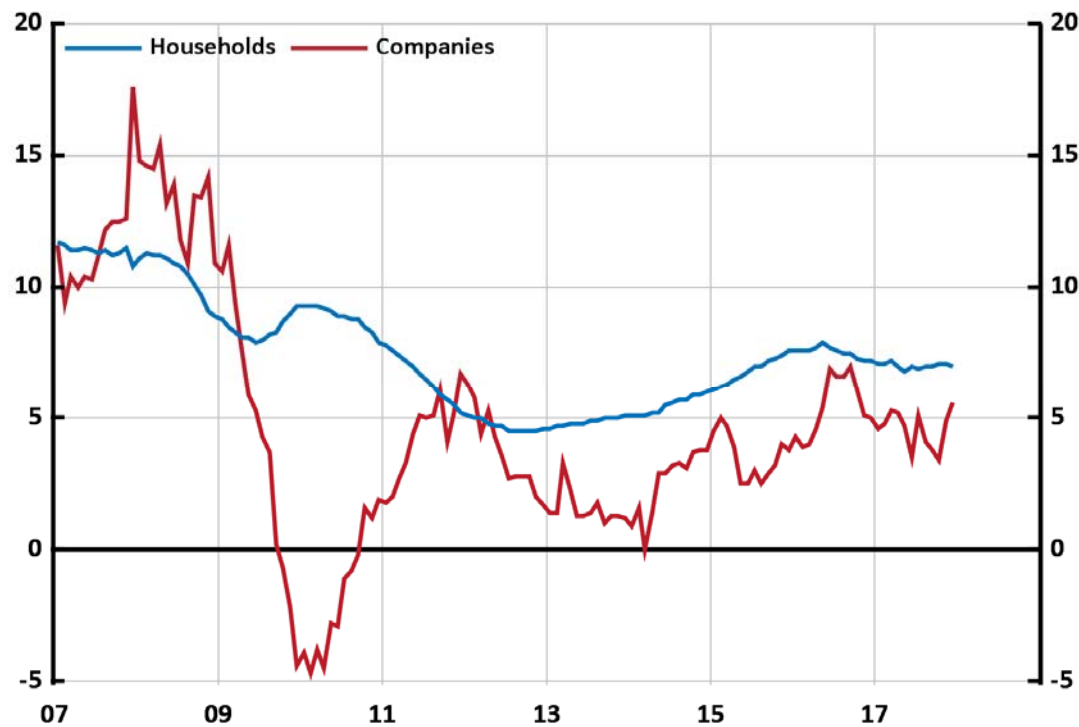


Note. The figure shows changes in KIX and contributions from different currencies between 20 December 2017 and 9 February 2018. EM refers to Brazil, Hungary, India, Mexico, Poland and Turkey. Commodities refer to Australia, Canada and New Zealand. Other refers to Czech Republic, Denmark, Iceland, Japan, South Korea and Switzerland

Sources: Thomson Reuters and the Riksbank

Figure 2.9. Bank lending to households and companies

Annual percentage change

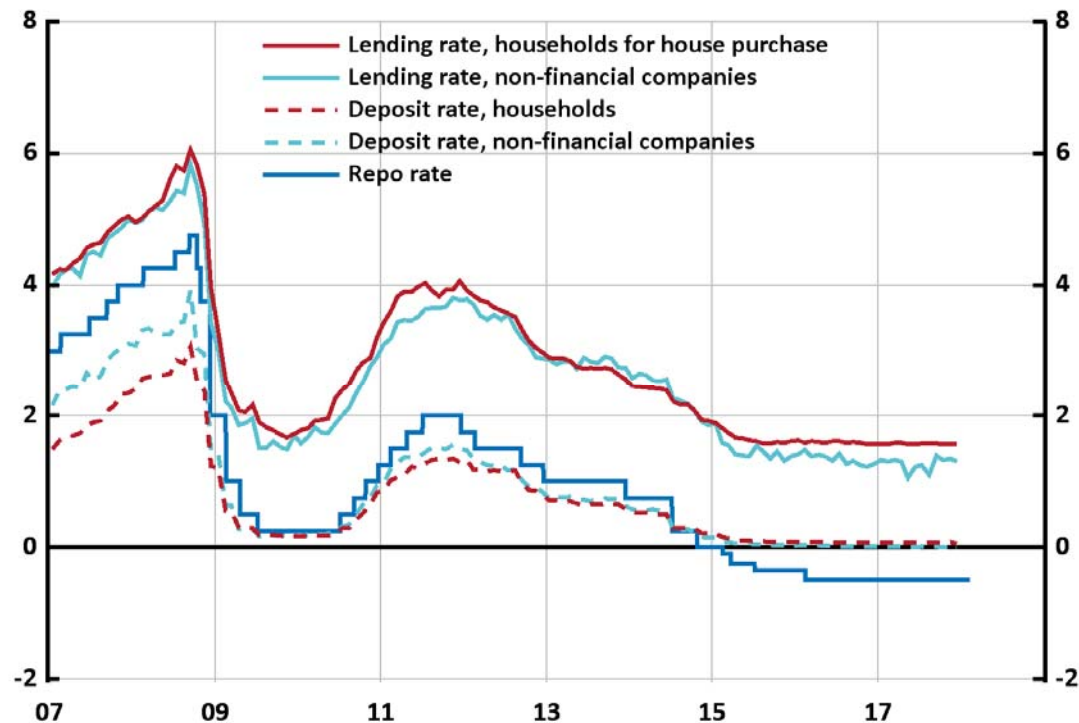


Note. MFIs' lending to households and non-financial companies adjusted for reclassifications and traded loans since 2006 according to financial market statistics.

Source: Statistics Sweden

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

Per cent



Note. MFIs' average deposit and lending rates are a weighted average of all interest rates for different maturities.

Sources: Statistics Sweden and the Riksbank

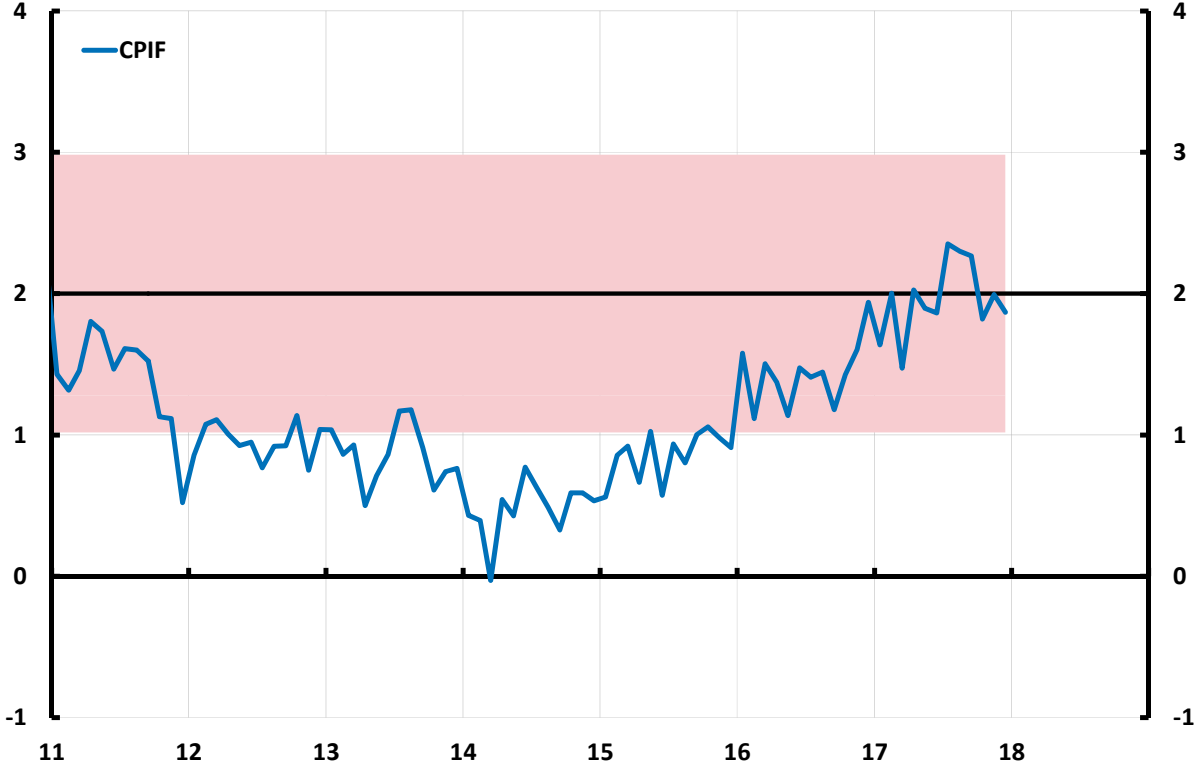
Chapter 3

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

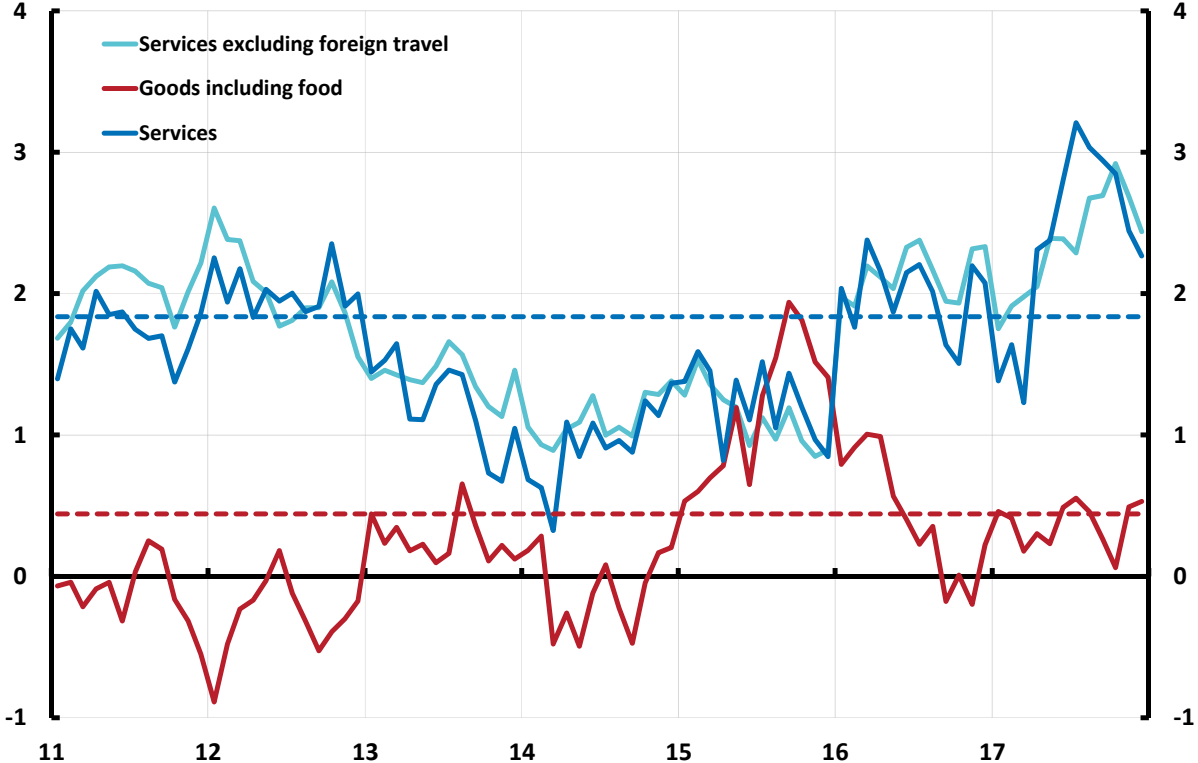


Note. The pink area shows the Riksbank’s variation band and covers about three-quarters of the outcomes since January 1995. The variation band is a means of showing whether the deviation from the inflation target is unusually large.

