



# Monetary Policy Report July 2018

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



1668  
2018  
350

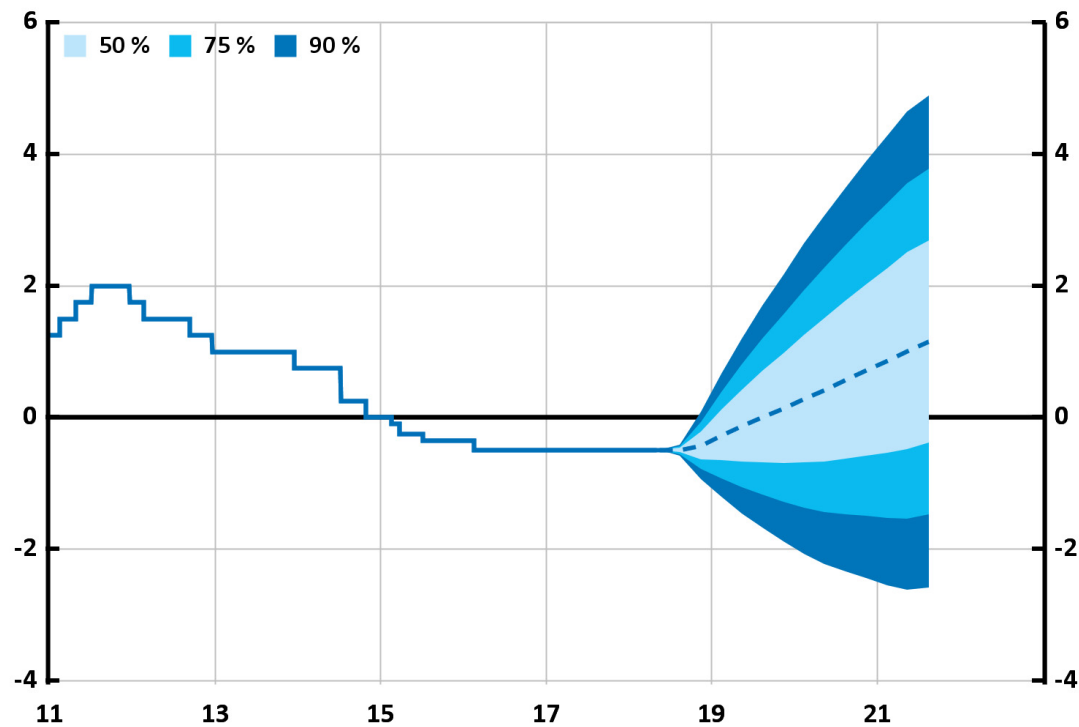
# Chapter 1

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

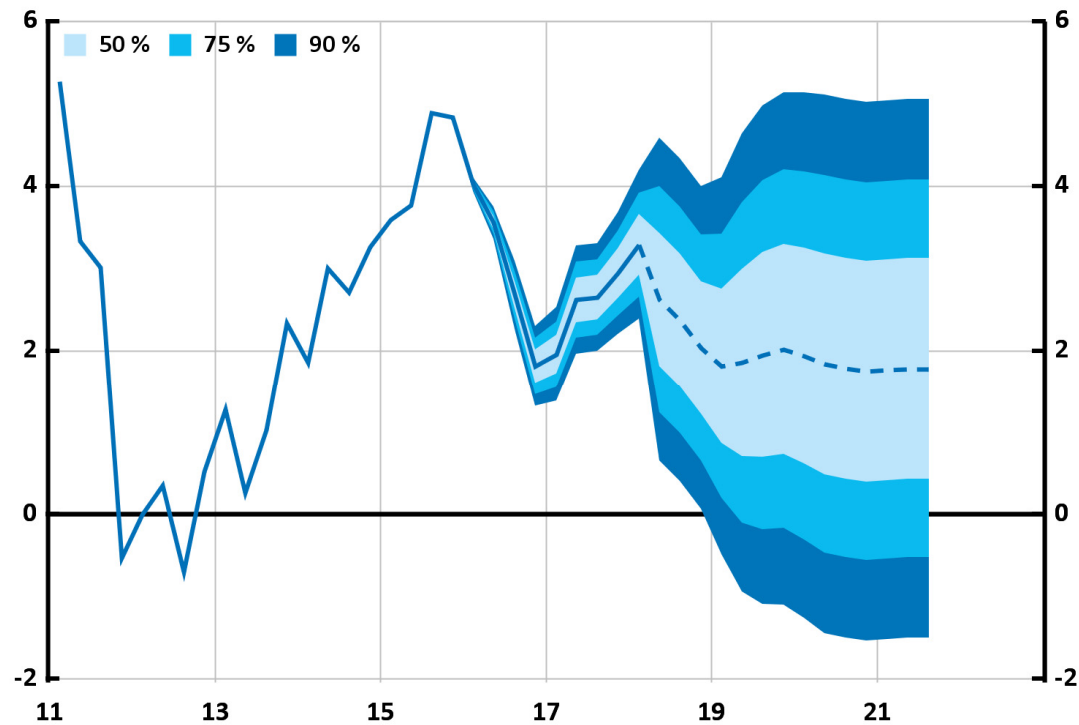


Note. The uncertainty bands for the repo rate are based on the Riksbank's historical forecasting errors and the ability of risk-premium adjusted forward rates to forecast the future repo rate for the period 1999 up to the point when the Riksbank started to publish forecasts for the repo rate during 2007.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

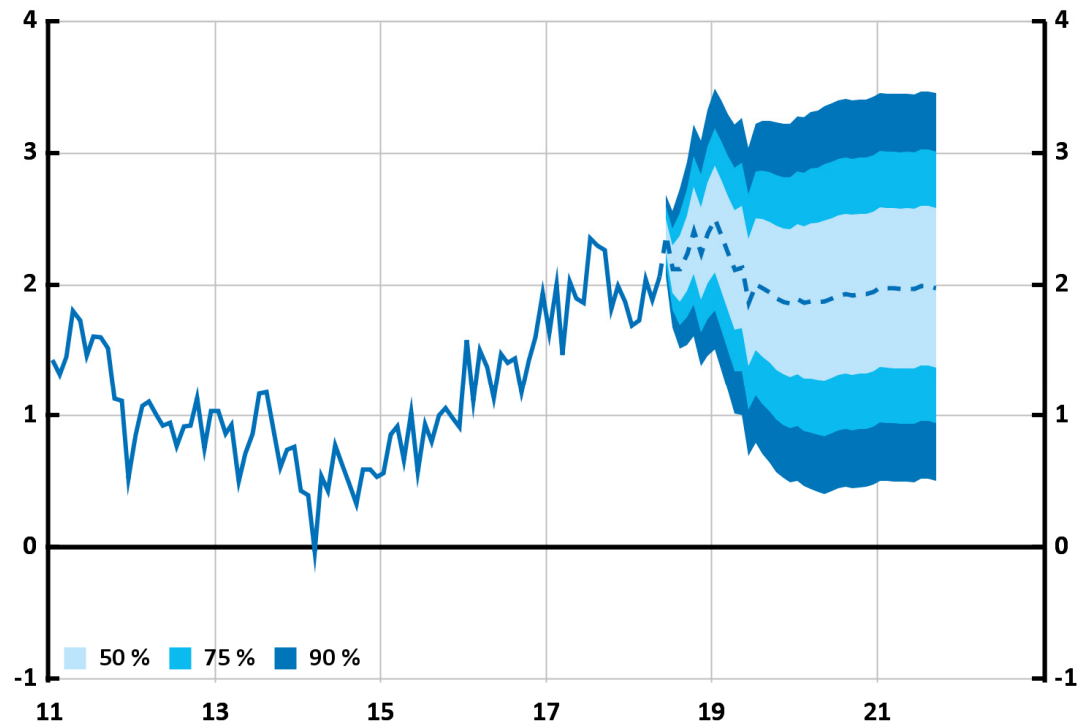


Note. The uncertainty bands are based on the Riksbank's historical forecasting errors. There is also uncertainty for the outcomes for GDP, as the figures in the National Accounts are revised several years after the preliminary publication.

Sources: Statistics Sweden and the Riksbank

# Figure 1.3. CPIF with uncertainty bands

Annual percentage change

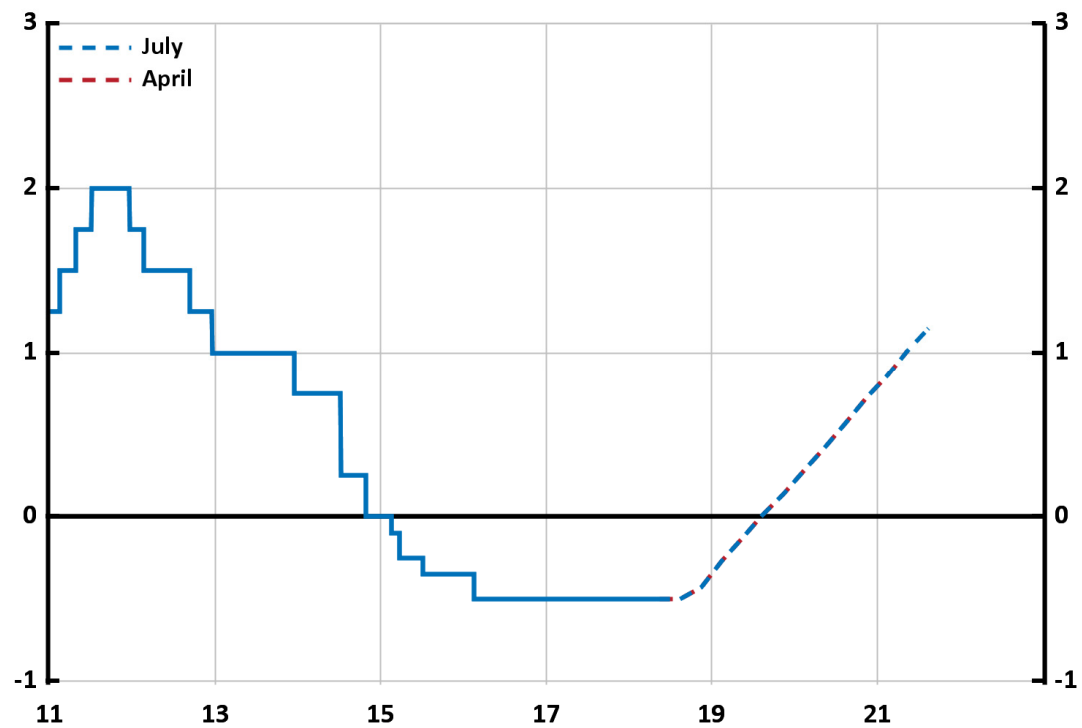


Note. The uncertainty bands are based on the Riksbank's historical forecasting errors.

Sources: Statistics Sweden and the Riksbank

# Figure 1.4. Repo rate

Per cent

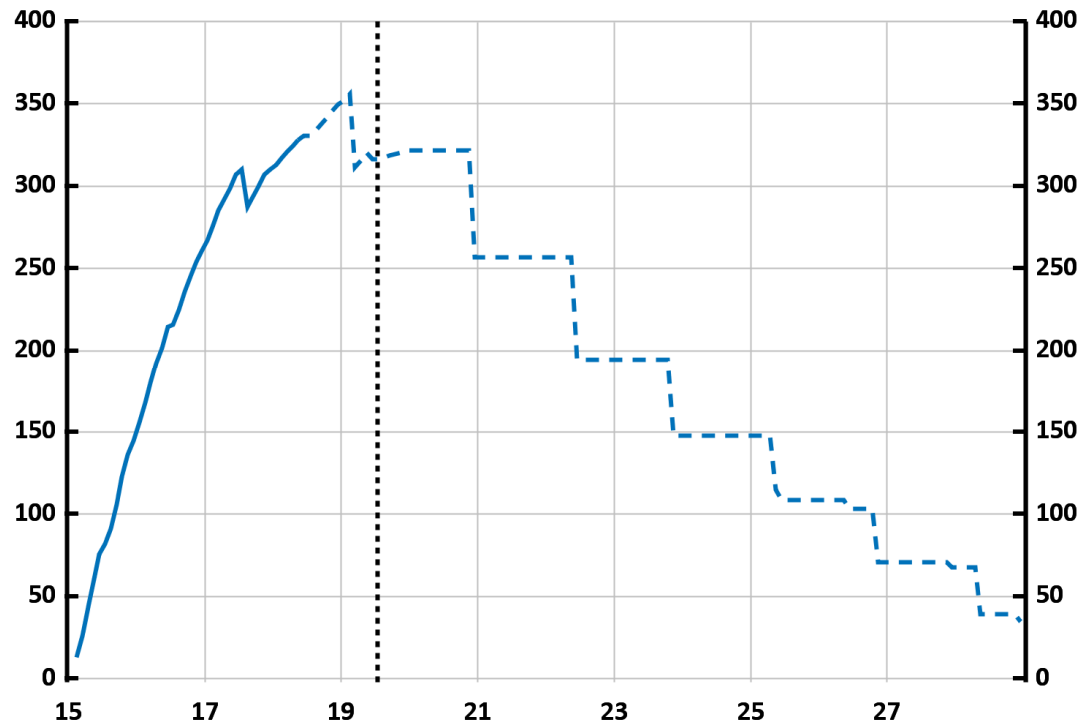


Note. Outcomes are daily data and the forecasts refer to quarterly averages.

Source: The Riksbank

# Figure 1.5. The Riksbank's holdings of government bonds

Nominal amounts, SEK billion

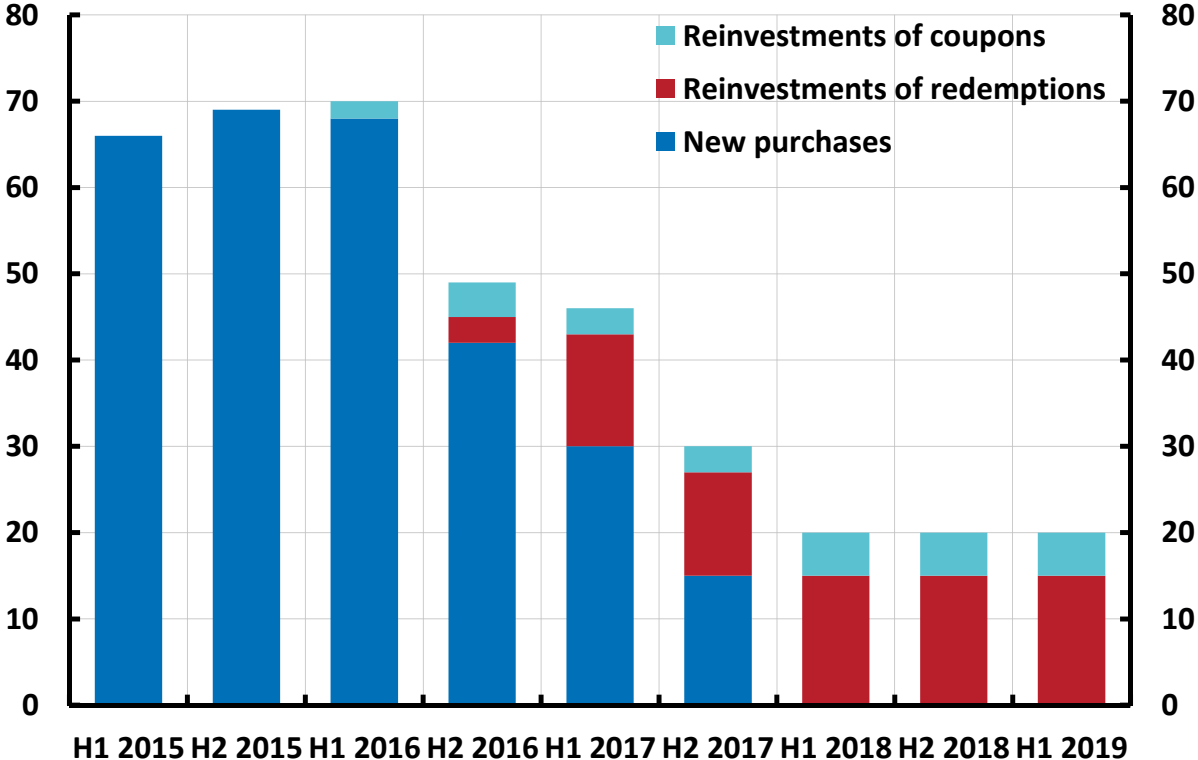


Note. Forecast up until June 2019, after that a technical projection with the assumption that no further reinvestments are made. The development of the holdings is also affected to a certain extent by the bonds' market prices and by which bonds the Riksbank chooses to reinvest in. The vertical line marks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

Source: The Riksbank

# Figure 1.6. The Riksbank's purchases and reinvestments

Nominal amounts, SEK billion



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

Source: The Riksbank



# Figure 1.7. Competition-weighted nominal exchange rate, KIX

Index, 1992-11-18 = 100

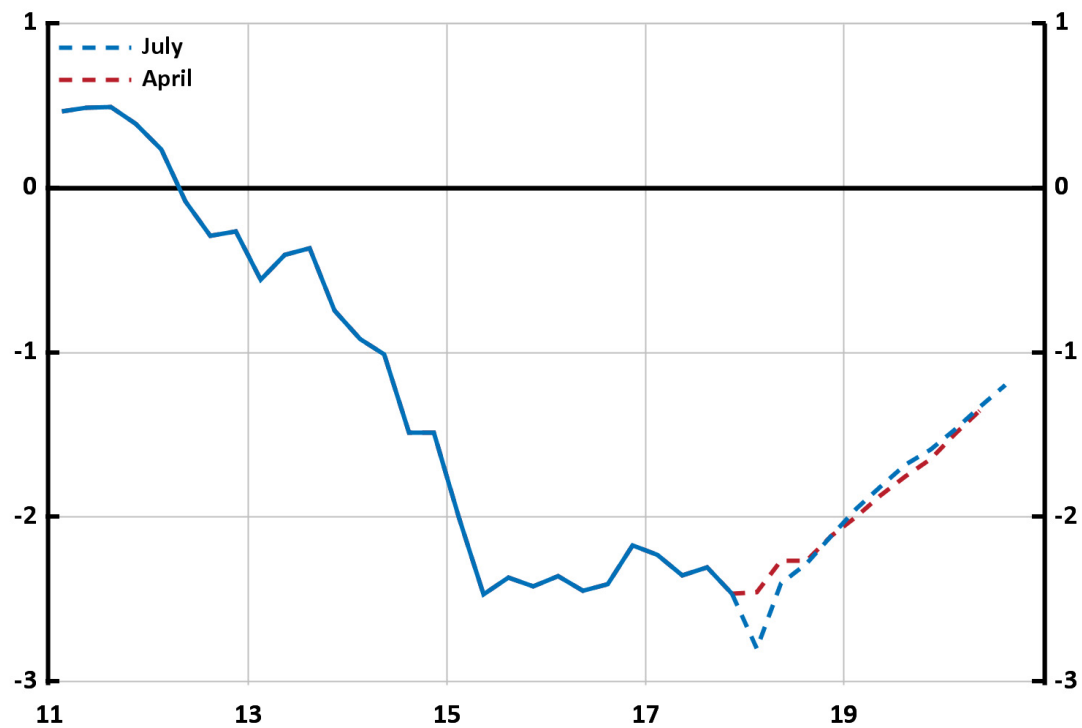


Note. Outcomes are daily rates and forecasts refer to quarterly averages. KIX refers to an aggregate of countries that are important for Sweden's international transactions.

Sources: National sources and the Riksbank

# Figure 1.8. Real repo rate

Per cent, quarterly averages

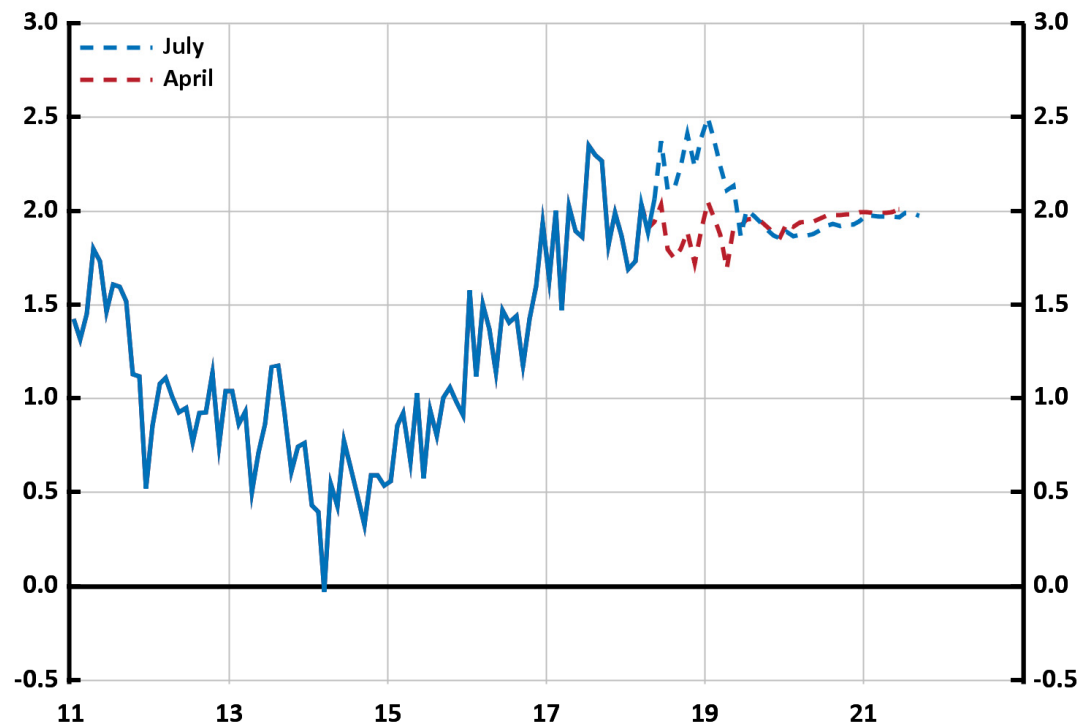


Note. The real repo rate is calculated as the mean of the Riksbank's repo rate forecast for the year ahead minus the inflation forecast (CPIF) for the corresponding period.

Sources: Statistics Sweden and the Riksbank

# Figure 1.9. CPIF

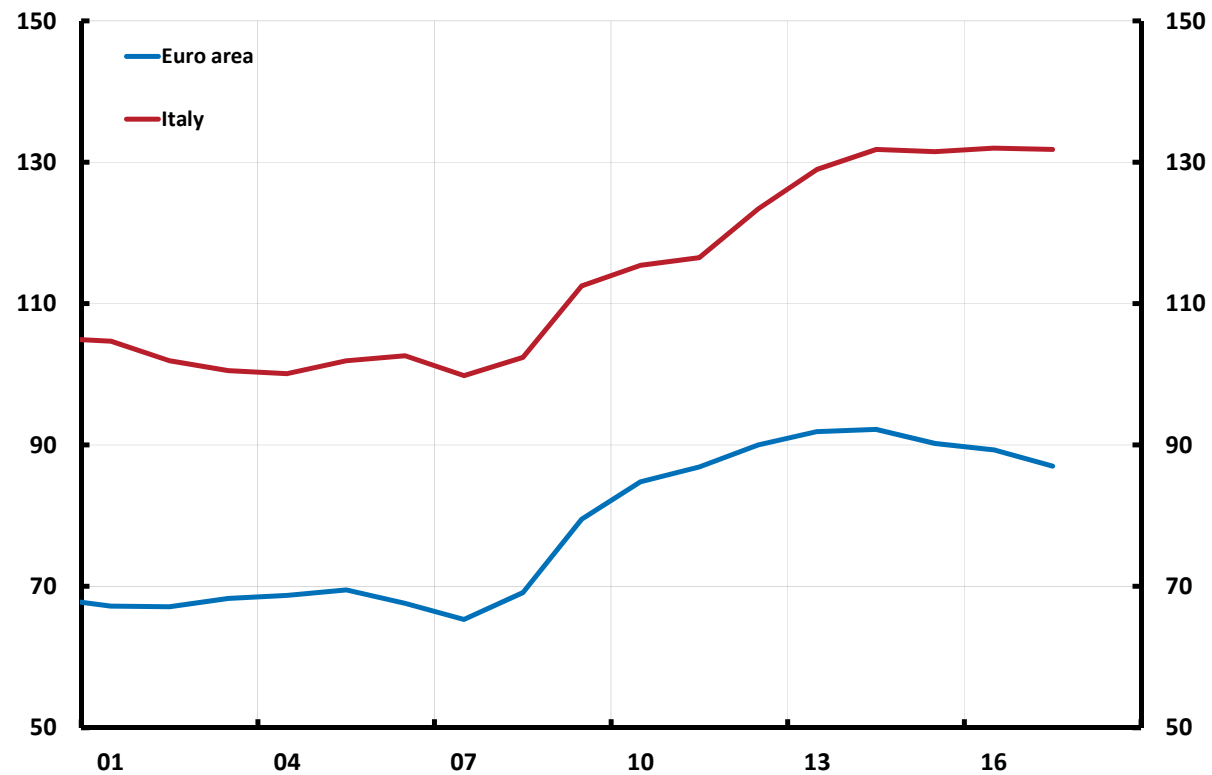
Annual percentage change



Sources: Statistics Sweden and the Riksbank

# Figure 1.10. Public gross debt in Italy and the euro area

Per cent of GDP

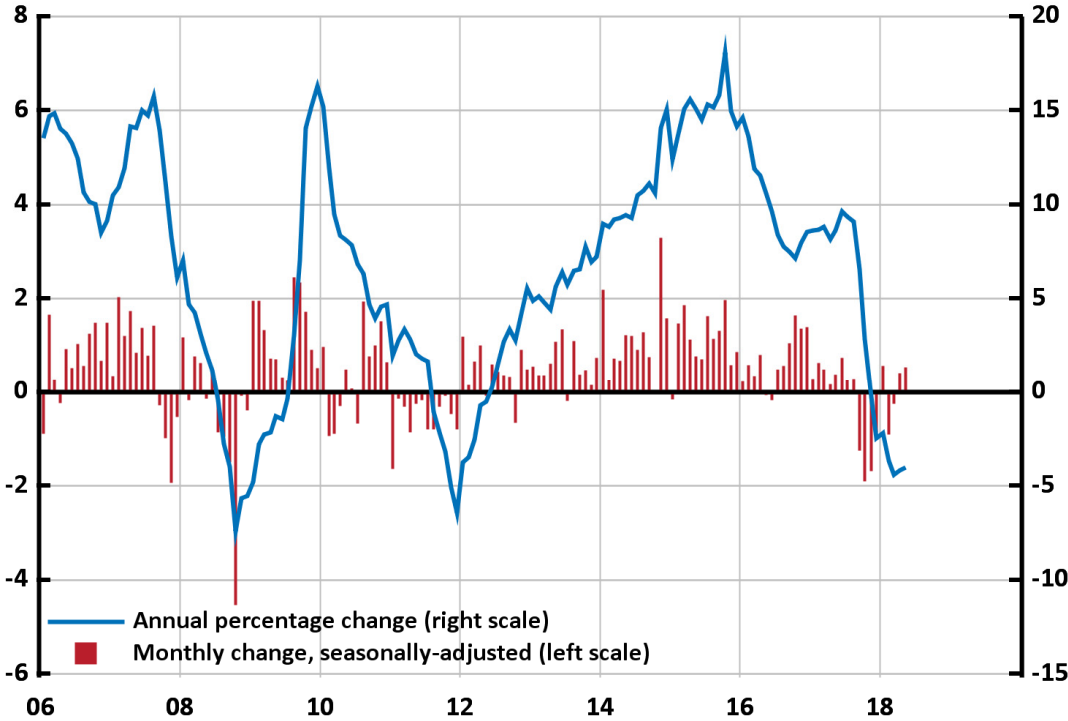


Note. Refers to consolidated gross debt in the public sector (Maastricht debt).