Sources: Statistics Sweden and the Riksbank

Figure 3.2. Prices of goods and services in the CPI

Annual percentage change

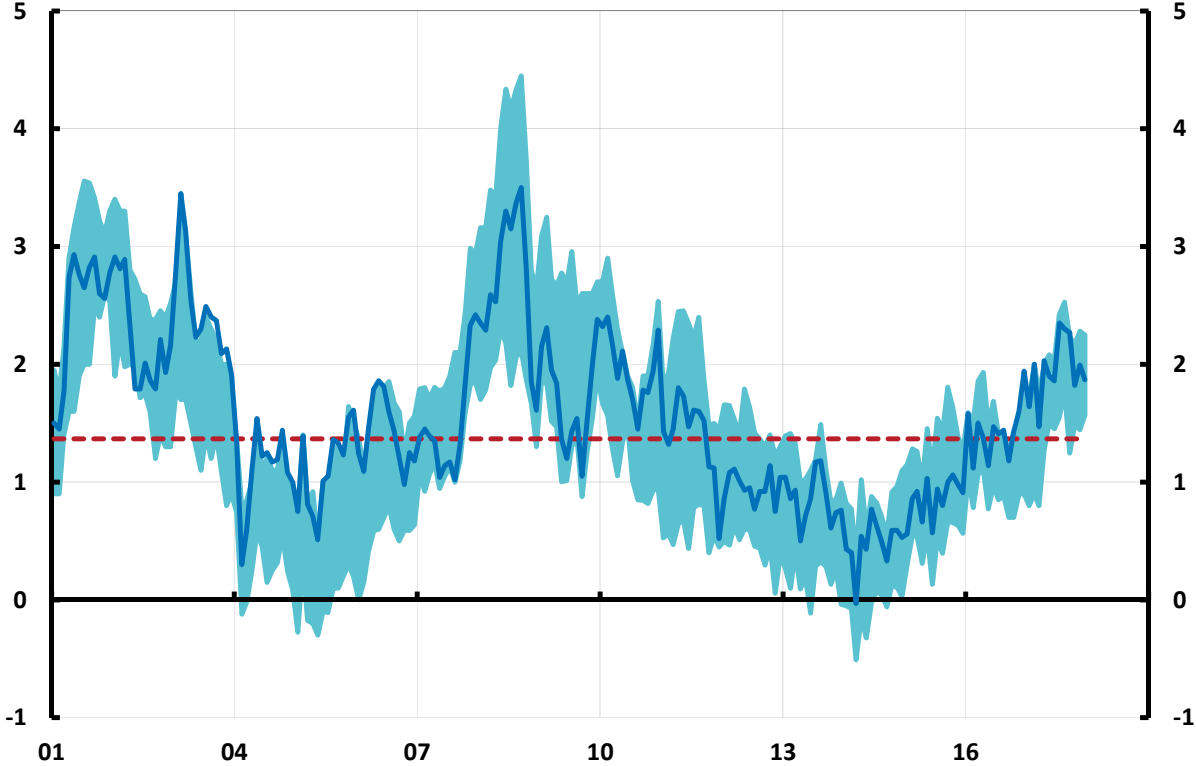


Note. Goods including food is a combination of the aggregate goods and food in the CPI. Together, these account for 45 per cent of the CPI. Service prices account for 45 per cent of the CPI. The broken lines represents the mean value since January 2000.

Sources: Statistics Sweden and the Riksbank

Figure 3.3. The CPIF and different measures of underlying inflation

Annual percentage change



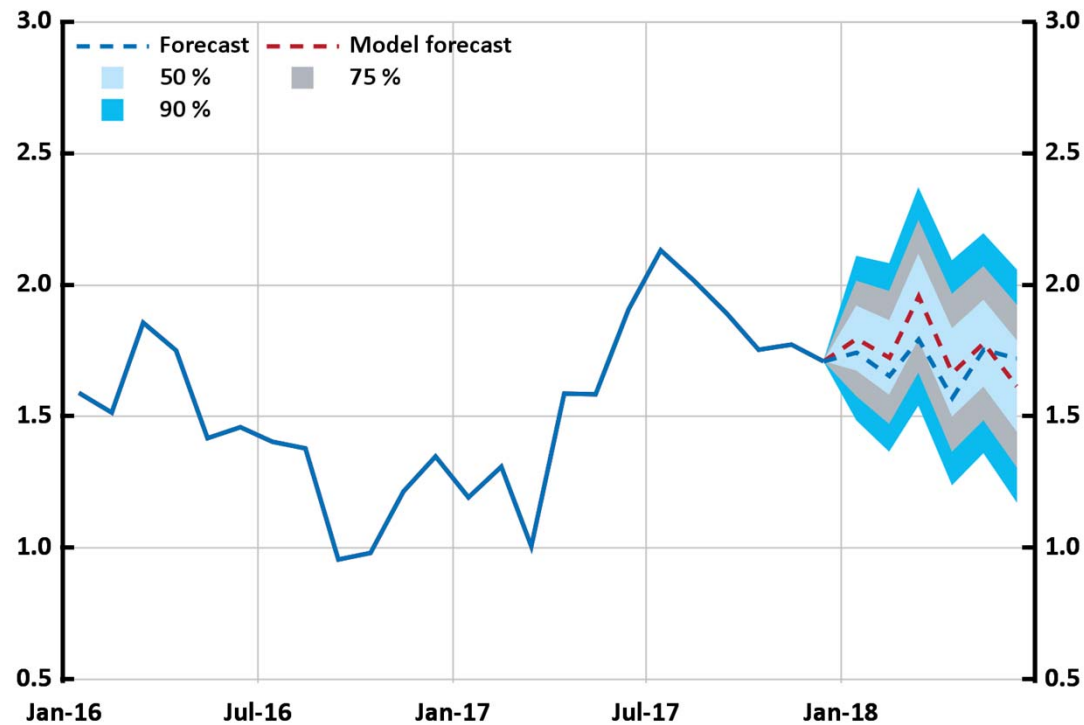
Note. The field shows the highest and lowest outcomes among different measures of underlying inflation. The measures included are the CPIF excluding energy, the CPIF with constant tax, UND24, Trim85, HICP excluding energy and unprocessed food, persistence-weighted inflation, factors from principal component analysis and weighted mean inflation. The broken line represent the mean value since January 2000 for all different measures of underlying inflation.

Sources: Statistics Sweden and the Riksbank



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

Annual percentage change

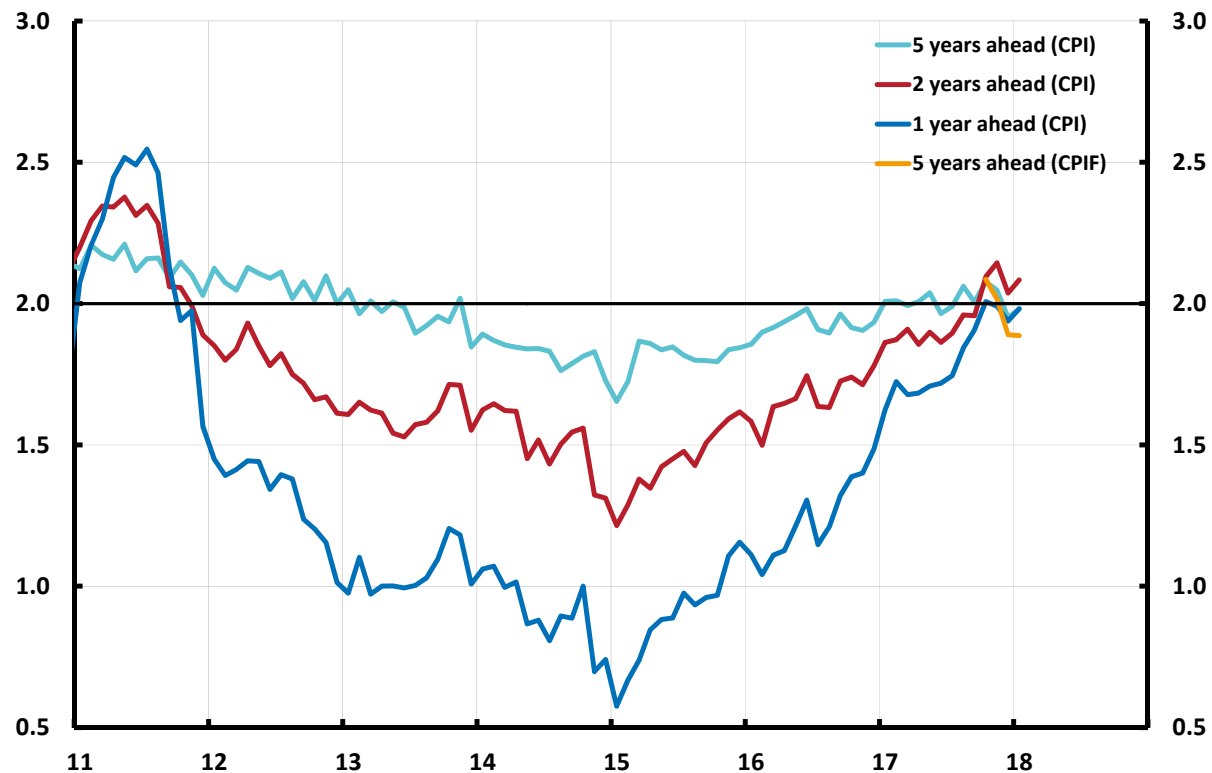


Note. The uncertainty bands are based on the models' historical forecast errors.

Sources: Statistics Sweden and the Riksbank

Figure 3.5. Inflation expectations among money market participants

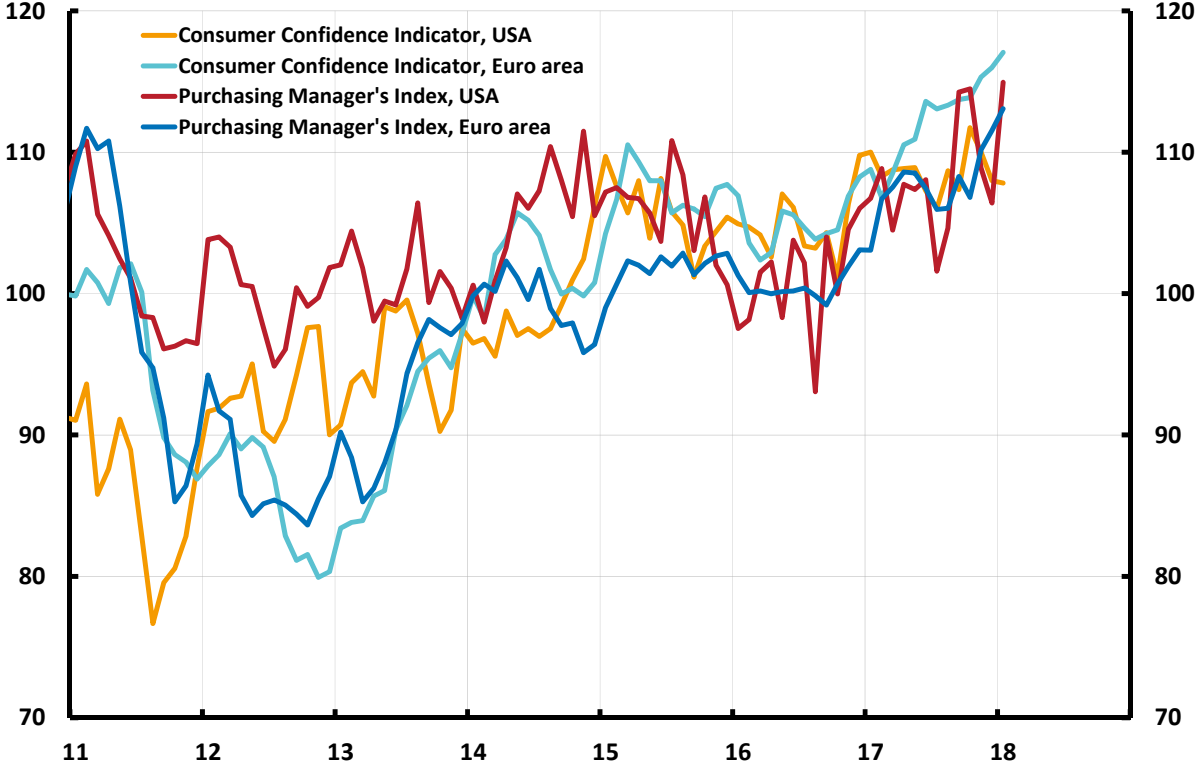
Per cent, mean value



Source: TNS Sifo Prospera

Figure 3.6. Confidence indicators abroad

Average = 100, standard deviation = 10

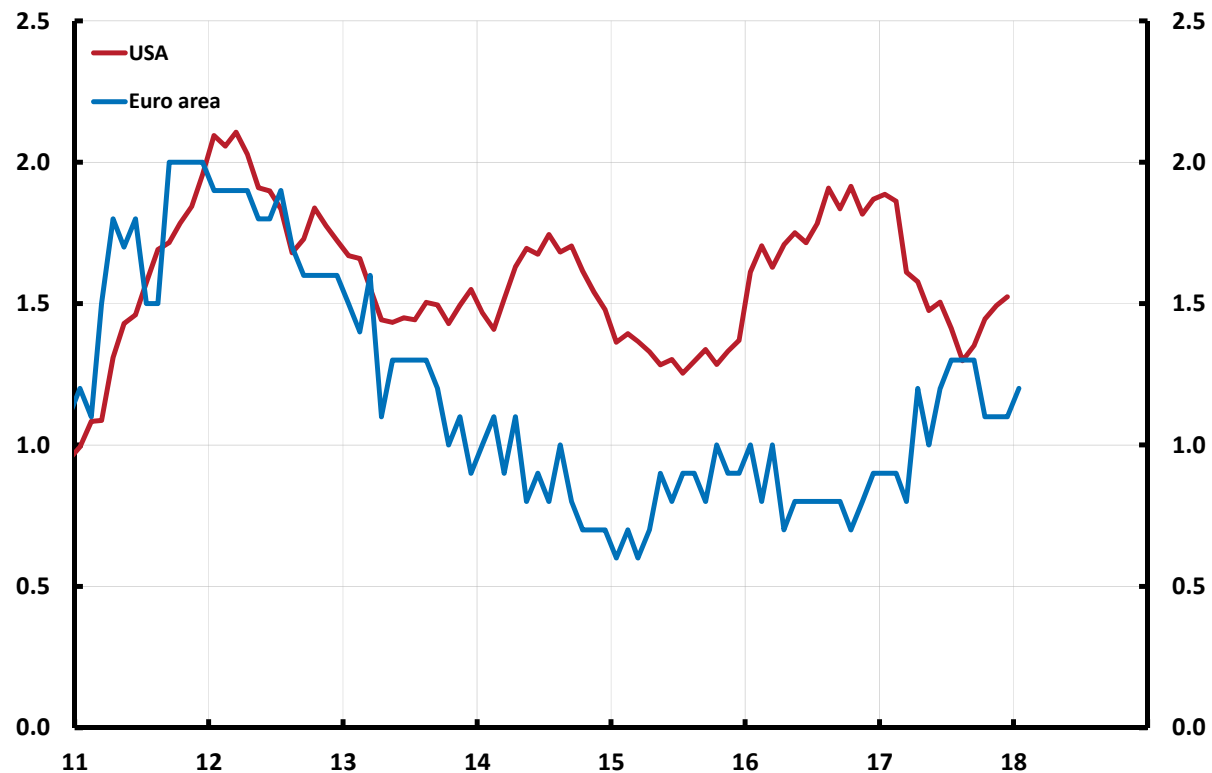


Note. The series have been normalised from January 1999. The Riksbank's aggregate of confidence in the US manufacturing and service sectors.

Sources: Institute for Supply Management (ISM), Markit Economics, European Commission, University of Michigan and the Riksbank

Figure 3.7. Underlying inflation abroad

Annual percentage change

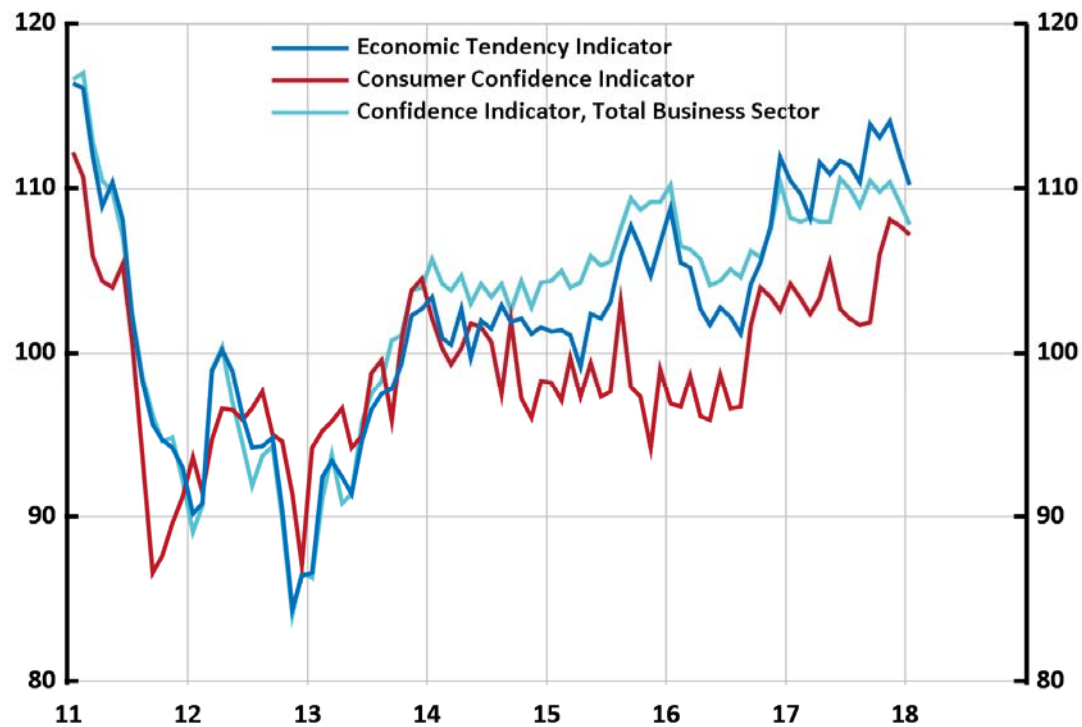


Note. HICP excluding energy and unprocessed food is shown for the euro area. Deflator for PCE excluding energy and food is shown for the United States.

Sources: Bureau of Economic Analysis and Eurostat

Figure 3.8. Confidence indicators

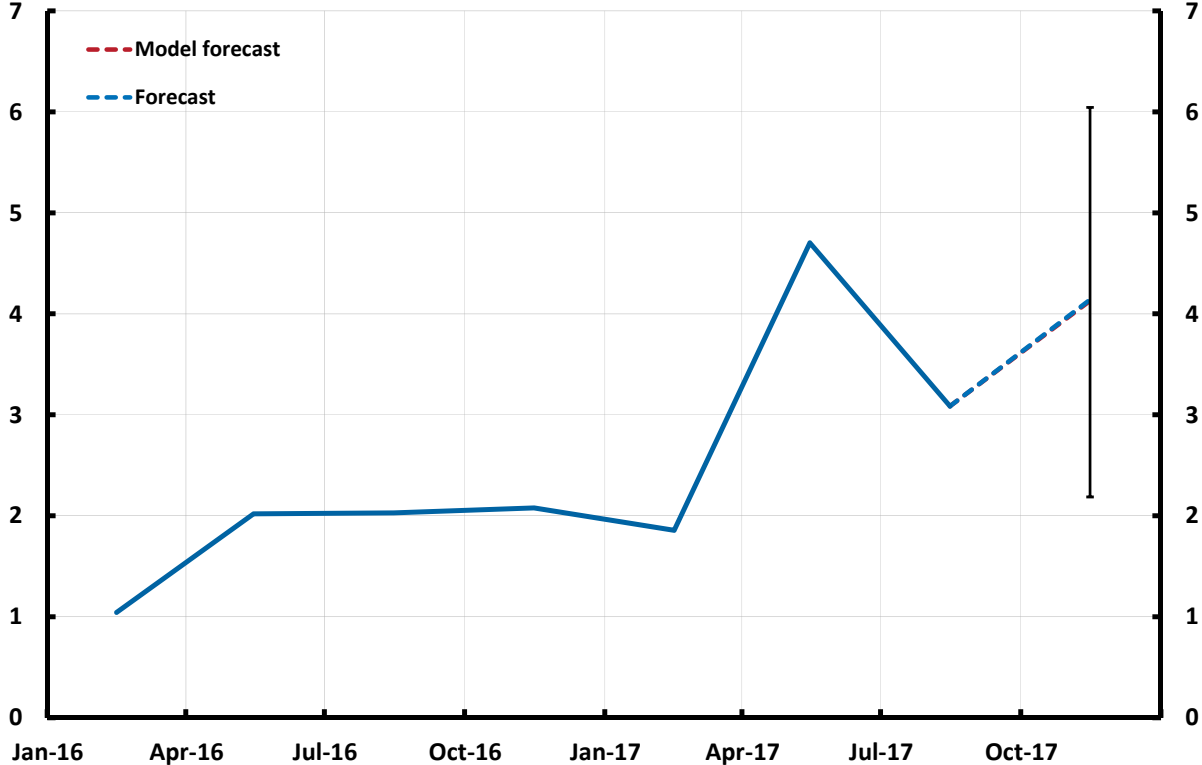
Index, average = 100, standard deviation = 10, seasonally-adjusted data



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

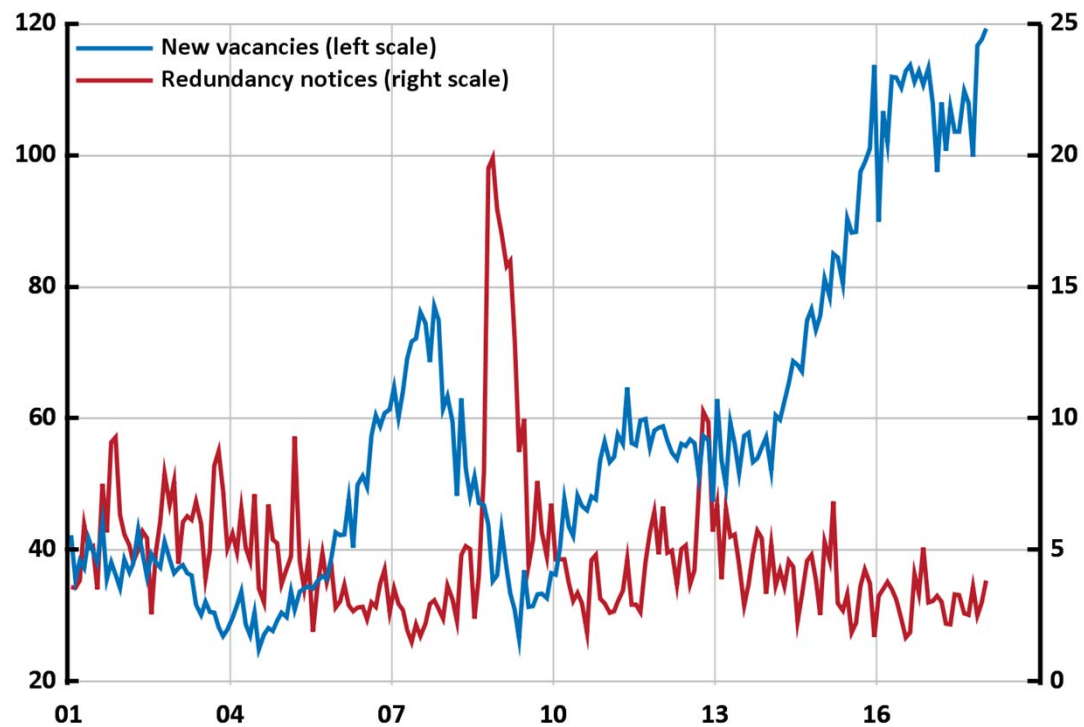


Note. The model forecast is an average of forecasts from different statistical models. The vertical line refers to a 50 per cent uncertainty band based on the models' historical forecast errors.

Sources: Statistics Sweden and the Riksbank

Figure 3.10. New vacancies and redundancy notices

Thousands

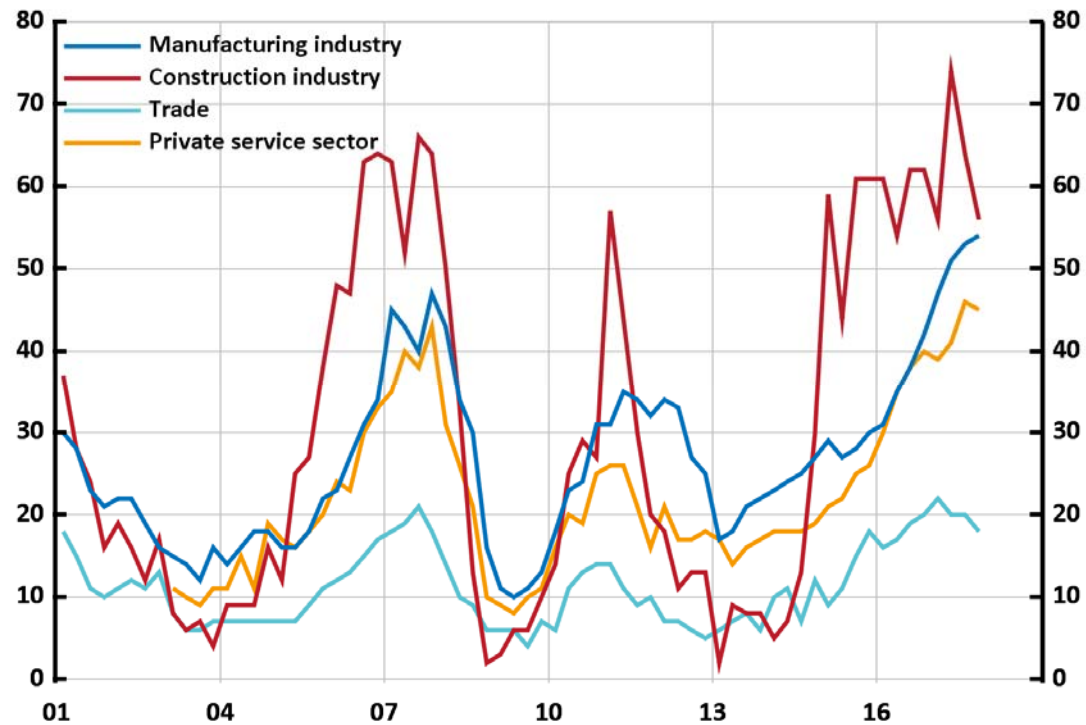


Note. Seasonally-adjusted data for new vacancies.