Source: Eurostat

# Figure 1.11. House prices according to HOX Sweden

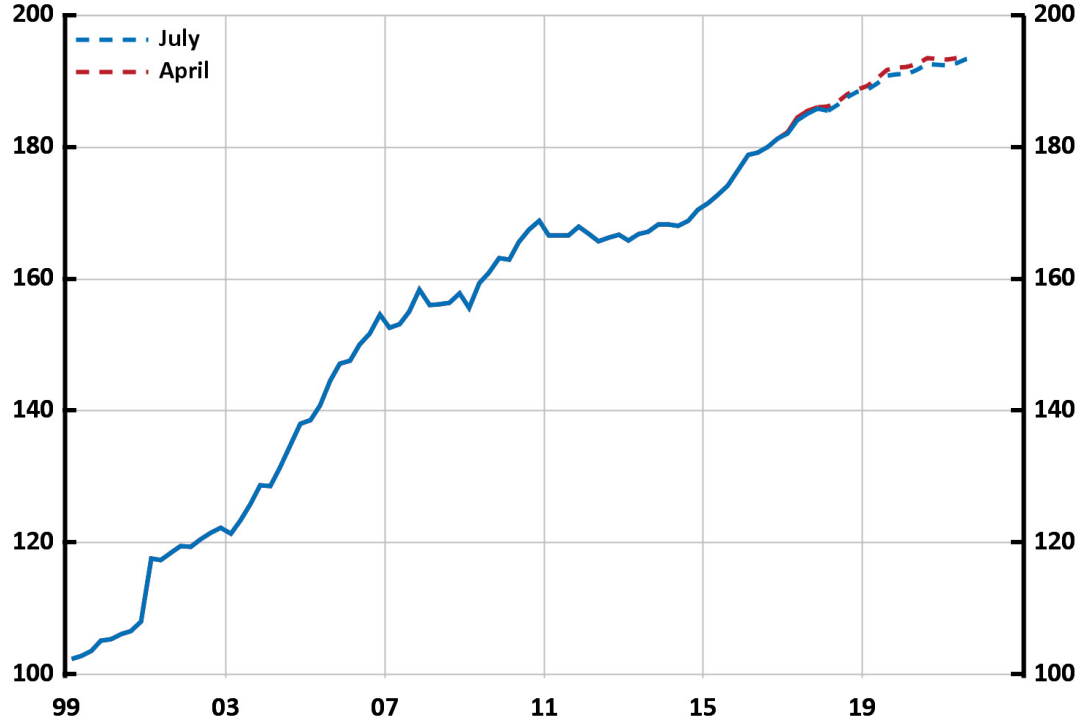
Per cent



Sources: Valueguard and the Riksbank


# Household debt ratio

Per cent of yearly disposable income



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

Sources: Statistics Sweden and the Riksbank



# Article – The Phillips curve and monetary policy

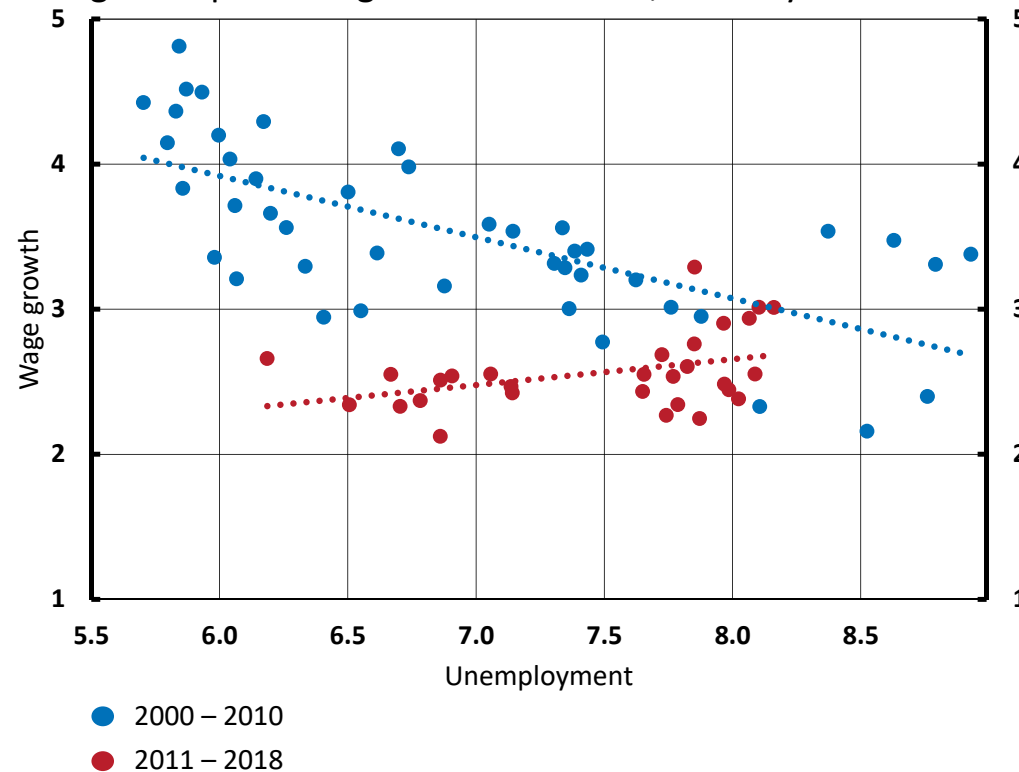
S V E R I G E S R I K S B A N K



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# Figure 1.13. Phillips curve with wage growth and unemployment

Annual percentage change and percentage of labour force, 15–74 years.



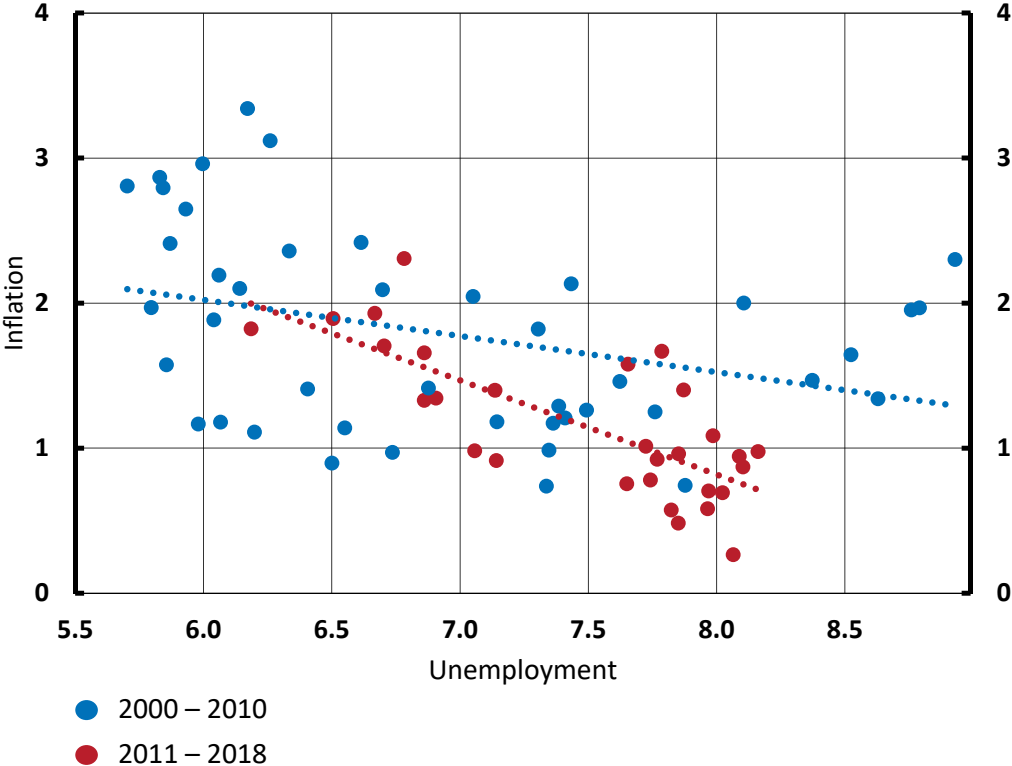
Note. Wages according to the short-term wage statistics from the National Mediation Office. Blue and red lines show estimated regression lines for the period 2000-2010 and 2011-2018 respectively.

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



# Figure 1.14. Phillips curve with inflation and unemployment

Annual percentage change and percentage of labour force, 15–74 years.

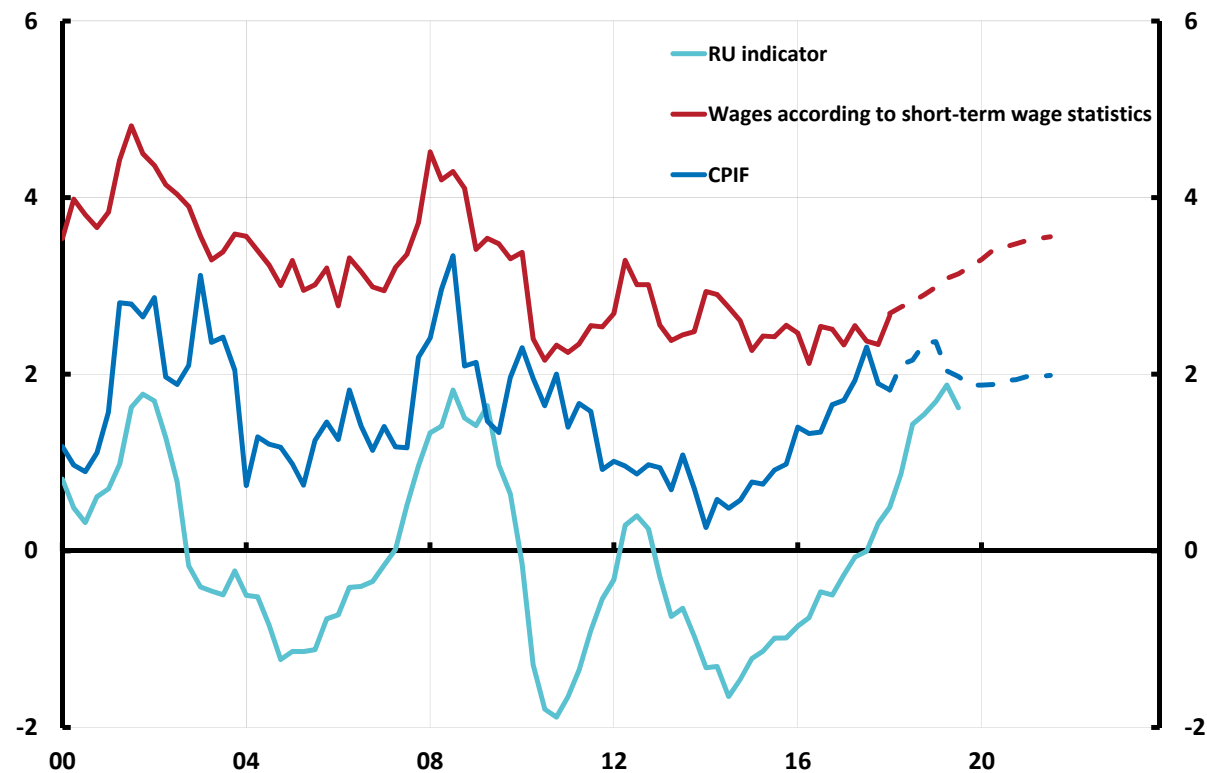


Note. Inflation refers to the CPIF. Blue and red lines show the estimated regression correlation for the periods 2000–2010 and 2011–2018 respectively.

Sources: Statistics Sweden and the Riksbank

# Figure 1.15. Short-term wages, the CPIF and the RU indicator 6 quarters earlier

Annual percentage change and standard deviation respectively

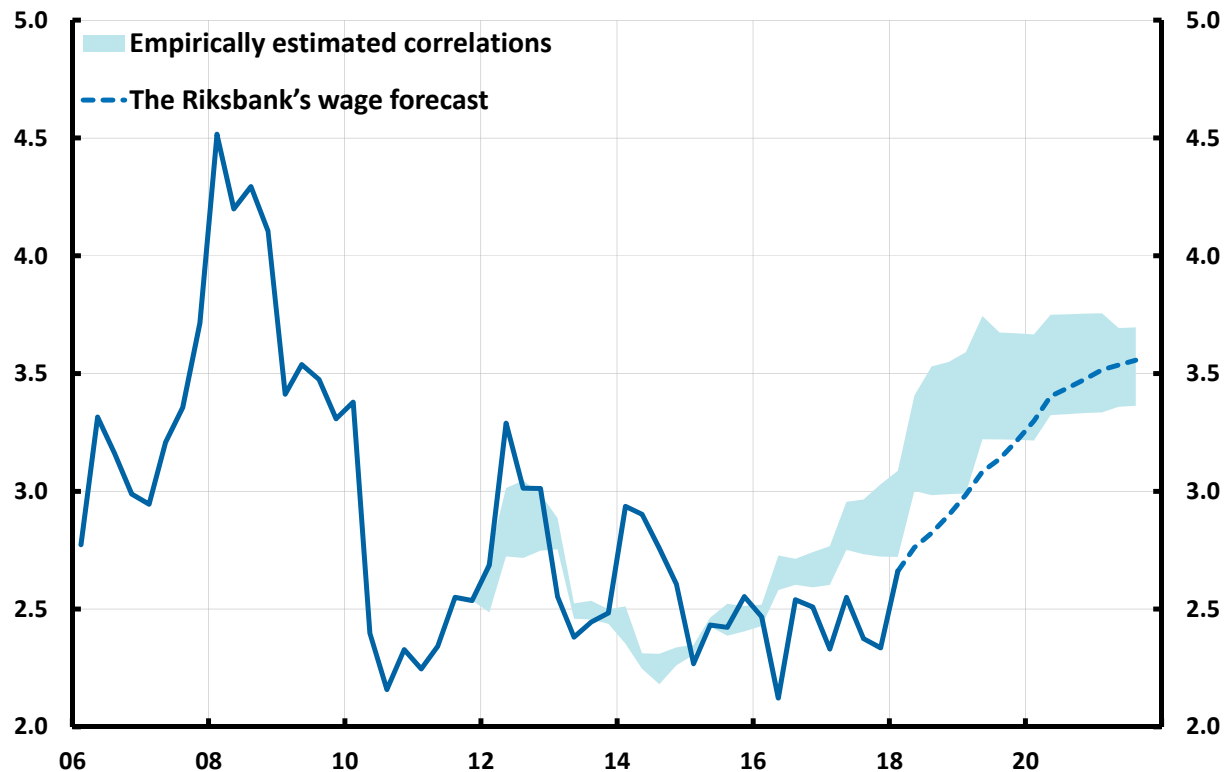


Note. The National Mediation Office's forecast for definitive outcomes for short-term wages 2017Q2-2018Q1. The RU indicator is a measure of resource utilisation. It is normalised so that a mean value is 0 and the standard deviation is 1.