Sources: Employment Service and the Riksbank

Figure 3.11. Labour shortage

Yes-responses, per cent, seasonally-adjusted data

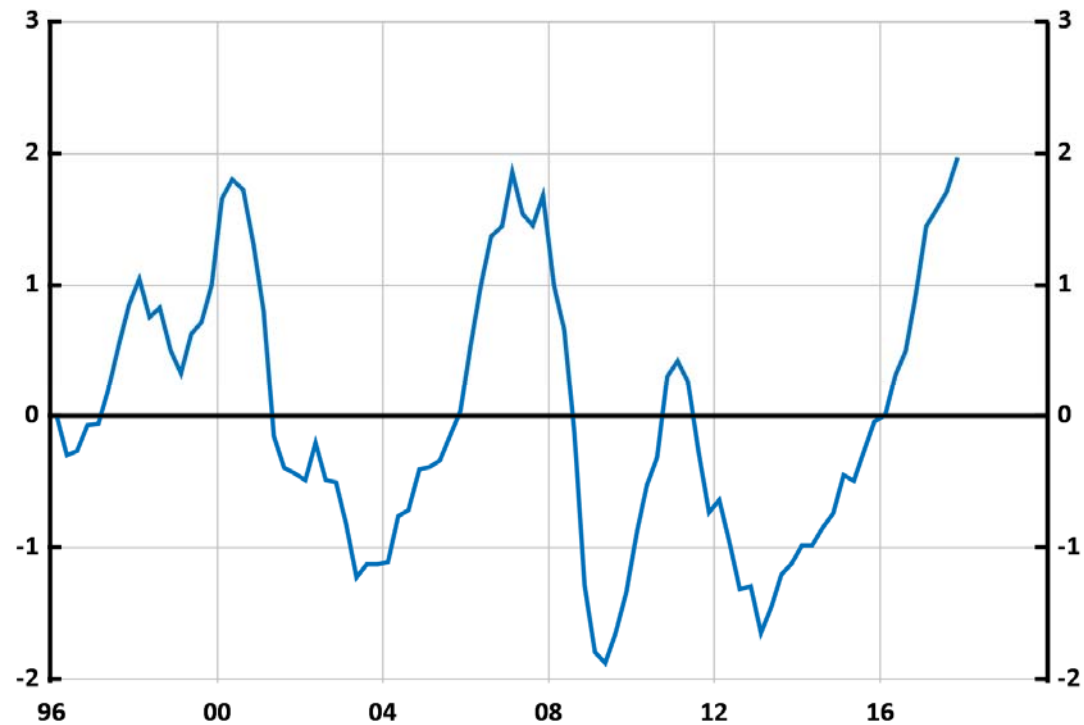


Note. Construction industry refers to the proportion of firms that have quoted a labour shortage as their main obstacle to increased construction. Other industries refers to the proportion of firms responding yes to the question of whether there is a labour shortage.

Source: National Institute of Economic Research

Figure 3.12. Resource utilisation indicator

Standard deviation

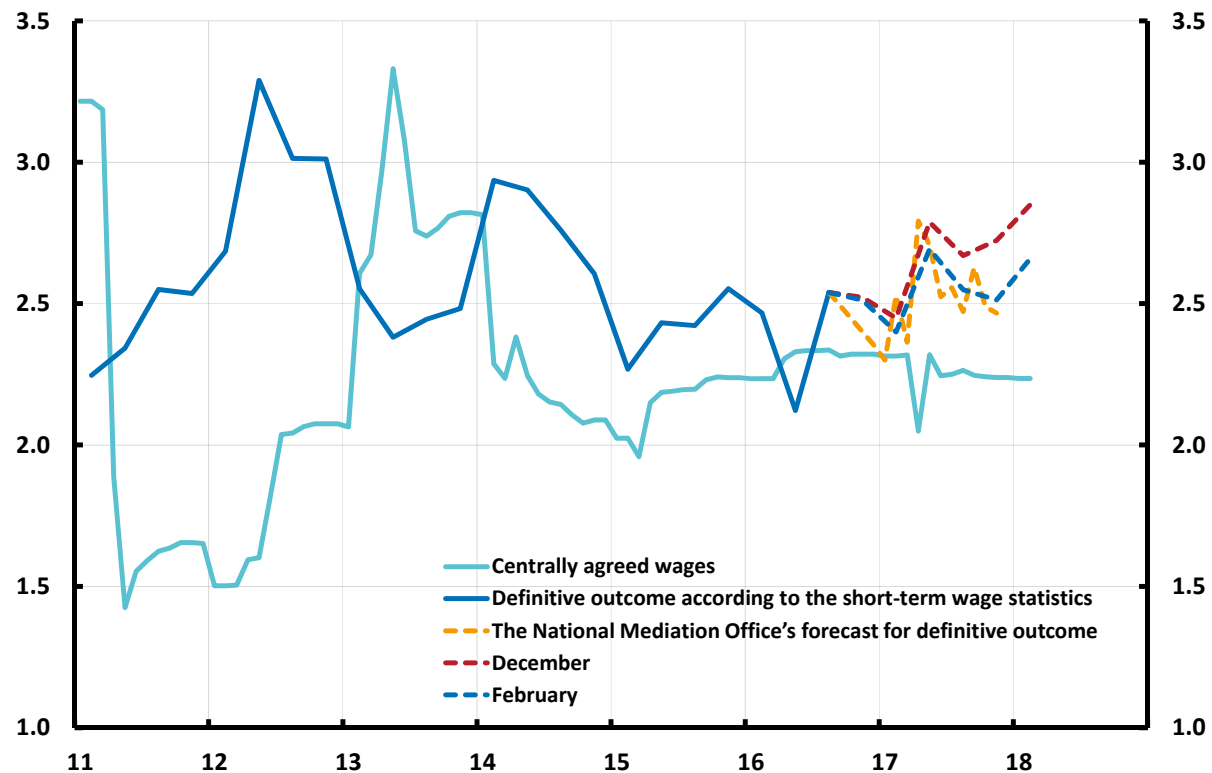


Note. The RU indicator is a statistical measure of resource utilisation. It is normalised so that the mean value is 0 and the standard deviation is 1.

Source: The Riksbank

Figure 3.13. Wages and wage agreements in the economy as a whole

Annual percentage change



Note. The National Mediation Office's forecast for definitive outcome for the period 2016:12–2017:11.

Sources: National Mediation Office and the Riksbank

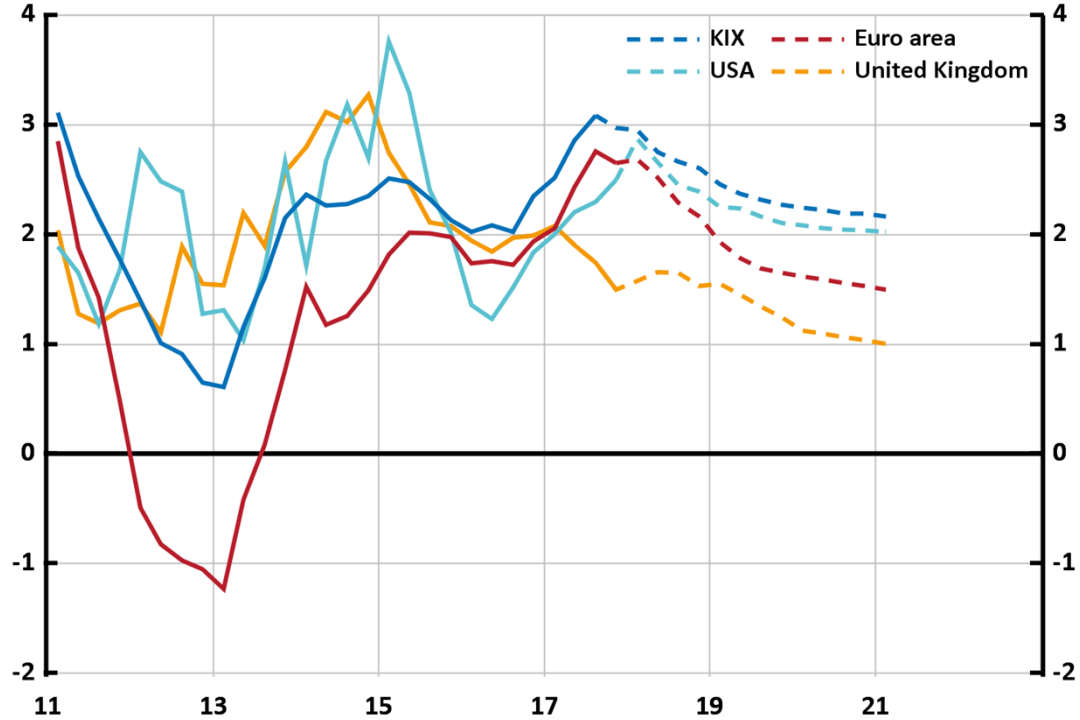
Chapter 4

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



Figure 4.1. GDP in various countries and regions

Annual percentage change

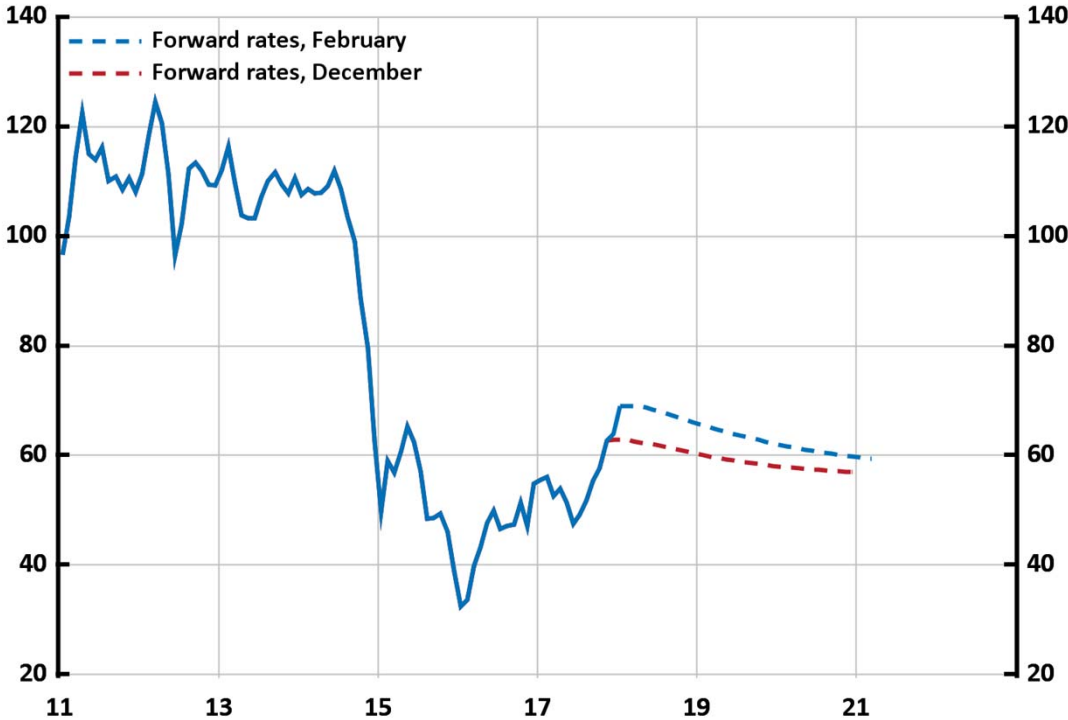


Note. KIX is an aggregate of the countries that are important to Sweden's international transactions.

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, Brent oil

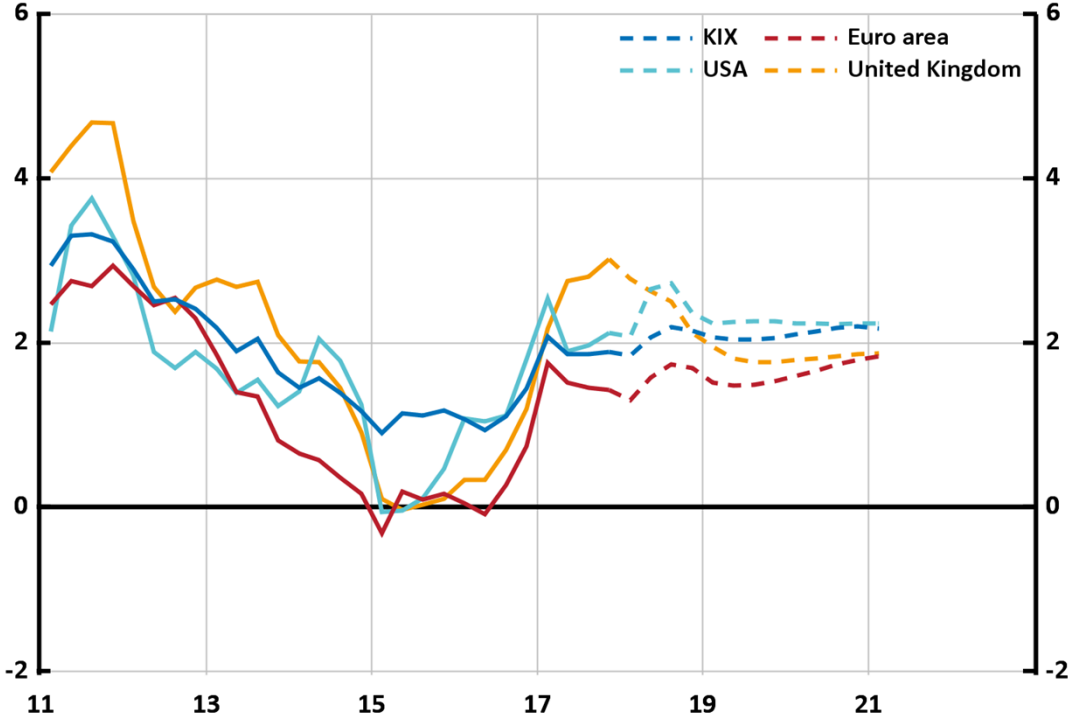


Note. Forward rates are calculated as a 15-day average. The outcome refers to monthly averages of spot prices.

Sources: Macrobond and the Riksbank

Figure 4.3. Inflation in various countries and regions

Annual percentage change

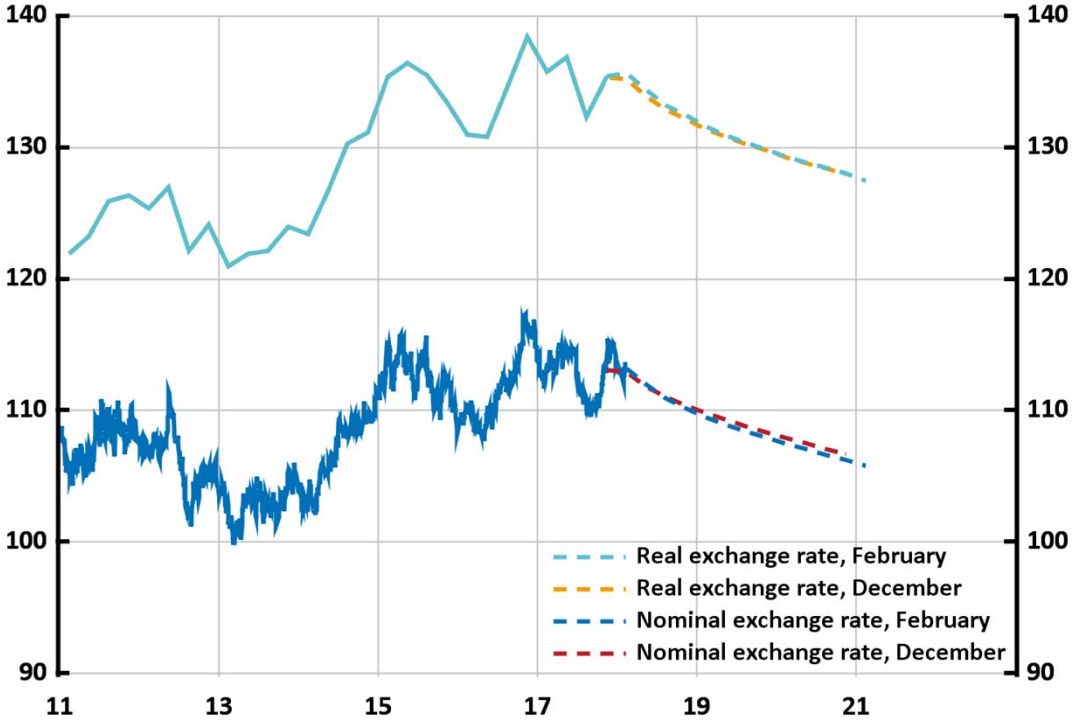


Note. KIX is an aggregate of the countries that are important to Sweden's international transactions.

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

Figure 4.4. Real and nominal exchange rate, KIX

Index, 18 November 1992 = 100

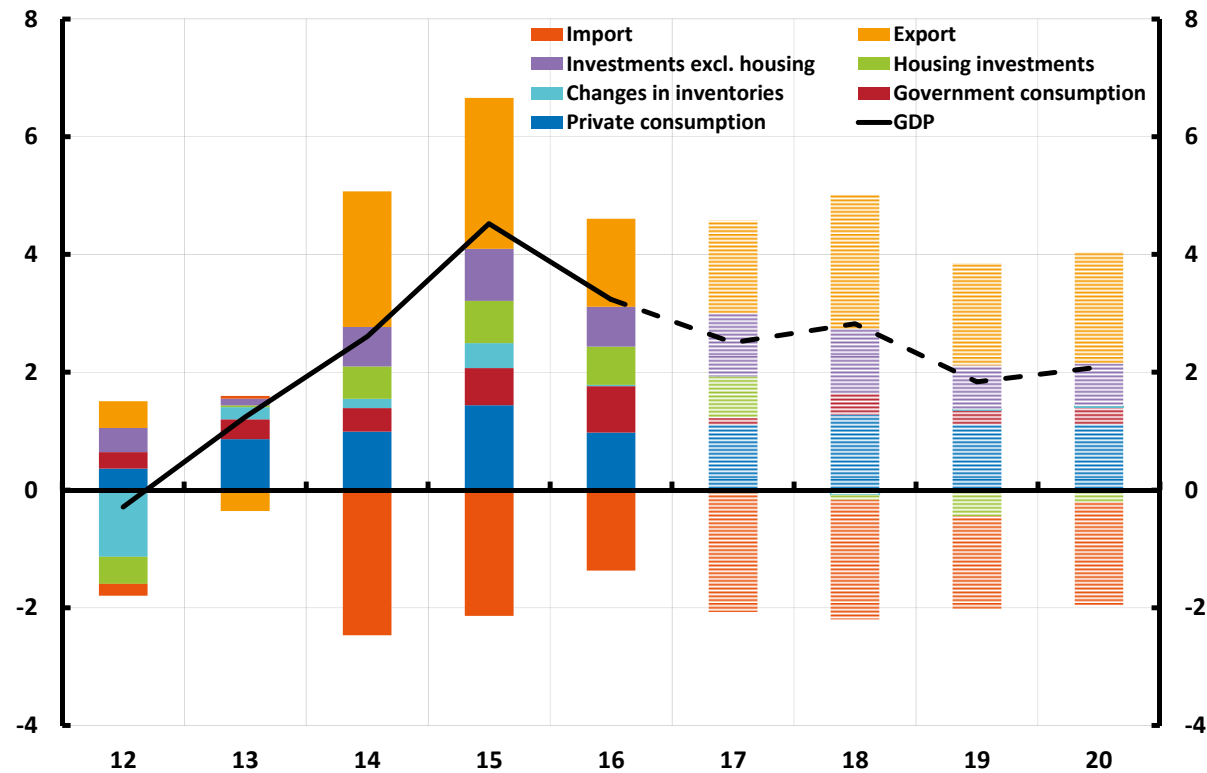


Note. The real exchange rate has been calculated with the CPIX for Sweden and the CPI for the rest of the world. Outcomes are daily data for the nominal exchange rate, outcomes for the real exchange rate and forecasts refer to quarterly averages. The KIX is an aggregate of countries that are important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

Sources: National sources, Statistics Sweden and the Riksbank

Figure 4.5. Contributions to GDP-growth

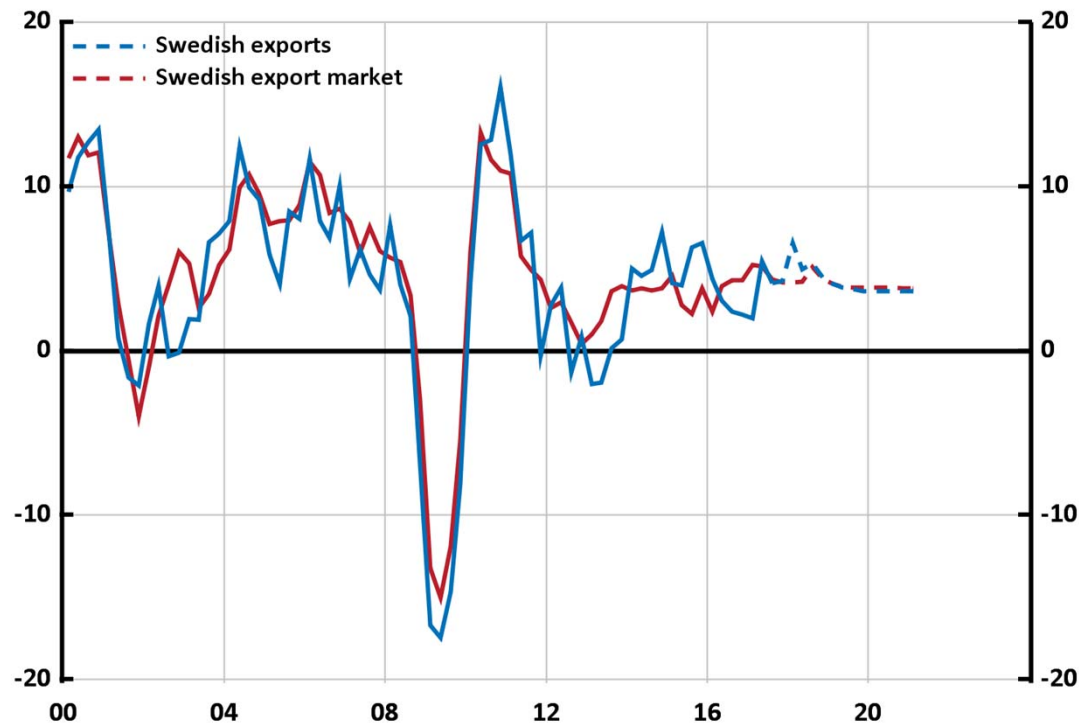
Annual percentage change and contributions to annual GDP-growth



Sources: Statistics Sweden and the Riksbank

Figure 4.6. Exports and the Swedish export market

Annual percentage change, calendar-adjusted data

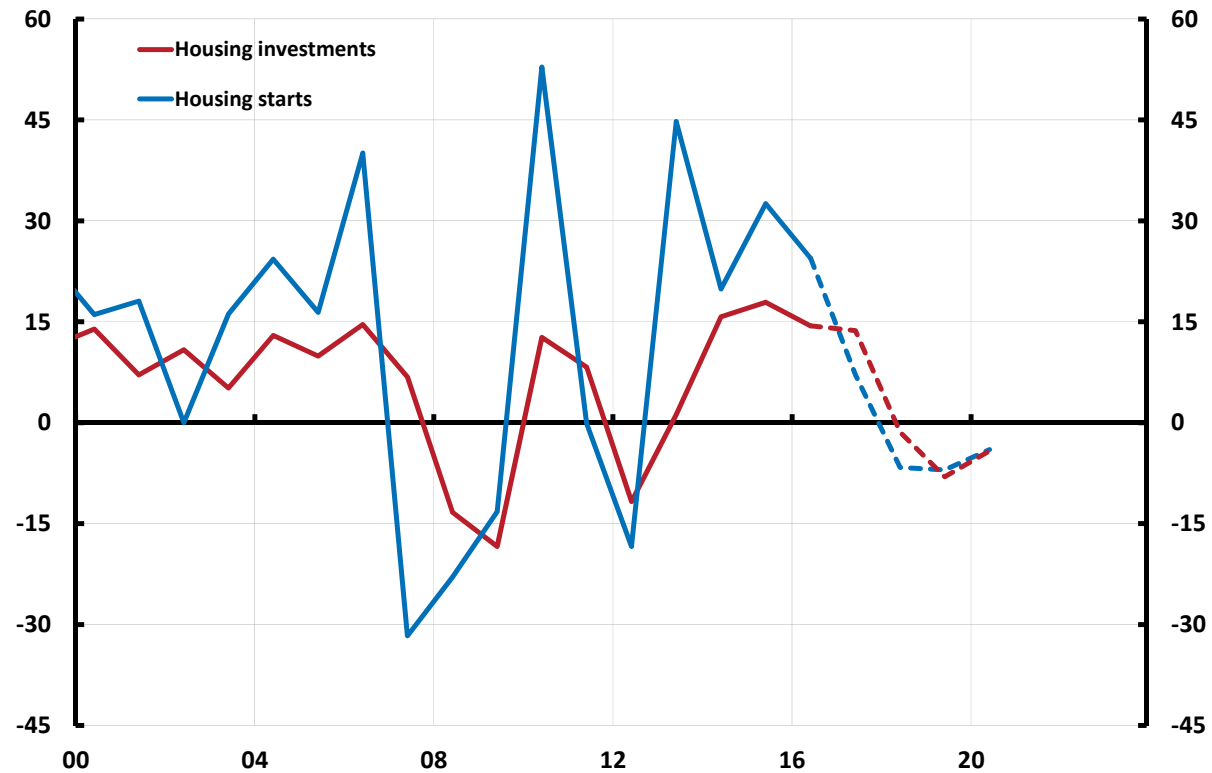


Note. The Swedish export market index aims to measure import demand in the countries to which Sweden exports. This is calculated by aggregating countries included in KIX and covers around 85 per cent of the total Swedish export market.