Sources: Statistics Sweden and the Riksbank

# Figure 1.16. The Riksbank's wage forecast and empirically estimated correlations

Annual percentage change



Note. Wages according to short-term wage statistics. The National Mediation Office's forecast for definitive outcomes for short-term wages 2017Q2 – 2018Q1. The field contains adjusted values between 2012 and 2018 Q1 and model forecasts thereafter.

Sources: Swedish National Mediation Office and the Riksbank

# Figure 1.17. Inflation and unit labour costs

Annual percentage change



Note. The trend in unit labour costs (for the entire economy) has been calculated using a so-called HP filter based on the Riksbank's forecast in July 2018 and an assumption that unit labour costs will increase by 2 per cent across the forecast horizon.

Sources: Statistics Sweden and the Riksbank

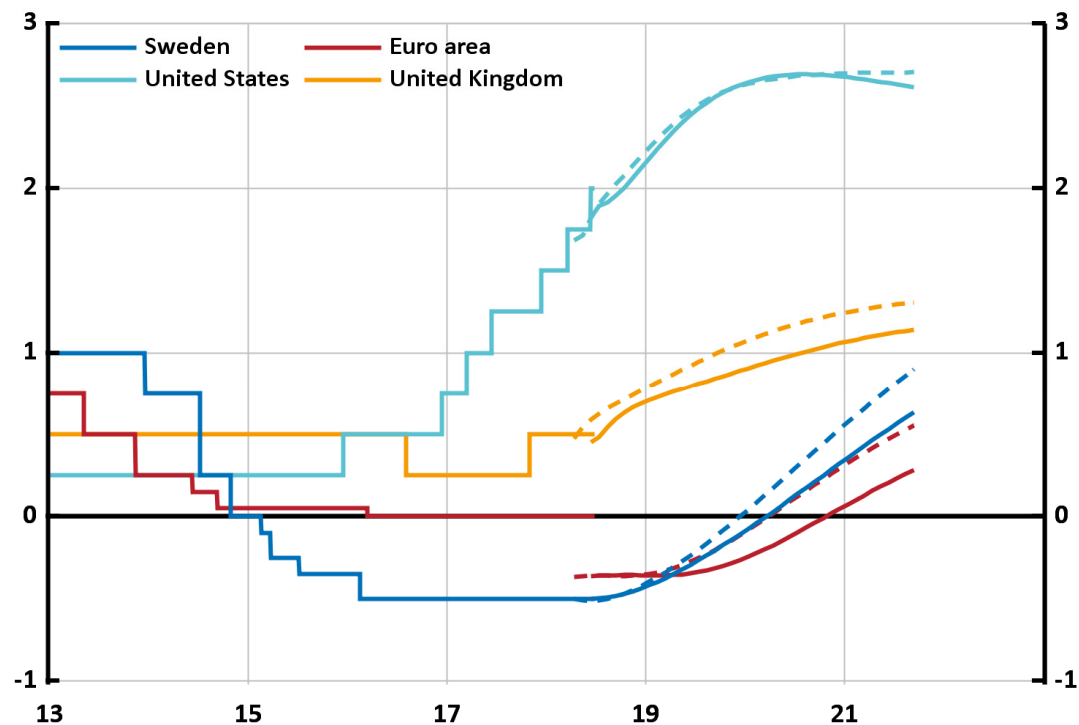
# Chapter 2

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

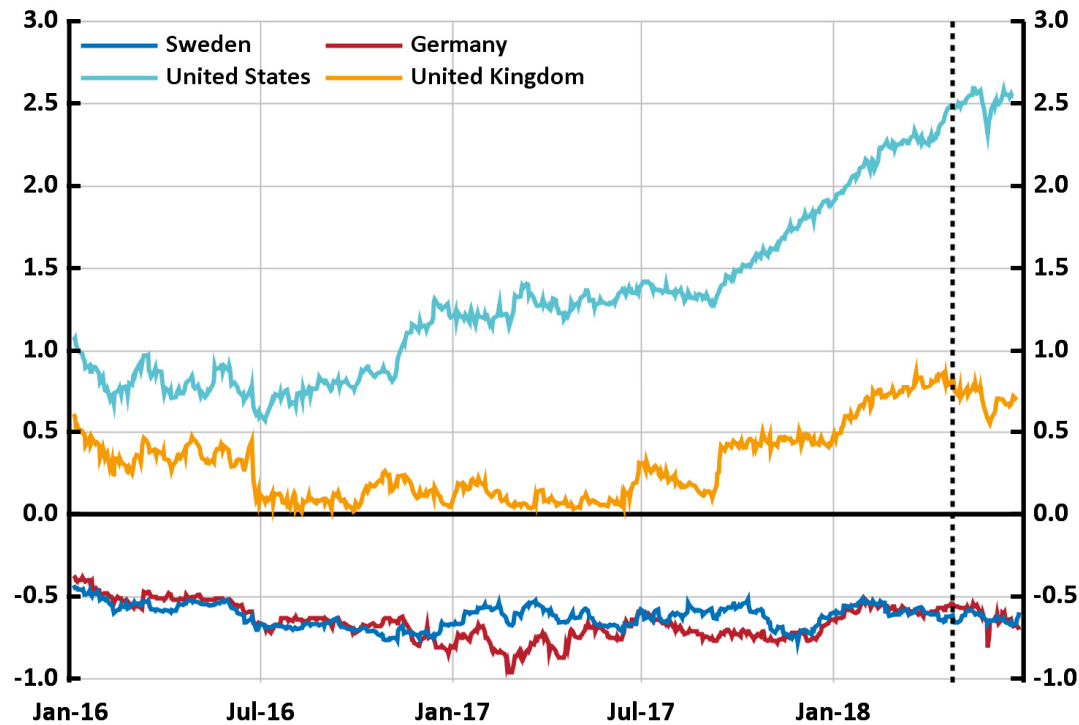


Note. Forward rates describe the expected overnight rate, which does not always correspond to the policy rate (the main refinancing rate for the euro area). Unbroken lines are estimated on 29 June 2018, broken lines are estimated on 27 April 2018.

Sources: The national central banks, Macrobond and the Riksbank

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

Per cent

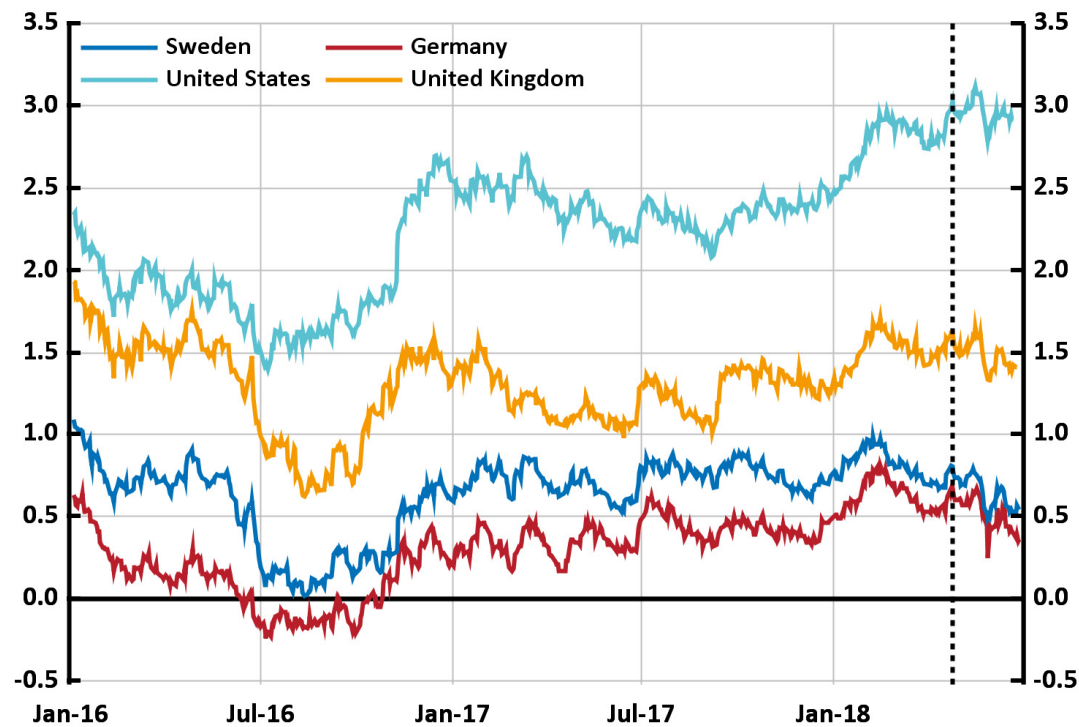


Note. Implied zero-coupon yields from government bonds. The vertical line indicates the Monetary Policy Meeting in April.

Sources: The national central banks and the Riksbank

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

Per cent



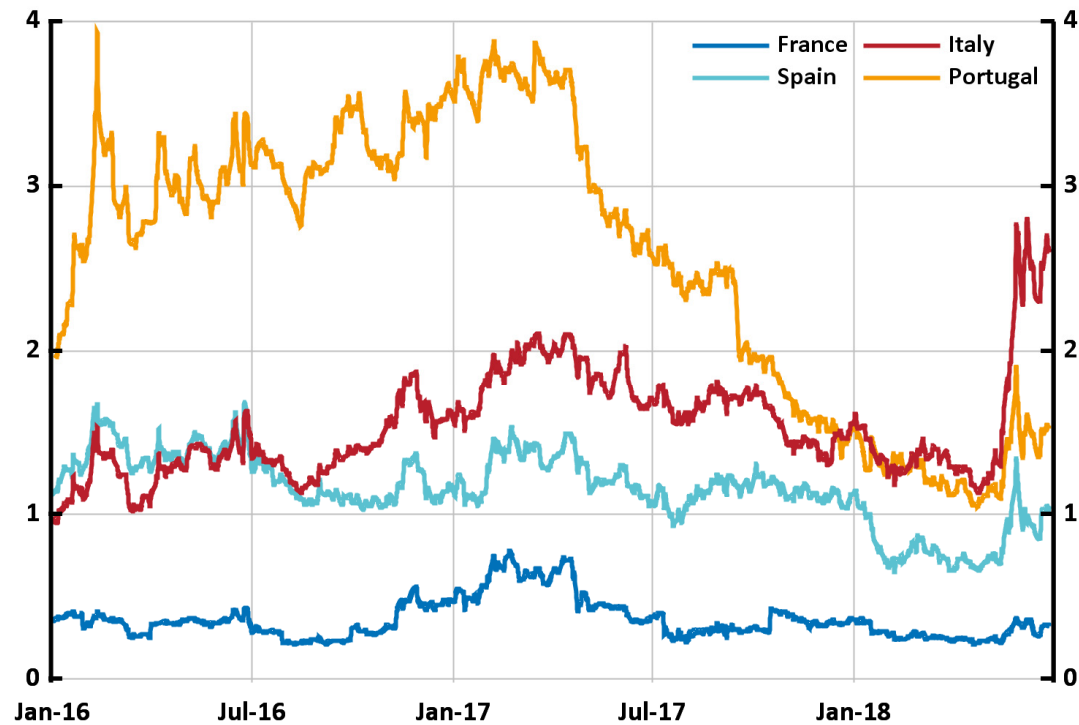
Note. Implied zero-coupon yields from government bonds. The vertical line indicates the Monetary Policy Meeting in April.

Sources: The national central banks and the Riksbank



# Figure 2.4. Yield differential in relation to Germany, 10-year

Percentage points

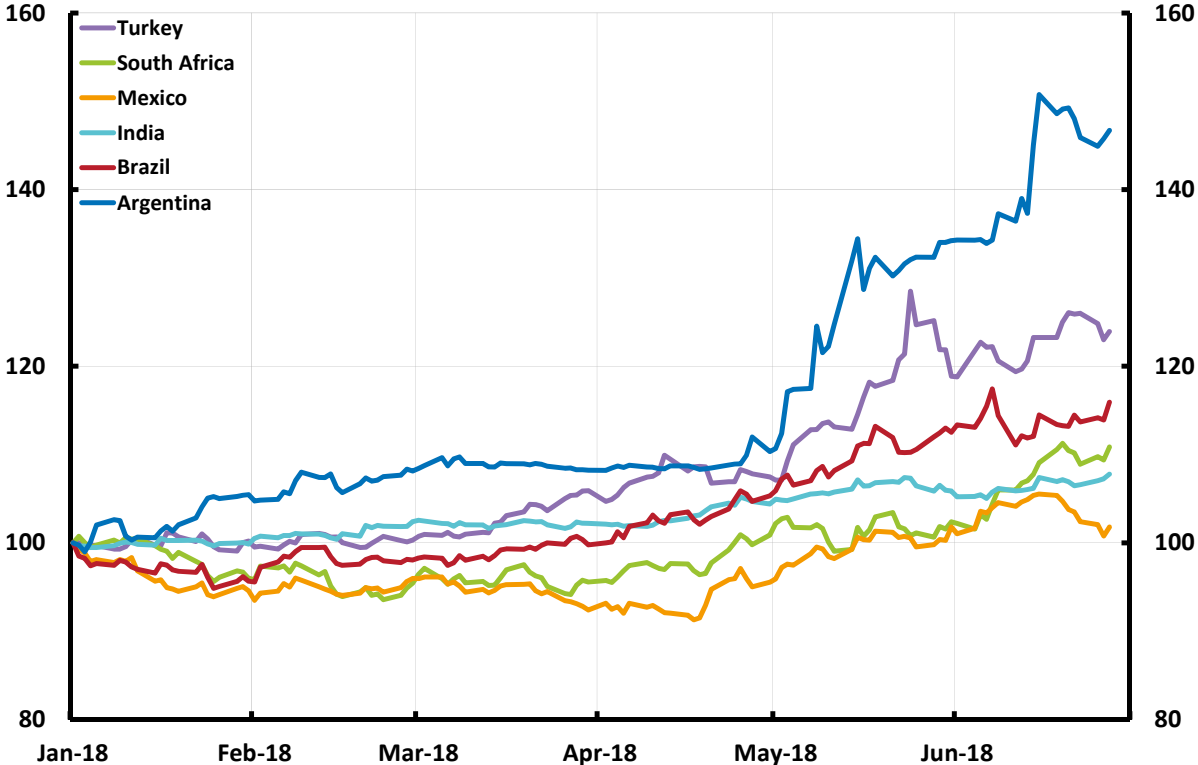


Note. Yield differentials refer to 10-year benchmark bonds.

Source: Macrobond

# Figure 2:5. Emerging market economies' currencies against the dollar

Index, 2018-01-01=100

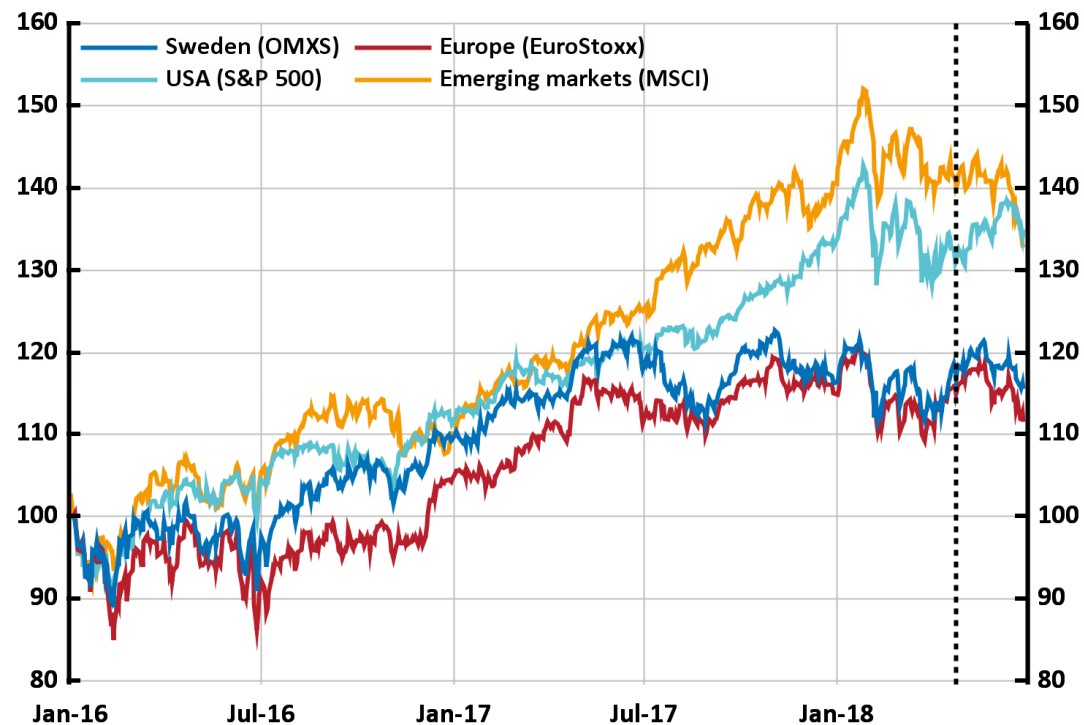


Note. A value higher than 100 indicates a weaker exchange rate.

Source: Macrobond

# Figure 2.6. Stock market movements in local currency

Index, 4 January 2016 = 100

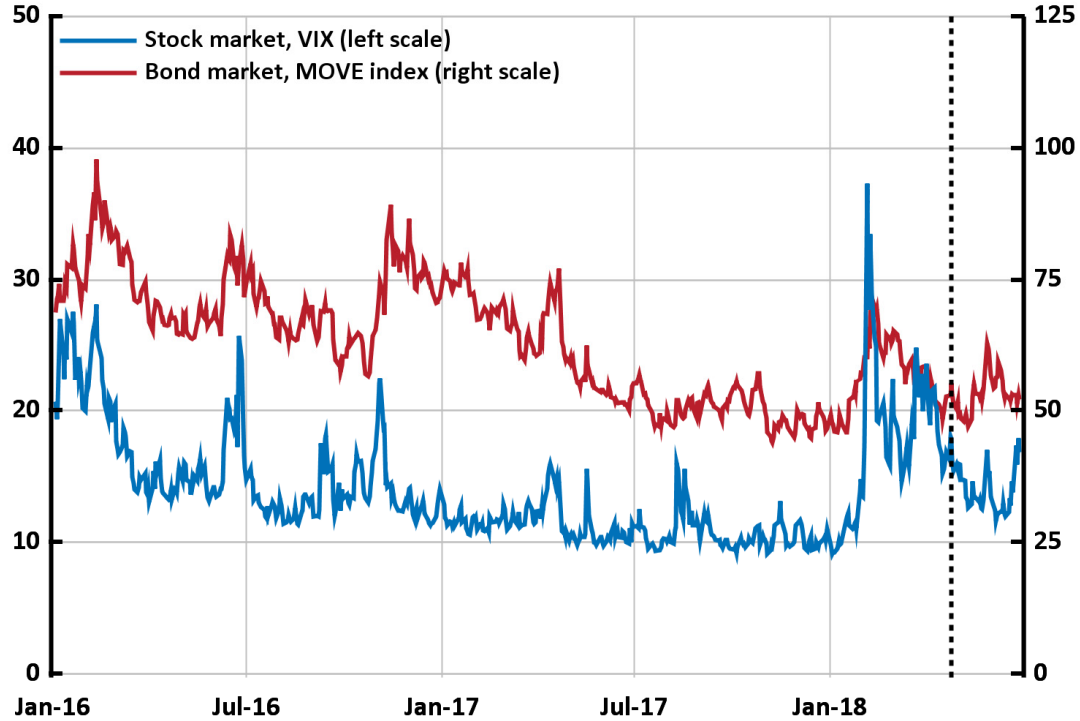


Note. The vertical line indicates the Monetary Policy Meeting in April.

Source: Macrobond

# Figure 2.7. Volatility Indices

Per cent and index respectively

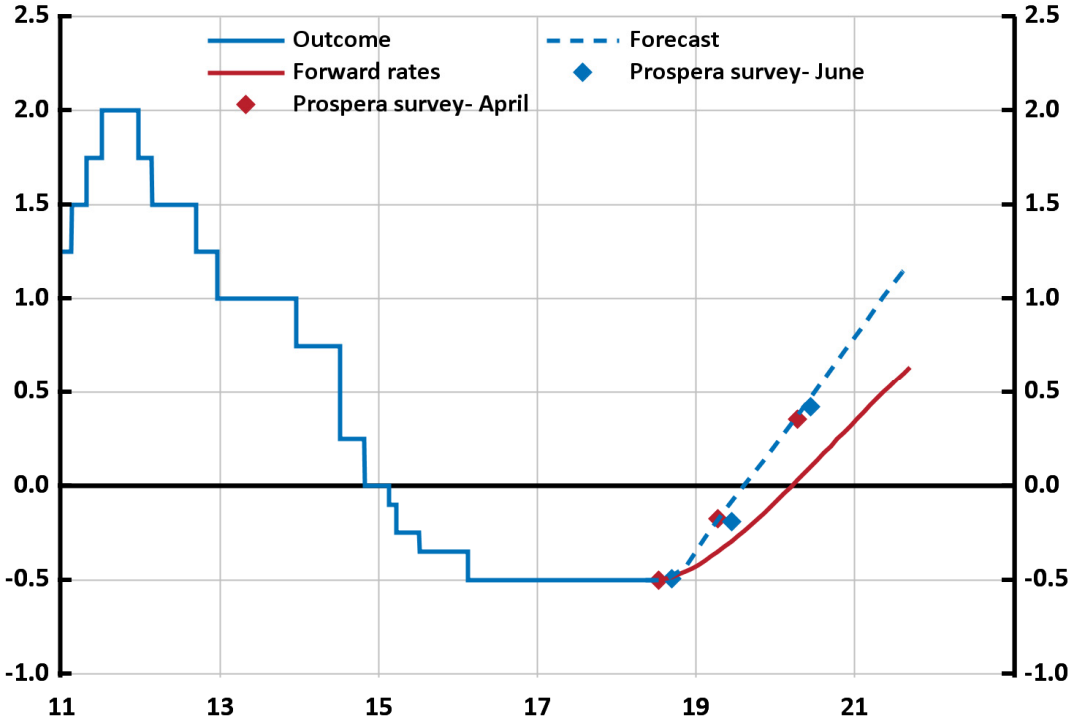


Note. Volatility Index (VIX) shows the expected volatility on the US stock market based on options prices. Merrill Lynch Option Volatility Estimate (MOVE) Index is a measure of the expected volatility of US government bonds based on options prices. The vertical line indicates the Monetary Policy Meeting in April.

Sources: Chicago Board Operations Exchange and Merrill Lynch

# Figure 2.8. Repo rate and market expectations

Per cent, average

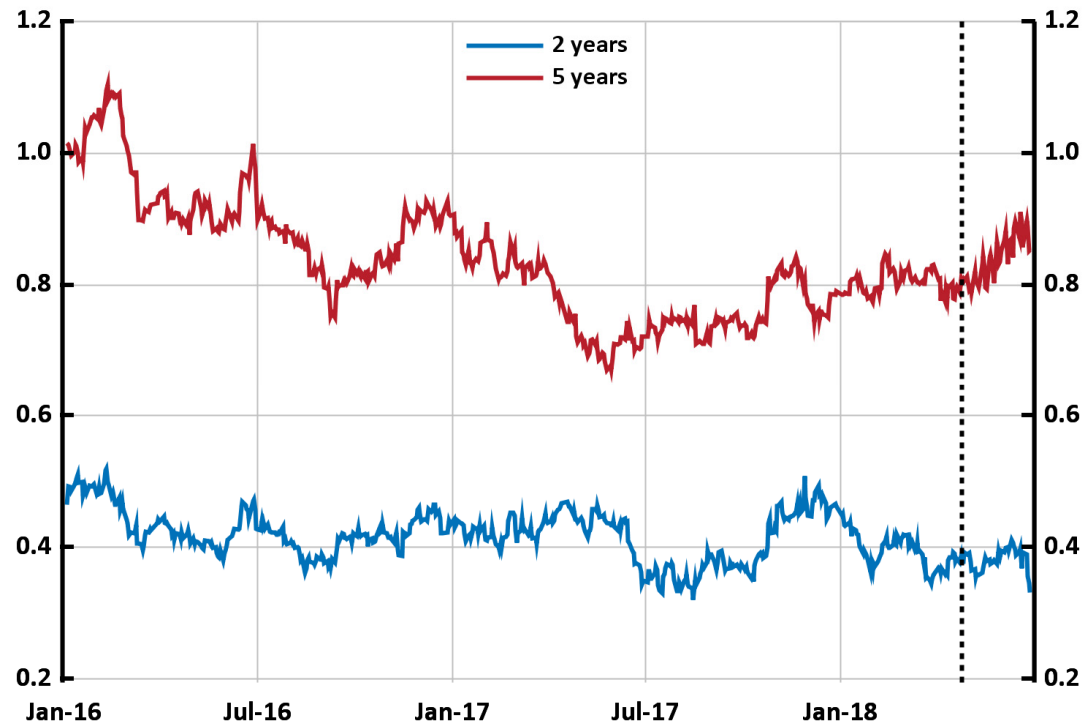


Note. The forward rate is estimated on 2018-06-29 and is a measure of the expected repo rate. The survey responses show the average for money market participants 2018-03-27 respectively 2018-05-30.

Sources: Macrobond, TNS Sifo Prospera and the Riksbank

# Figure 2.9. Yield spread between mortgage bonds and government bonds

Percentage points



Note. Yields on mortgage bonds and government bonds are zero coupon yields calculated using the Nelson-Siegel method. The vertical line indicates the Monetary Policy Meeting in April.