Sources: Statistics Sweden and the Riksbank

Figure 4.7. Housing starts and investment

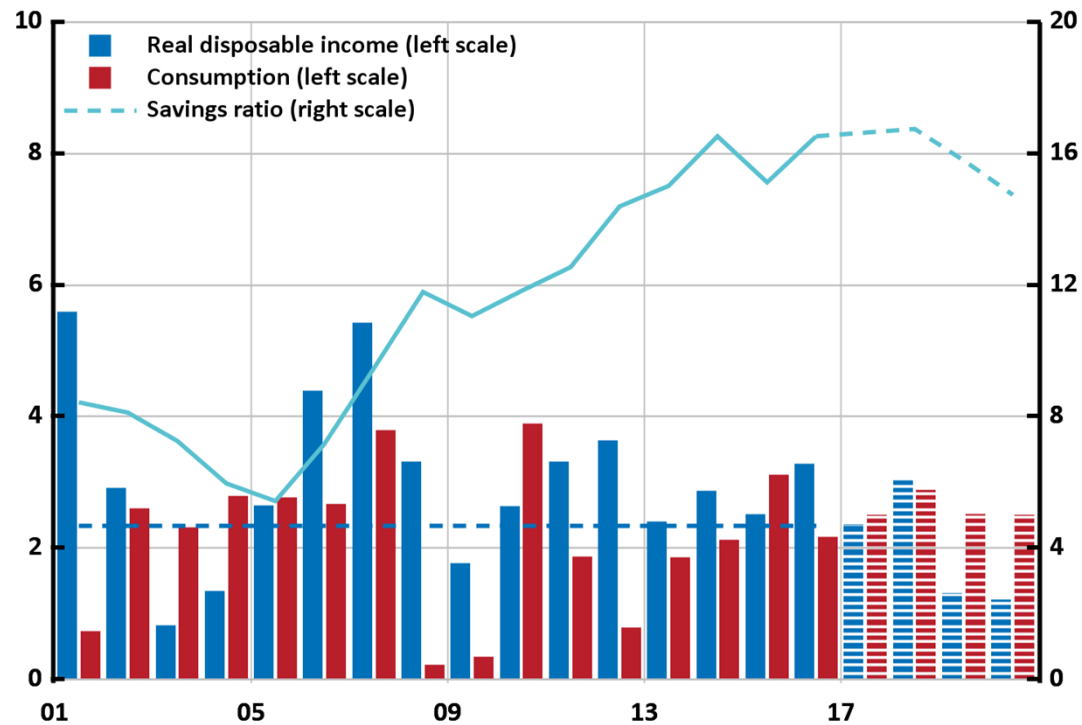
Annual percentage change



Sources: Statistics Sweden and the Riksbank

Figure 4.8. Households' real disposable income, consumption and savings ratio

Annual percentage change and per cent of disposable income

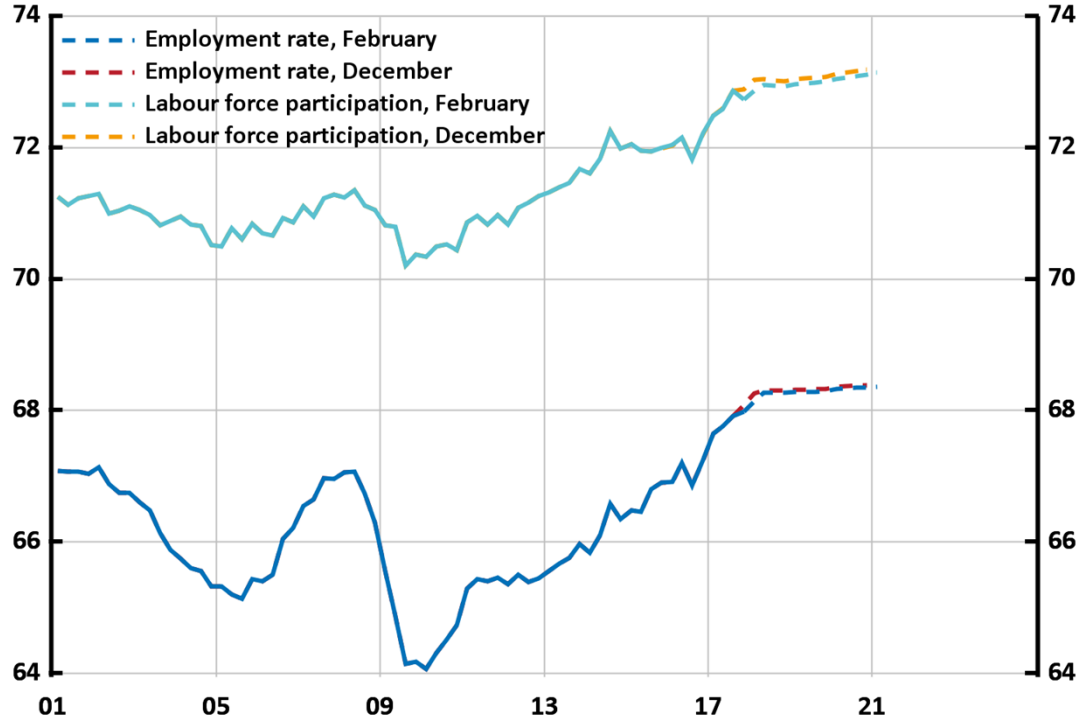


Note. The savings ratio includes collective insurance schemes. Disposable income has been deflated using the household consumption deflator. Broken line is the average of consumption between 1994 and 2015.

Sources: Statistics Sweden and the Riksbank

Figure 4.9. Employment rate and labour force participation

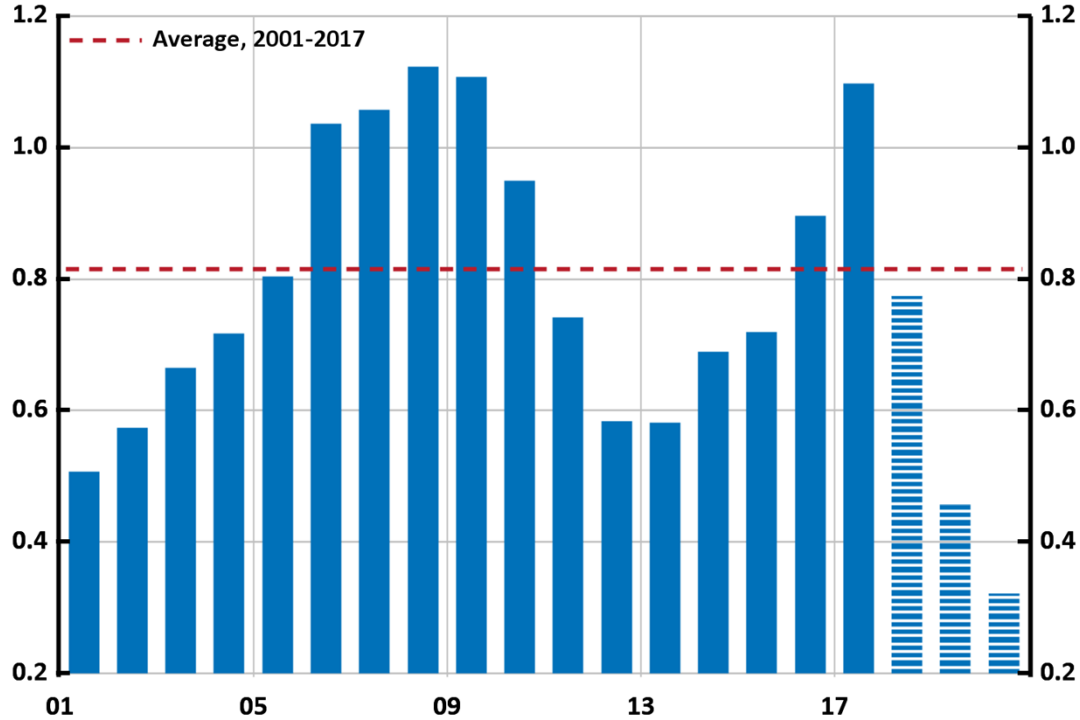
Employment and labour force as percentage of the population, aged 15–74, seasonally-adjusted data



Sources: Statistics Sweden and the Riksbank

Figure 4.10. Working-age population, 15–74 years

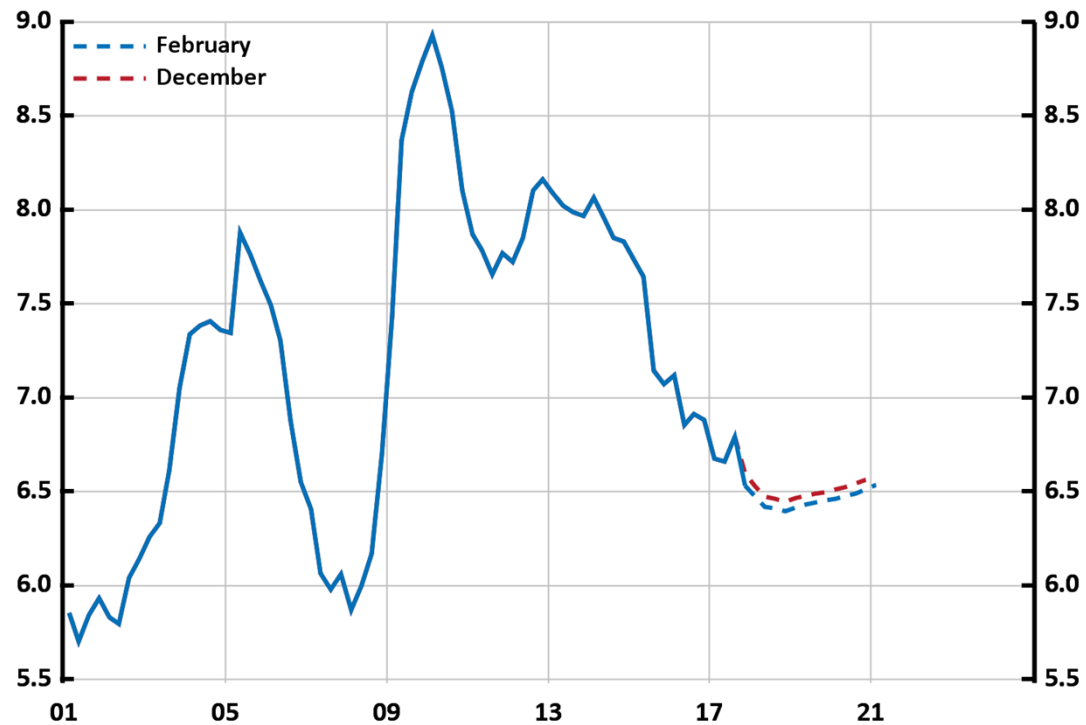
Annual percentage change



Sources: Statistics Sweden and the Riksbank

Figure 4.11. Unemployment

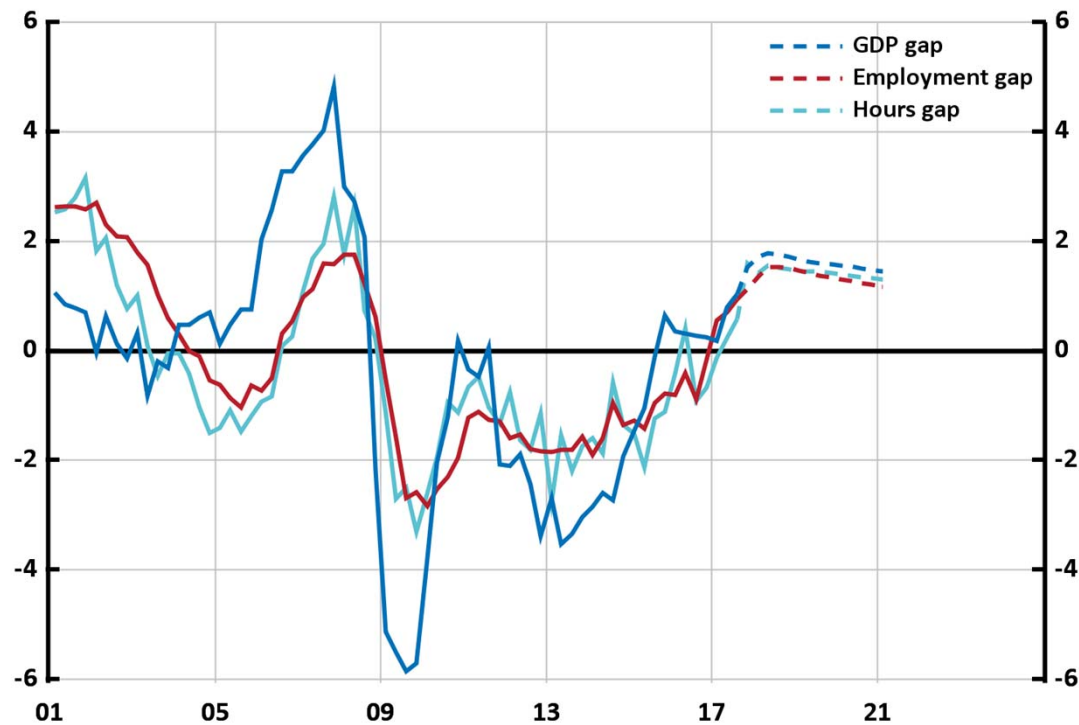
Per cent of the labour force, 15–74 years, seasonally-adjusted data



Sources: Statistics Sweden and the Riksbank

Figure 4.12. GDP gap, employment gap and hours gap

Per cent

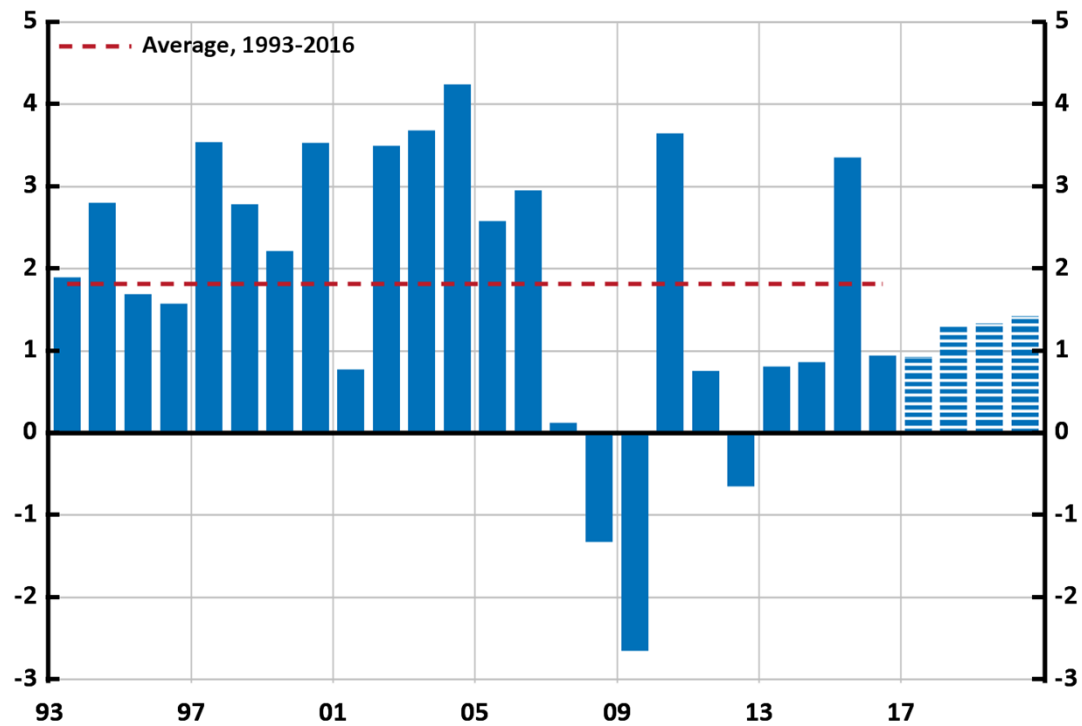


Note. The gaps refer to the deviation in GDP, the number of those employed and the number of hours worked from the Riksbank's assessed trends.