Sources: Macrobond and the Riksbank

# Figure 2.10. Competition-weighted nominal exchange rate, KIX

Index, 1992-11-18 = 100

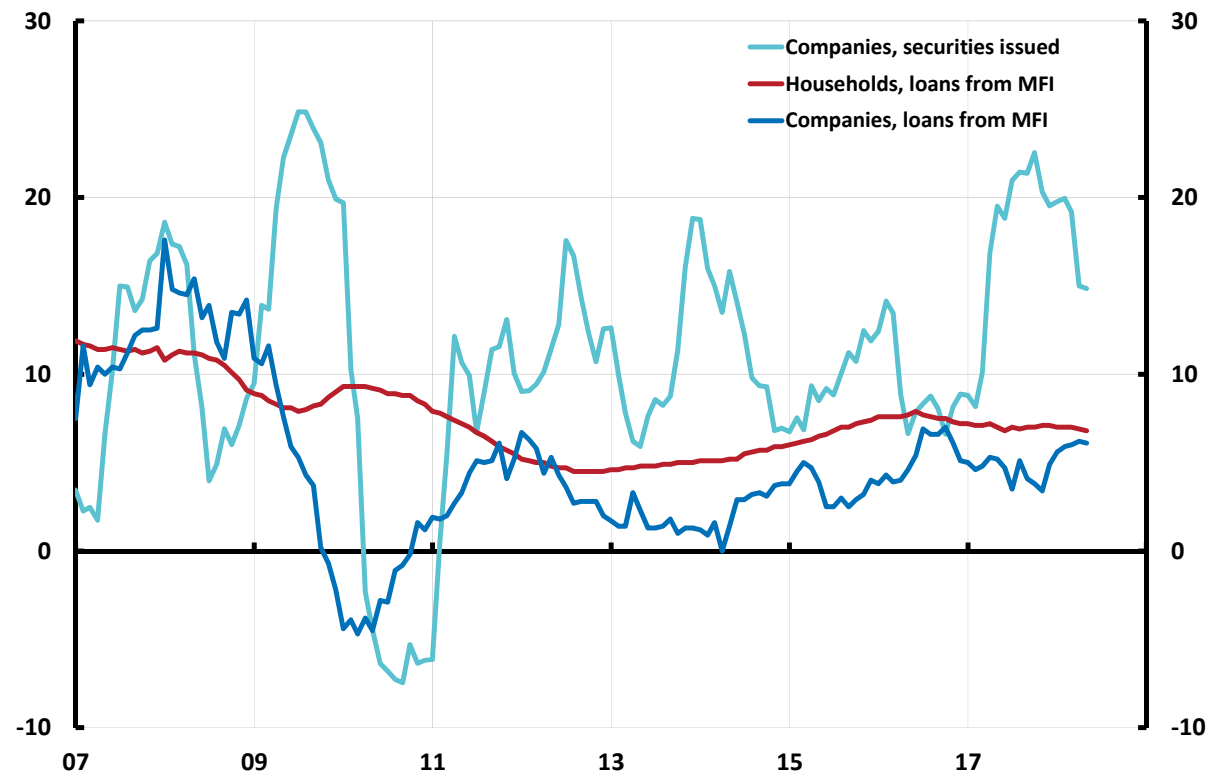


Note. Outcomes are daily rates. KIX refers to an aggregate of countries that are important for Sweden's international transactions. The vertical line indicates the Monetary Policy Meeting in April.

Sources: National sources and the Riksbank

# Figure 2.11. Bank lending to households and companies

Annual percentage change



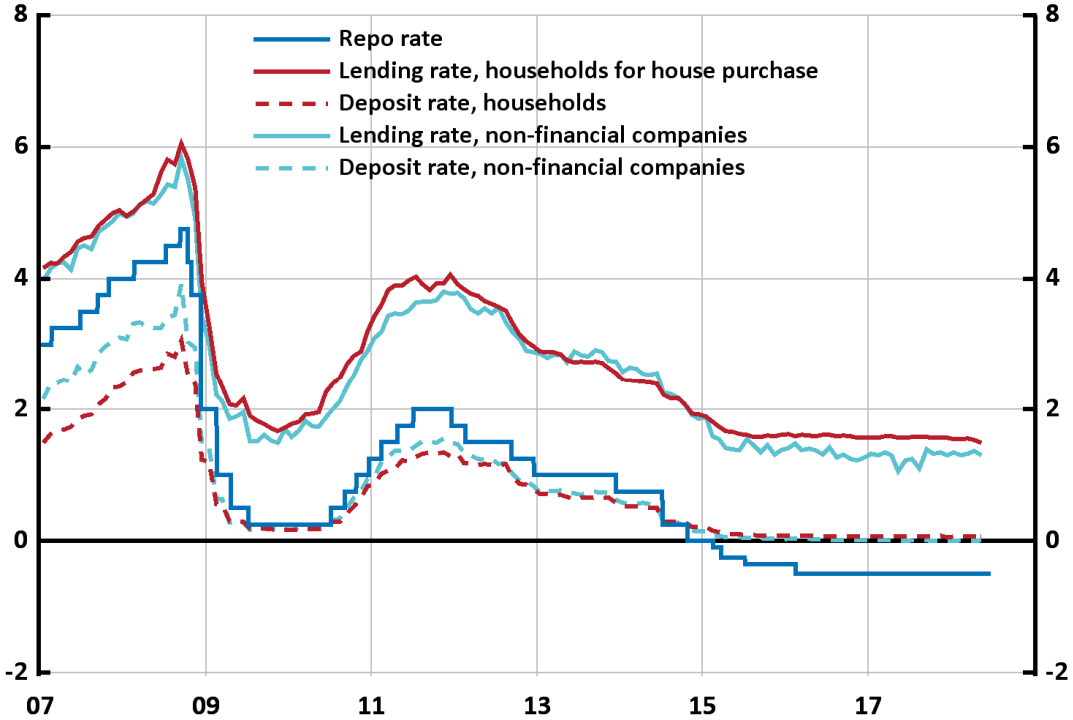
Note. Lending by Monetary financial institutions (MFI) to households and non-financial corporations adjusted for reclassifications and bought and sold loans, according to financial market statistics. Securities issued by non-financial corporations have been adjusted for currency impact. The data extends until the end of April 2018.

Source: Statistics Sweden



# Figure 2.12. 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

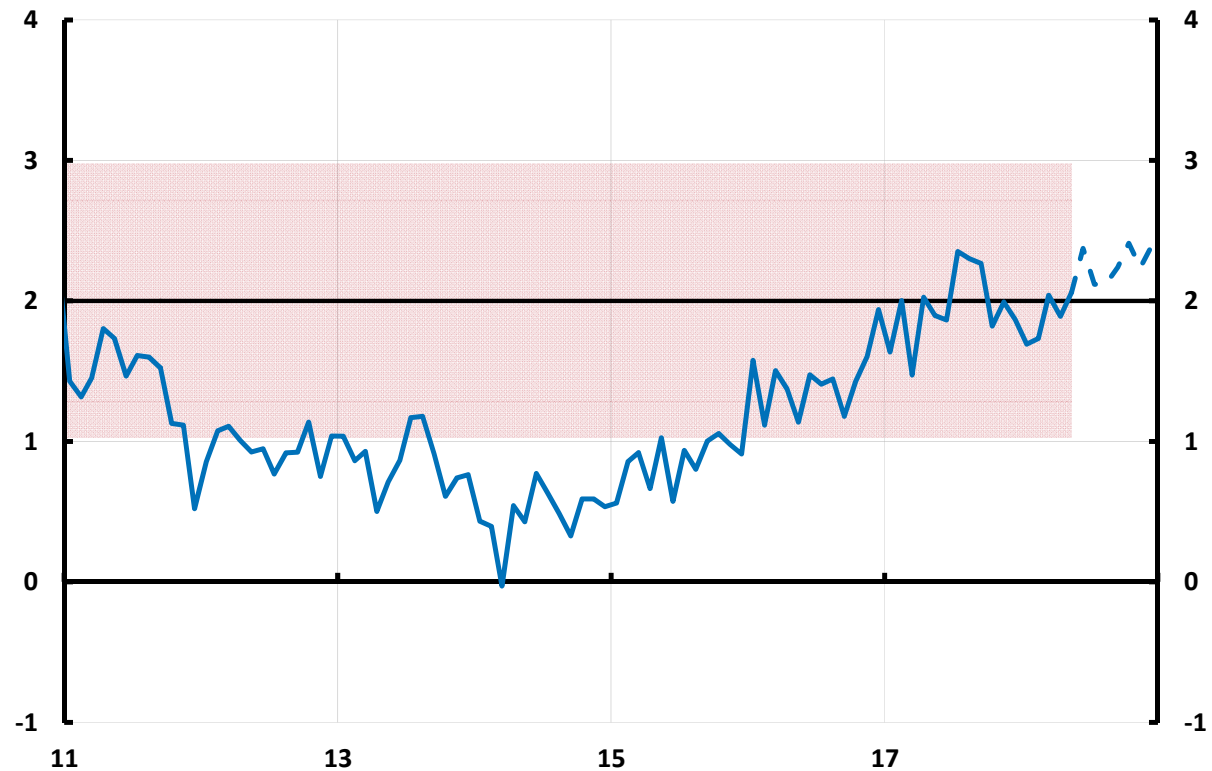
# Chapter 3

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

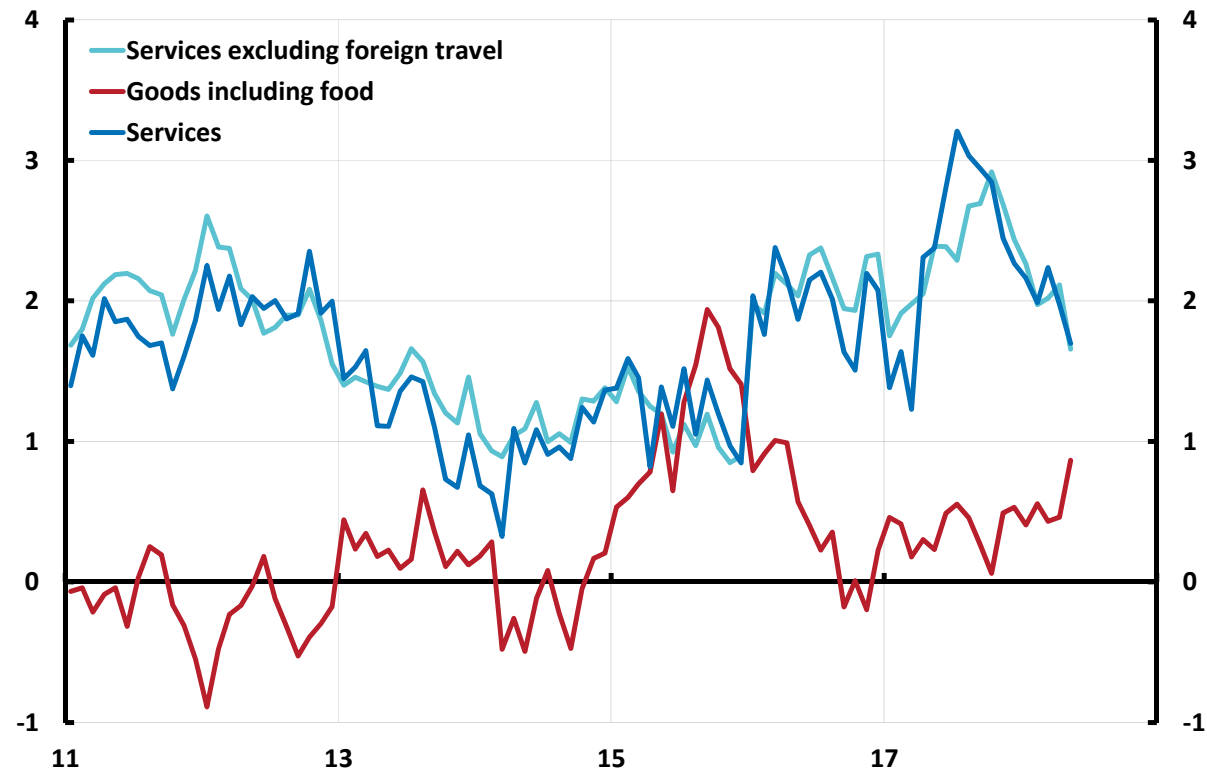


Note. The pink area shows the Riksbank's variation band and covers about three-quarters of the outcomes since January 1995. The variation band is a means of showing whether the deviation from the inflation target is unusually large. The dotted line refers to the Riksbank's forecast.

Sources: Statistics Sweden and the Riksbank

# Figure 3.2. Prices of goods and services in the CPI

Annual percentage change

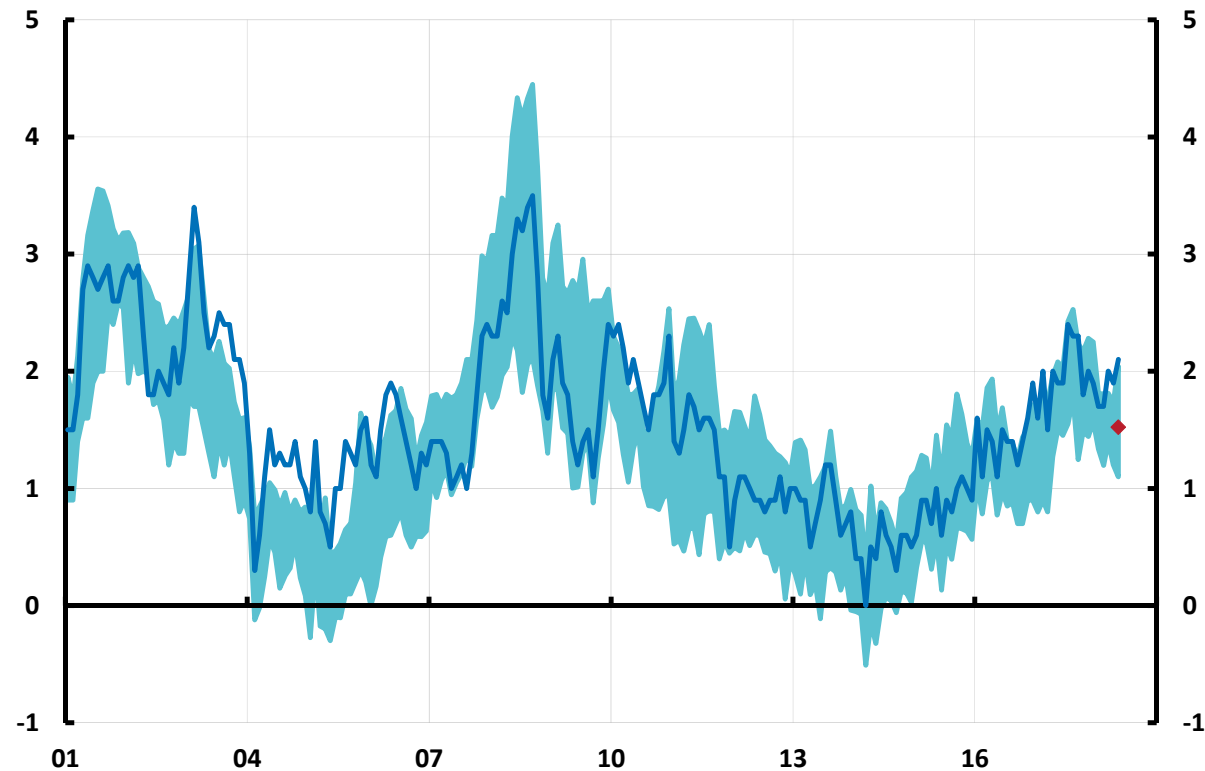


Note. Goods including food is a combination of the aggregate goods and food in the CPI. Together, these account for 45 per cent of the CPI. Service prices account for 45 per cent of the CPI.