Sources: Statistics Sweden and the Riksbank

Figure 4.13. Productivity

GDP per hour worked, annual percentage change, calendar-adjusted data



Sources: Statistics Sweden and the Riksbank

Figure 4.14. Hours worked gap and short-term wages

Per cent and annual percentage change, respectively

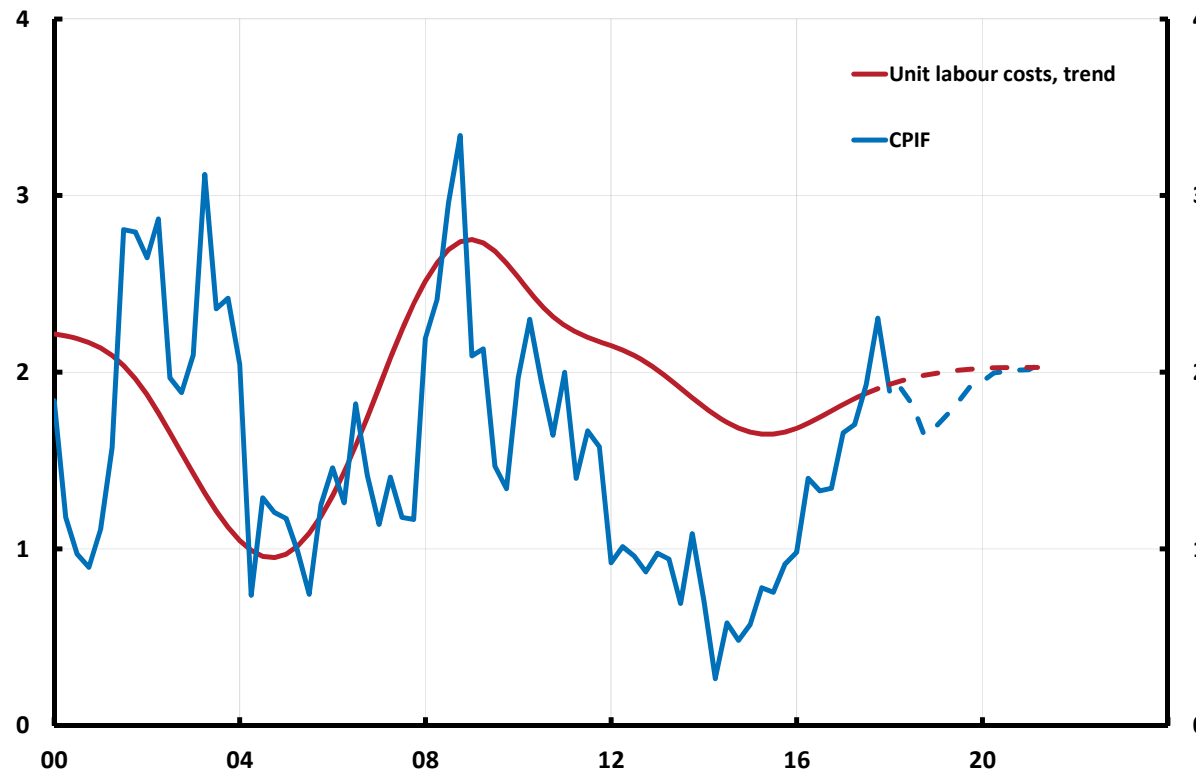


Note. The hours worked gap refers to the deviation in the number of hours worked from the Riksbank's assessed trend.

Sources: Statistics Sweden, The National Mediation Office and the Riksbank

Figure 4.15. Inflation and unit labour costs

Annual percentage change

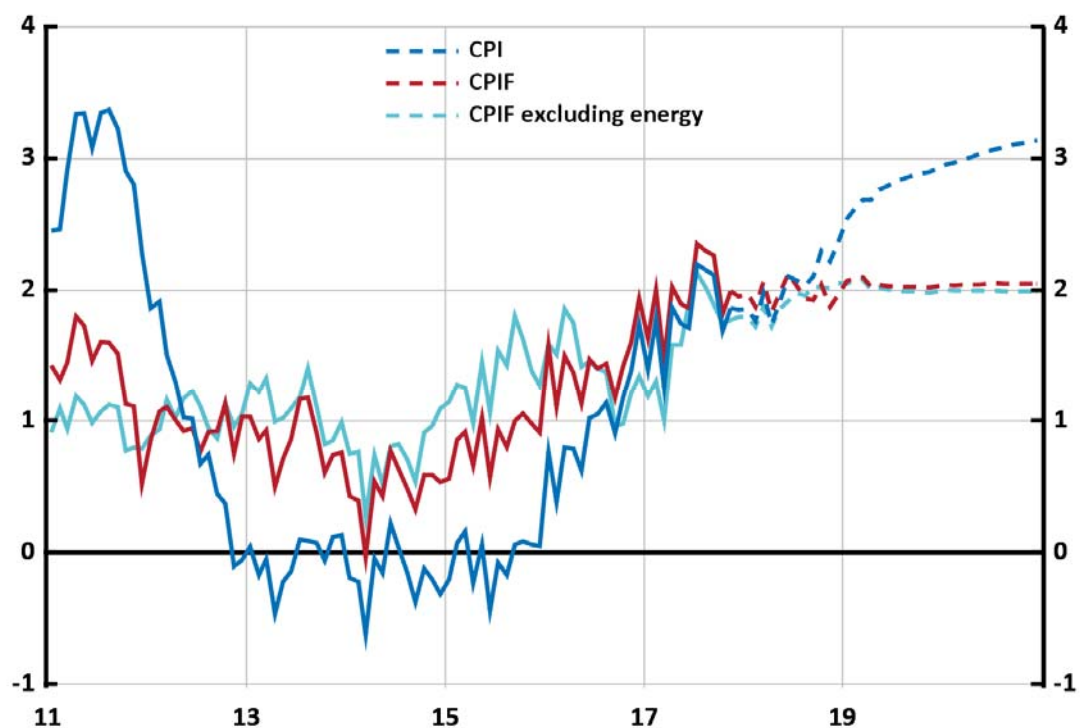


Note. The trend in unit labour costs has been calculated using a so-called HP filter. To calculate the trend, the Riksbank's forecast in February 2018 and an assumption that unit labour costs will increase by 2 per cent beyond the forecast horizon are used.

Sources: Statistics Sweden and the Riksbank

Figure 4.16. CPI, CPIX and CPIX excluding energy

Annual percentage change



Sources: Statistics Sweden and the Riksbank



Reduced housing construction is subduing GDP growth

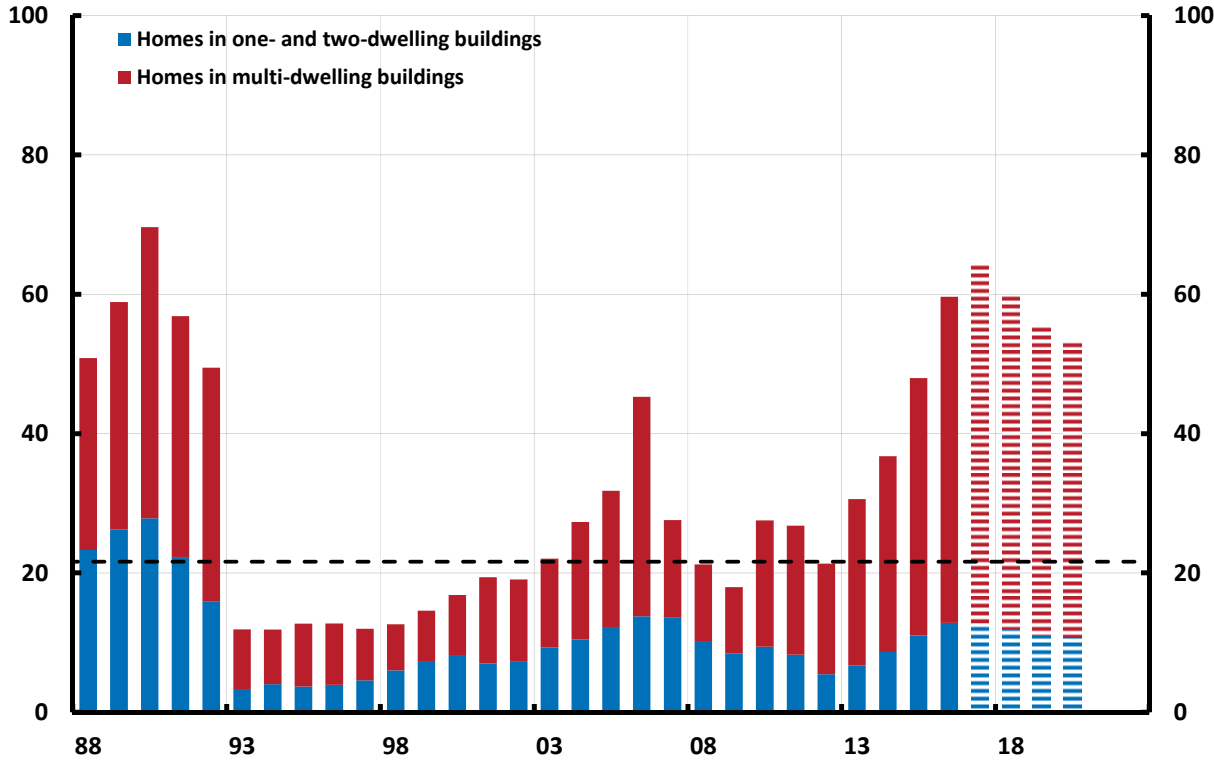
S V E R I G E S R I K S B A N K



1668
2018
350

Figure 4.17. Housing starts, 1988-2020

Thousands



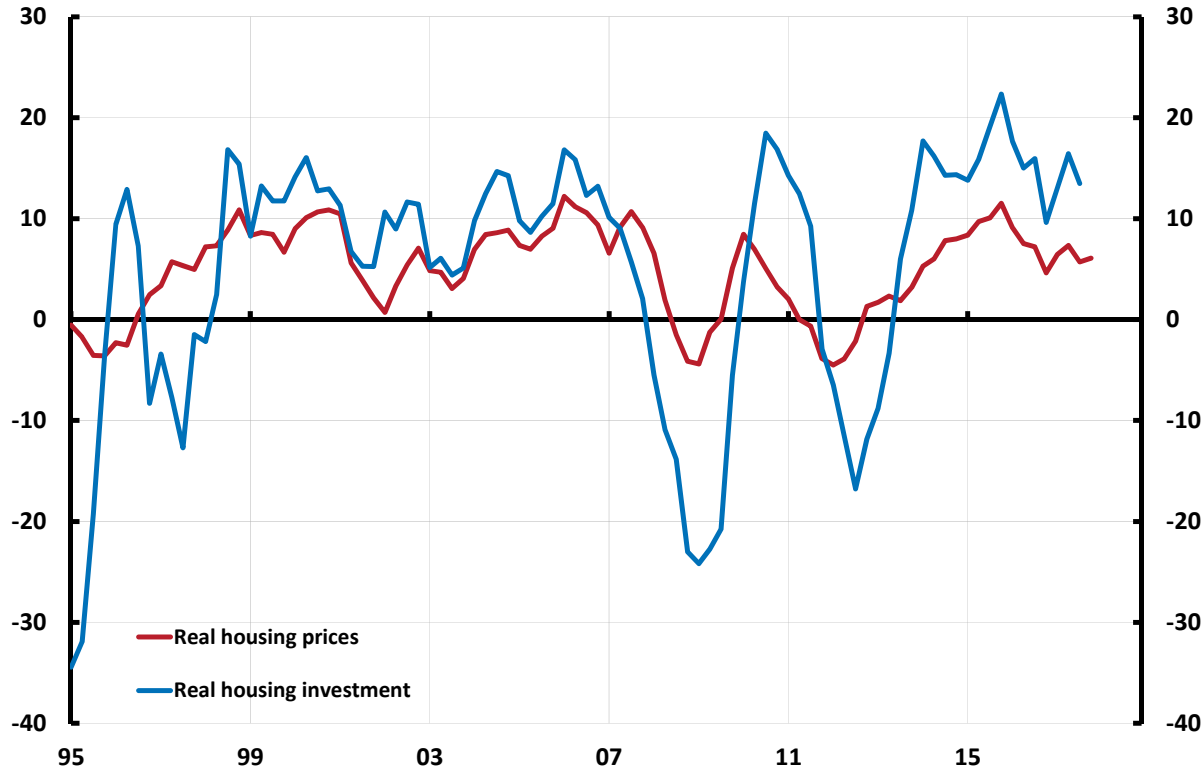
Note. The number of housing starts 2017-2020 constitutes the Riksbank's forecasts. Broken line refers to the mean value from 1995-2012.