Sources: Statistics Sweden and the Riksbank

# Figure 3.3. The CPIF and different measures of underlying inflation

Annual percentage change

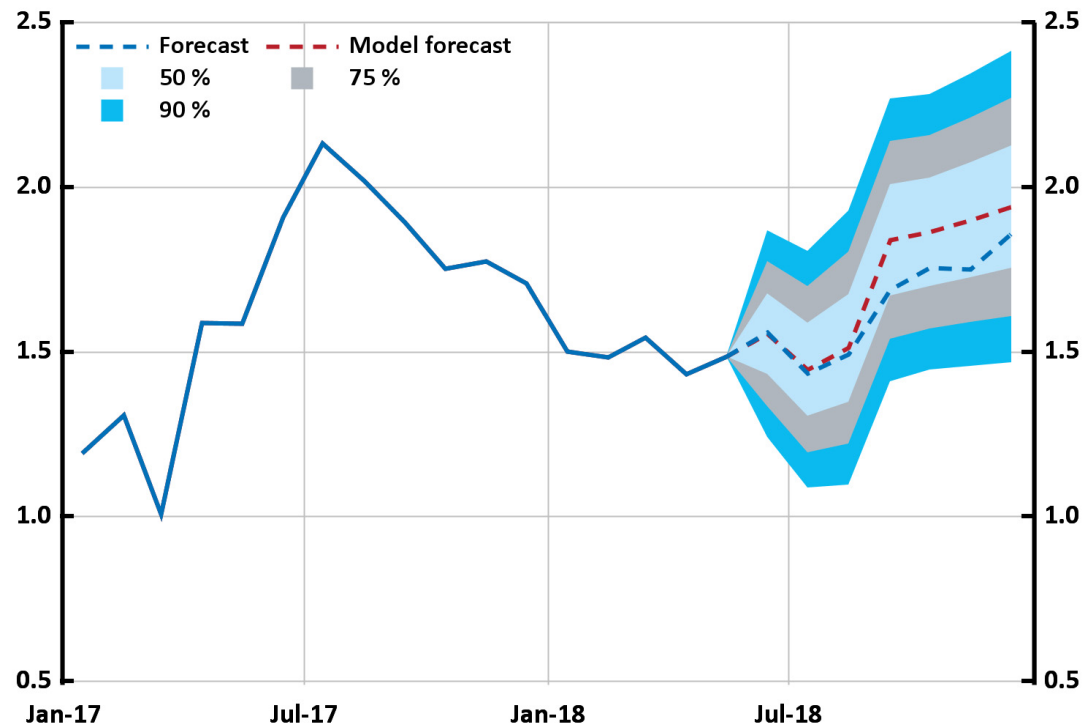


Note. The field shows the highest and lowest outcomes among different measures of underlying inflation. The measures included are the CPIF excluding energy, UND24, Trim85, HICP excluding energy and unprocessed food, persistence-weighted inflation, factors from principal component analysis and weighted mean inflation. The red dot represent the median in May 2018 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

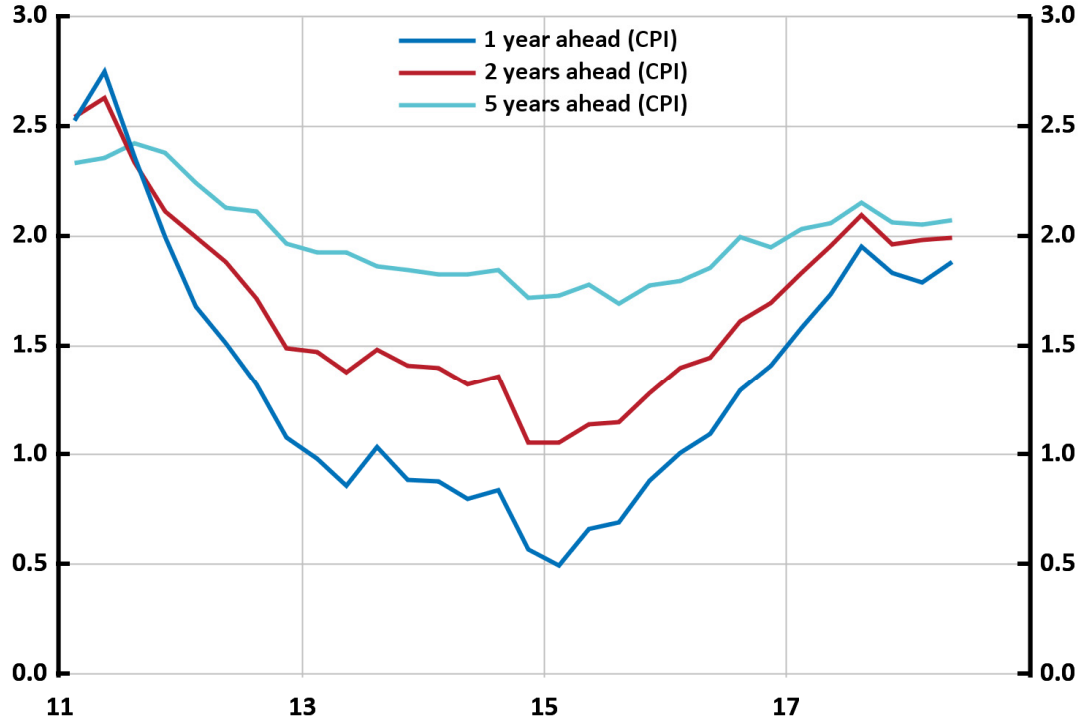


Note. The uncertainty bands are based on the models' historical forecast errors. The model forecasts are adjusted with regard to the new seasonal pattern following on from method changes in the calculation of the price index for package holidays.

Sources: Statistics Sweden and the Riksbank

# Figure 3.5. Inflation expectations among all participants

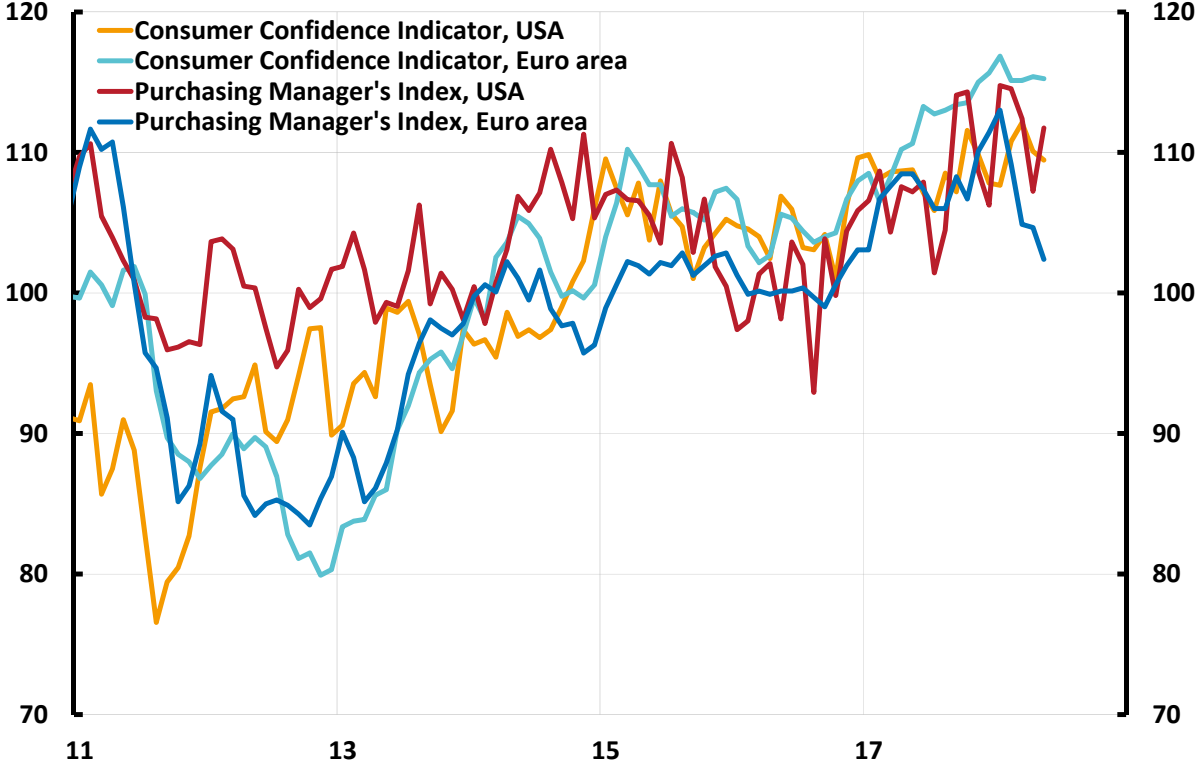
Per cent, mean



Source: TNS Sifo Prospera

# Figure 3.6. Confidence indicators abroad

Index, mean value = 100, standard deviation = 10



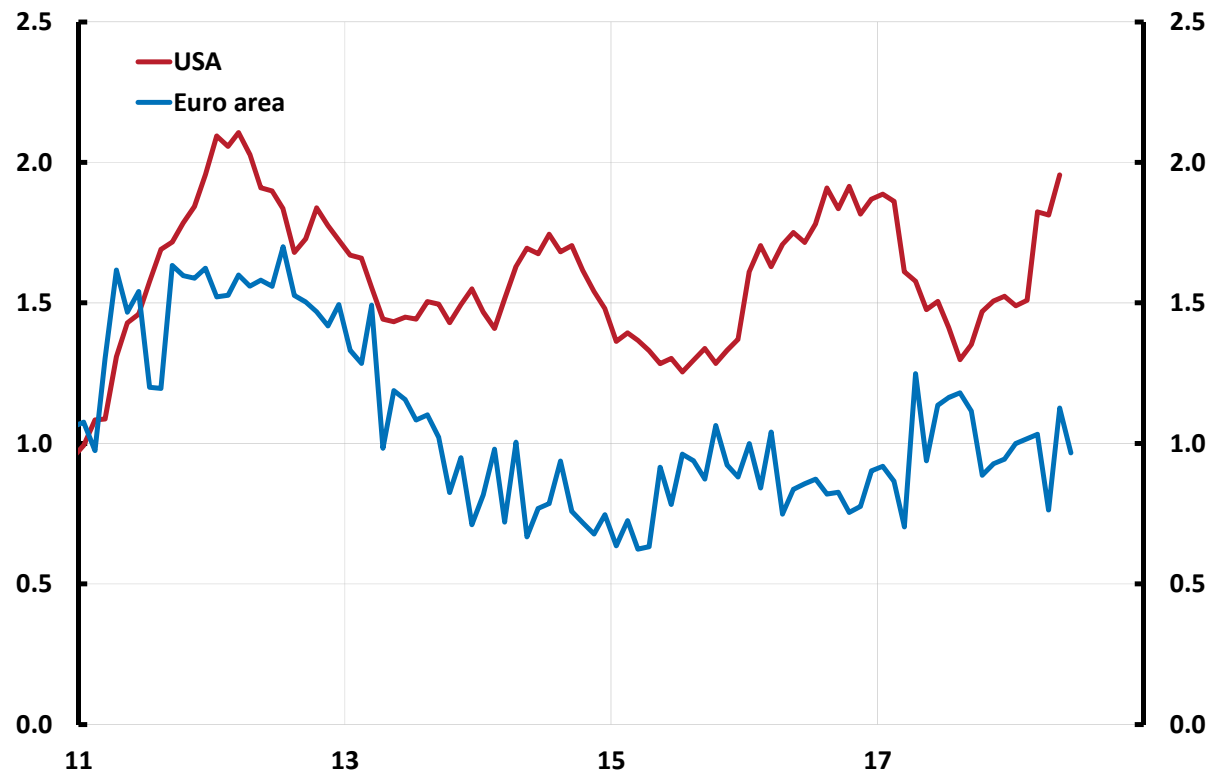
Note. The series have been normalised from January 1999. The Riksbank's aggregate of confidence in the US manufacturing and service sectors.