Sources: Statistics Sweden and the Riksbank



Figure 4.18. Housing investment and housing prices

Annual percentage change

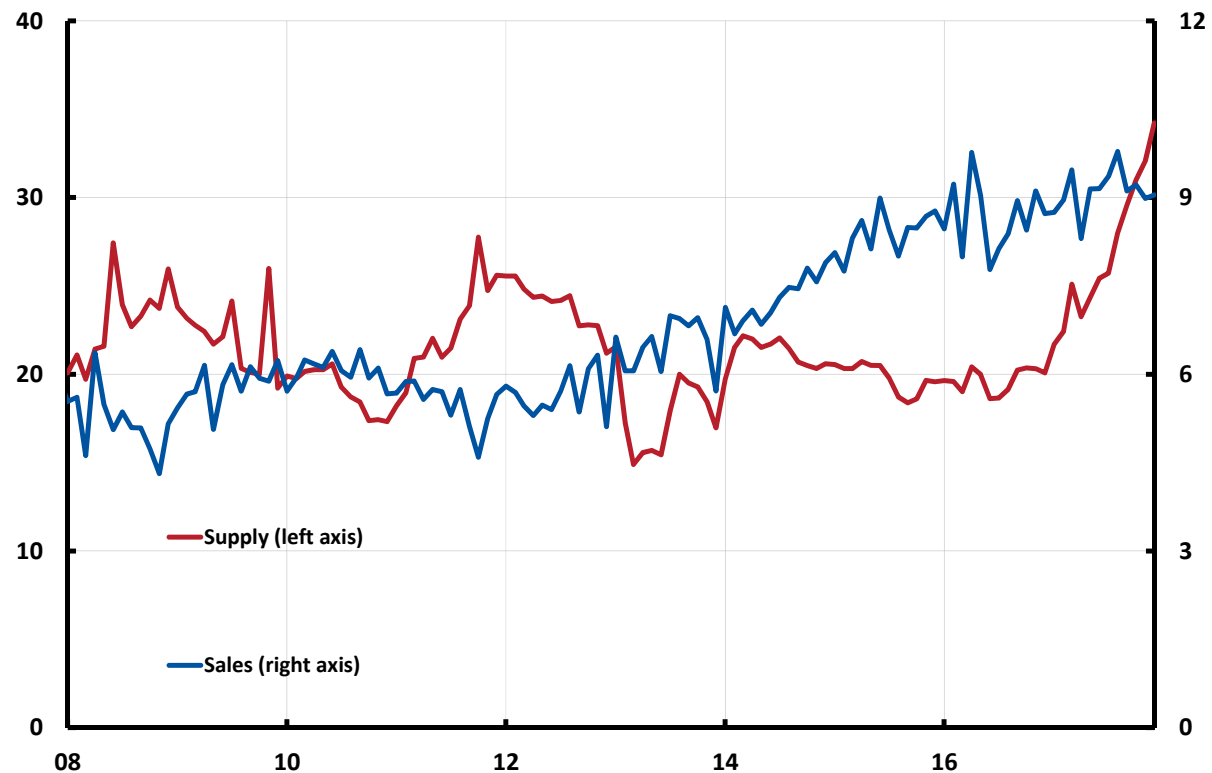


Note. Housing prices are the Property price index deflated with the CPIF.

Sources: The Riksbank and Statistics Sweden

Figure 4.19. Tenant-owned housing

Thousands

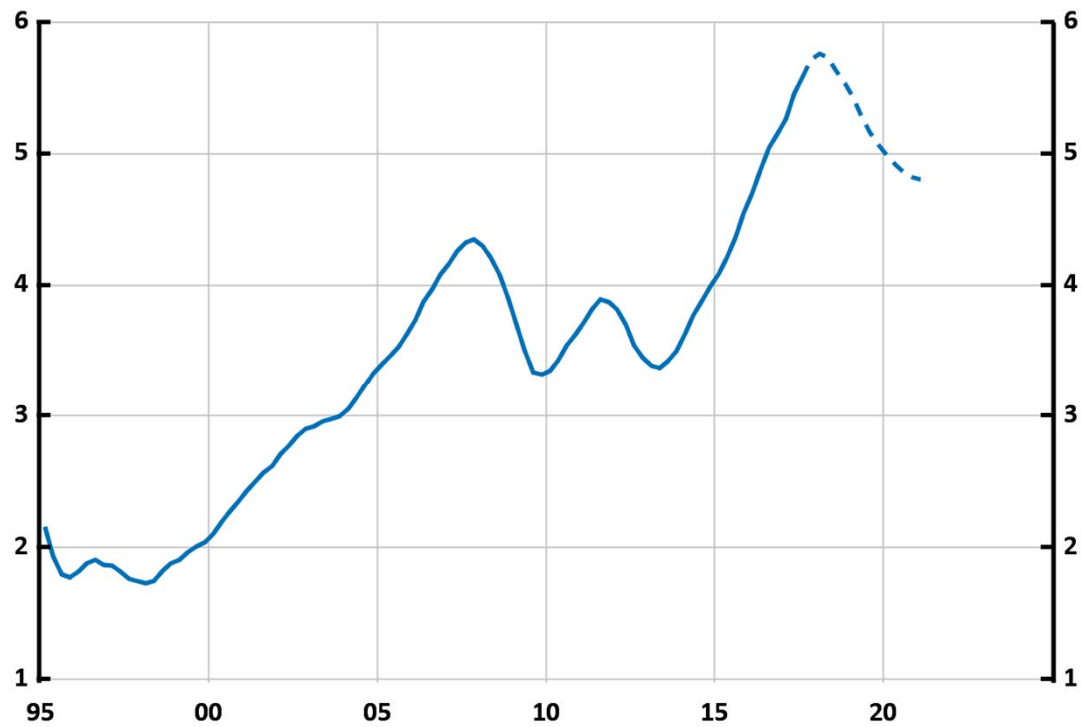


Note. Supply of tenant-owned housing comprises the number of advertisements during the month on the online residential property trading website, Hemnet. Sales comprise the number of reported sales according to the independent housing price statistics supplier, Mäklarstatistik.

Sources: Hemnet and Mäklarstatistik

Figure 4.20. Housing investment

Per cent of GDP, current prices, four quarter moving average



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

	Q4 2017	Q1 2018	Q2 2018	Q1 2019	Q1 2020	Q1 2021
Repo rate	-0.50	-0.50 (-0.50)	-0.50 (-0.50)	-0.15 (-0.15)	0.36 (0.36)	0.88

Source: The Riksbank

Table 2. Inflation
Annual percentage change, annual average

	2016	2017	2018	2019	2020
CPIF	1.4	2.0 (2.0)	1.8 (2.0)	1.9 (2.0)	2.0 (2.0)
CPIF excl. energy	1.4	1.7 (1.7)	1.7 (1.9)	1.9 (2.0)	2.0 (2.0)
CPI	1.0	1.8 (1.8)	1.7 (2.0)	2.6 (2.8)	3.1 (3.1)
HICP	1.1	1.9 (1.9)	1.7 (1.9)	1.8 (2.0)	1.9 (1.9)

Note. 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

	2016	2017	2018	2019	2020
Repo rate	-0.5	-0.5 (-0.5)	-0.4 (-0.4)	0.0 (0.0)	0.6 (0.6)
10-year rate	0.5	0.7 (0.7)	1.2 (1.1)	2.0 (1.9)	2.6 (2.5)
Exchange rate, KIX, 18 November 1992 = 100	111.7	112.9 (112.9)	111.6 (111.5)	108.7 (109.1)	106.9 (107.3)
General government net lending*	1.2	1.2 (1.2)	0.9 (0.8)	0.9 (0.9)	0.8 (0.8)

* 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	2016	2017	2018	2019	2020
Euro area	0.11	0.48	1.8	2.5 (2.4)	2.4 (2.4)	1.8 (1.8)	1.6 (1.6)
USA	0.15	0.09	1.5	2.3 (2.3)	2.6 (2.5)	2.2 (2.1)	2.1 (2.0)
Japan	0.04	0.02	0.9	1.8 (1.8)	1.4 (1.3)	0.8 (0.8)	0.3 (0.3)
China	0.19	0.09	6.7	6.9 (6.8)	6.4 (6.2)	6.1 (6.1)	6.1 (6.1)
KIX-weighted	0.75	1.00	2.1	2.9 (2.8)	2.7 (2.7)	2.4 (2.3)	2.2 (2.2)
World (PPP-weighted)	1.00	–	3.2	3.7 (3.7)	3.8 (3.7)	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 for 2018, according to the IMF. KIX weights refer to weights in the Riksbank's krona index (KIX) for 2018. The forecast for GDP in the world is based on the IMF's forecasts for PPP weights. The forecast for KIX-weighted GDP is based on an assumption that the KIX weights will develop in line with the trend during the previous five years.

CPI	2016	2017	2018	2019	2020
Euro area (HICP)	0.2	1.5 (1.5)	1.6 (1.5)	1.5 (1.5)	1.7 (1.7)
USA	1.3	2.1 (2.1)	2.5 (2.4)	2.3 (2.3)	2.2 (2.3)
Japan	-0.1	0.5 (0.4)	1.0 (0.9)	1.5 (1.5)	2.0 (2.0)
KIX-weighted	1.1	1.9 (1.9)	2.1 (2.0)	2.1 (2.0)	2.2 (2.2)

	2016	2017	2018	2019	2020
Policy rates in the rest of the world, per cent	-0.1	-0.1 (-0.1)	0.1 (0.1)	0.3 (0.2)	0.8 (0.6)
Crude oil price, USD/barrel Brent	45.1	54.8 (54.7)	68.0 (61.8)	63.9 (59.1)	60.8 (57.4)
Swedish export market	3.7	4.7 (5.2)	4.5 (4.3)	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

	2016	2017	2018	2019	2020
Private consumption	2.2	2.5 (2.5)	2.9 (2.9)	2.5 (2.5)	2.5 (2.5)
Public consumption	3.1	0.4 (0.4)	1.4 (1.4)	1.0 (1.0)	1.2 (1.2)
Gross fixed capital formation	5.6	7.4 (7.3)	4.0 (4.7)	1.2 (0.7)	2.0 (2.0)
Inventory investment*	0.0	-0.1 (-0.1)	-0.1 (-0.1)	0.0 (0.0)	0.0 (0.0)
Exports	3.3	3.6 (3.5)	5.1 (4.8)	3.8 (3.8)	4.1 (4.0)
Imports	3.4	5.1 (5.1)	5.0 (5.0)	3.8 (3.8)	4.2 (4.1)
GDP	3.2	2.5 (2.5)	2.8 (2.9)	1.8 (1.7)	2.1 (2.1)
GDP, calendar-adjusted	3.0	2.8 (2.7)	2.9 (3.0)	1.9 (1.7)	1.8 (1.8)
Final figure for domestic demand*	3.1	3.0 (3.0)	2.6 (2.8)	1.7 (1.5)	1.9 (1.9)
Net exports*	0.1	-0.4 (-0.4)	0.3 (0.1)	0.2 (0.2)	0.1 (0.1)
Current account (NA), per cent of GDP	5.1	4.6 (4.6)	4.5 (4.3)	4.5 (4.3)	4.4 (4.2)

*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

	2016	2017	2018	2019	2020
Population, aged 15–74	0.9	1.1 (1.1)	0.8 (0.7)	0.5 (0.5)	0.3 (0.3)
Potential hours worked	0.9	0.8 (0.8)	0.7 (0.7)	0.6 (0.6)	0.5 (0.5)
GDP, calendar-adjusted	3.0	2.8 (2.7)	2.9 (3.0)	1.9 (1.7)	1.8 (1.8)
Number of hours worked, calendar-adjusted	2.1	1.8 (1.6)	1.6 (1.5)	0.5 (0.7)	0.4 (0.4)
Employed, aged 15–74	1.5	2.3 (2.3)	1.4 (1.3)	0.5 (0.5)	0.4 (0.4)
Labour force, aged 15–74	1.0	2.0 (2.0)	1.1 (1.1)	0.5 (0.5)	0.5 (0.5)
Unemployment, aged 15–74 *	6.9	6.7 (6.7)	6.4 (6.5)	6.4 (6.5)	6.5 (6.5)

* 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

	2016	2017	2018	2019	2020
Hourly wage, NMO	2.4	2.5 (2.7)	2.8 (3.0)	3.1 (3.3)	3.4 (3.4)
Hourly wage, NA	2.2	2.9 (3.1)	2.9 (3.1)	3.2 (3.3)	3.4 (3.4)
Employers' contribution*	0.7	0.0 (0.0)	0.0 (0.0)	0.1 (0.1)	0.1 (0.1)
Hourly labour cost, NA	3.0	2.8 (3.1)	2.9 (3.1)	3.3 (3.4)	3.5 (3.6)
Productivity	0.9	0.9 (1.1)	1.3 (1.4)	1.3 (1.1)	1.4 (1.4)
Unit labour cost	2.6	2.0 (2.0)	1.6 (1.7)	1.9 (2.3)	2.1 (2.1)

* 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 (labour cost sum) divided by the number of hours worked by employees. Unit labour cost is defined as labour cost sum divided by GDP in fixed prices.

Sources: National Mediation Office, Statistics Sweden and the Riksbank