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



# Figure 3.7. Underlying inflation abroad

Annual percentage change

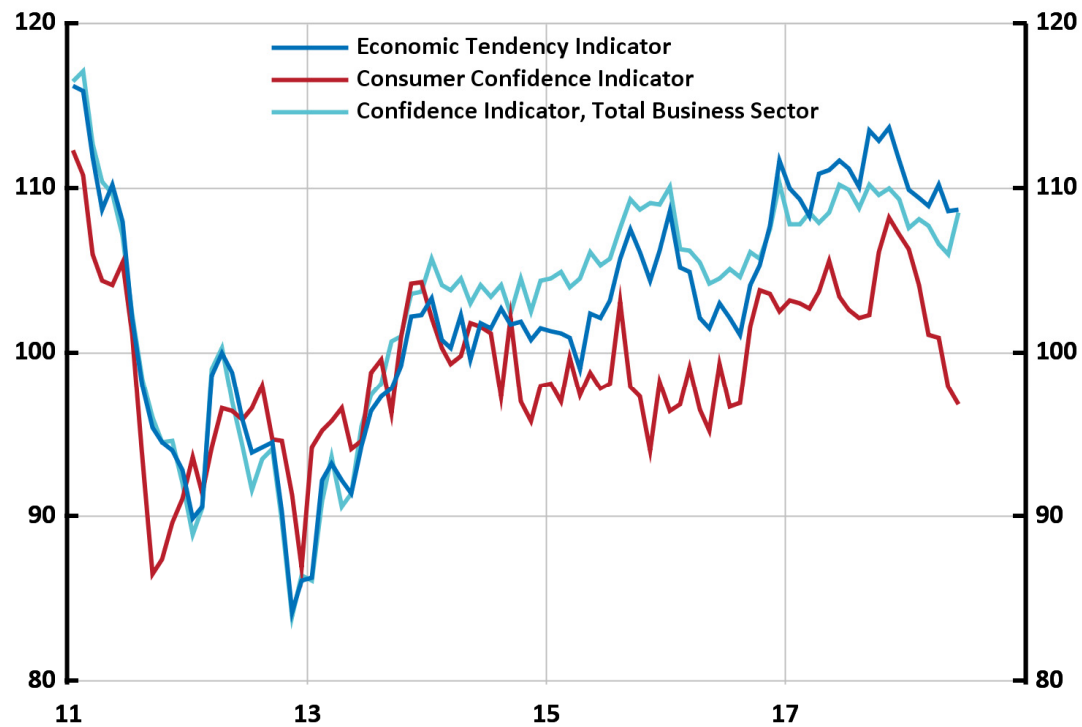


Note. HICP excluding energy, food, alcohol & tobacco is shown for the euro area. Deflator for PCE excluding energy and food is shown for the United States.

Sources: Bureau of Economic Analysis and Eurostat

# Figure 3.8. Confidence indicators

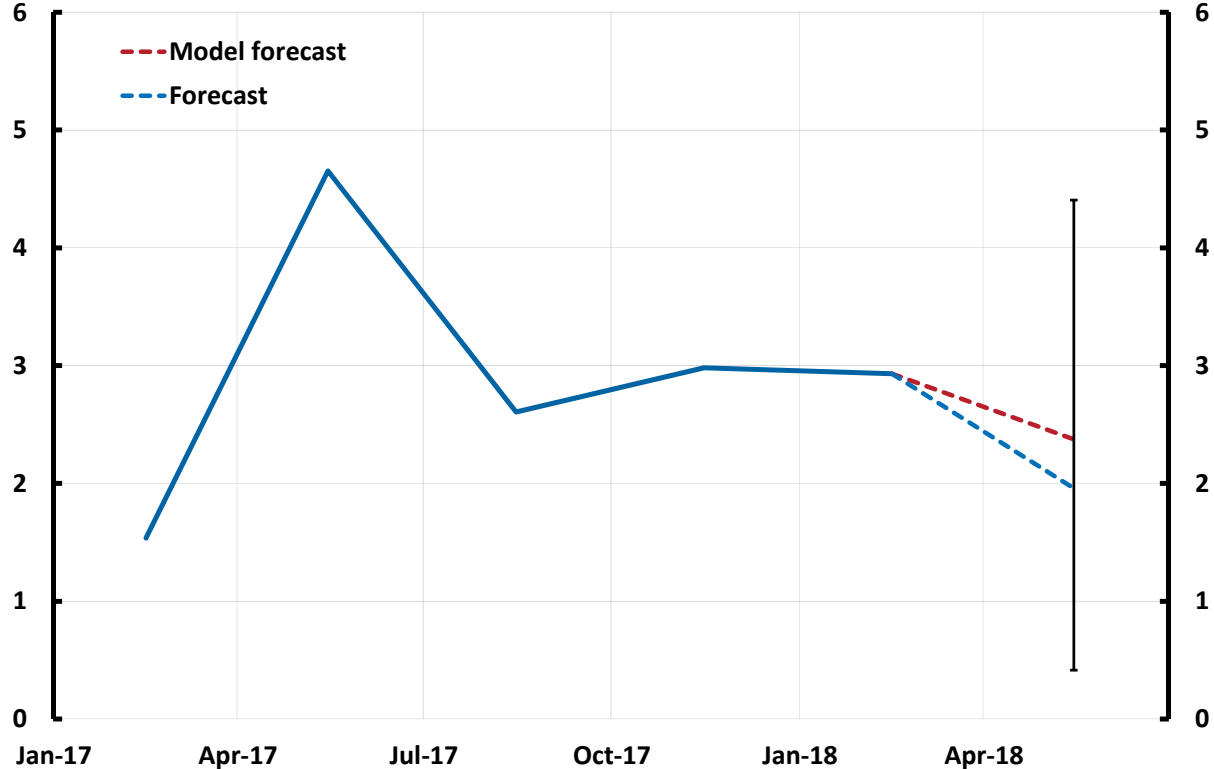
Index, mean value = 100, standard deviation = 10, seasonally-adjusted data



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

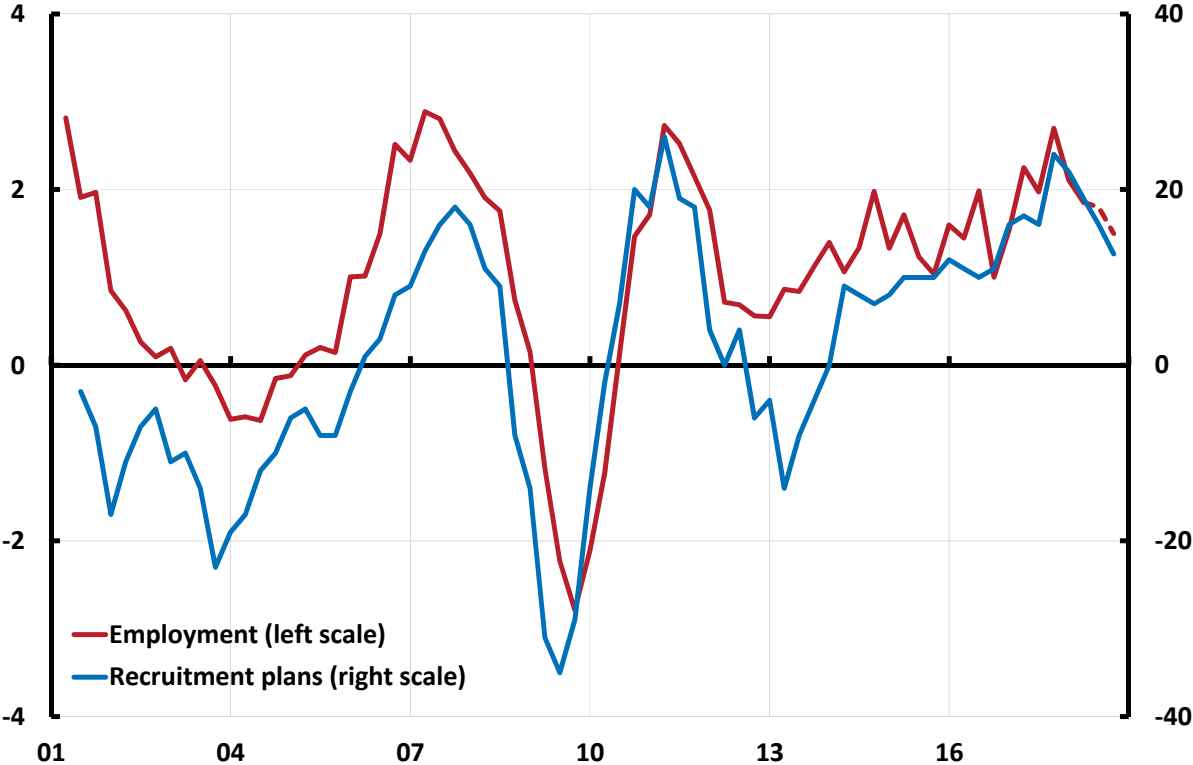


Note. The model forecast is an average of forecasts from different statistical models. The vertical line refers to a 50 per cent uncertainty band based on the models' historical forecast errors.

Sources: Statistics Sweden and the Riksbank

# Figure 3.10. Employment and recruitment plans

Annual percentage change and net figures respectively, seasonally-adjusted data

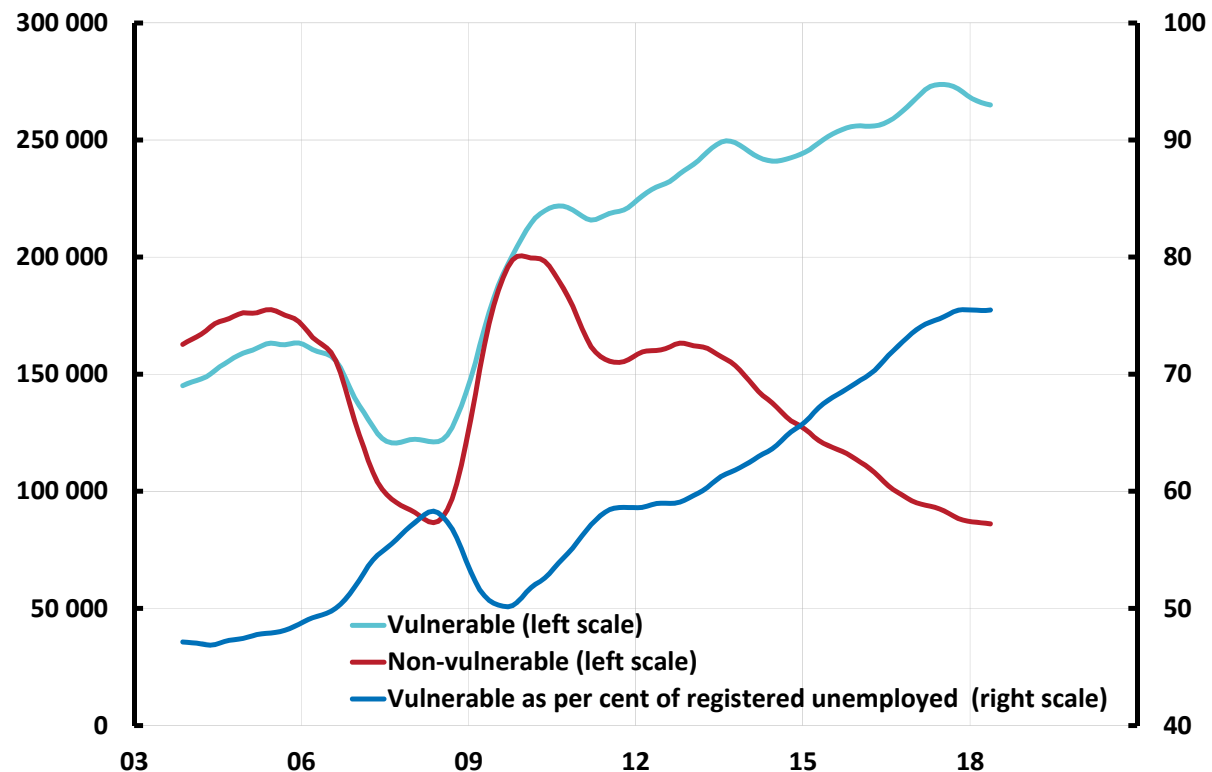


Note. Recruitment plans refer to expectations of then number of employed in the business sector three months ahead, moving forward one quarter. Recruitment plans for 2018 Q2 refer to an average of the monthly outcomes in April–June 2018.

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

# Figure 3.11. Registered unemployed by vulnerable and non-vulnerable groups

Number of persons and per cent of registered unemployed

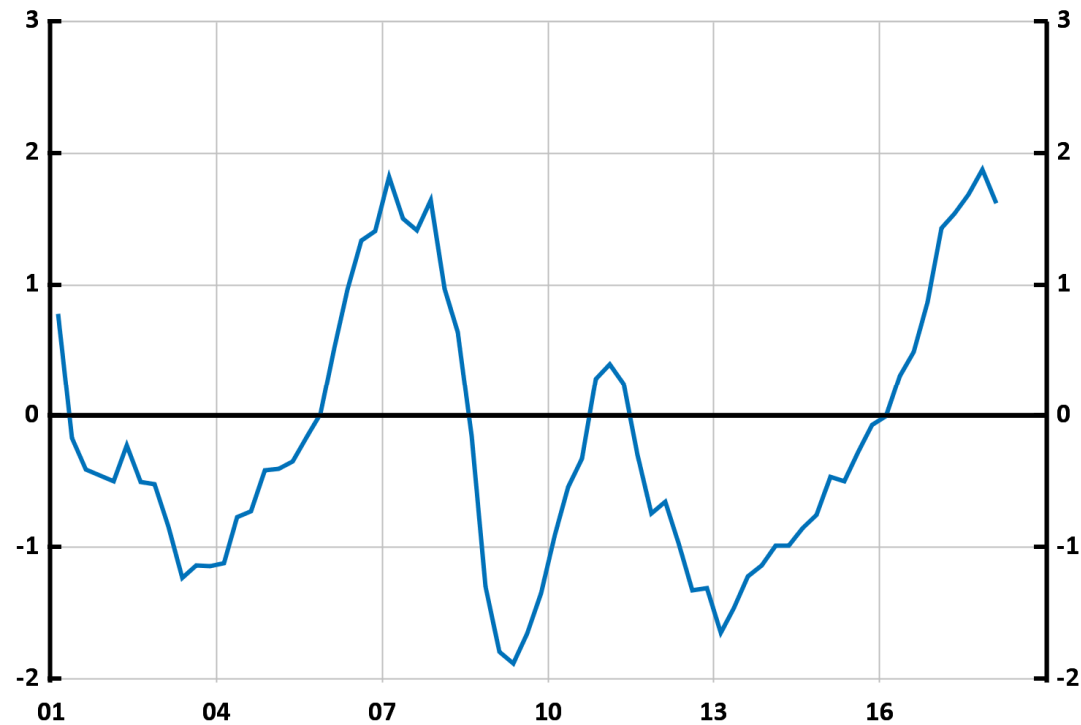


Note. Vulnerable groups refer to unemployed without upper-secondary education, born outside of Europe, people aged 55–64 years and persons with disabilities.

Source: Swedish Public Employment Service

## Figure 3.12. Resource utilisation indicator

Standard deviation

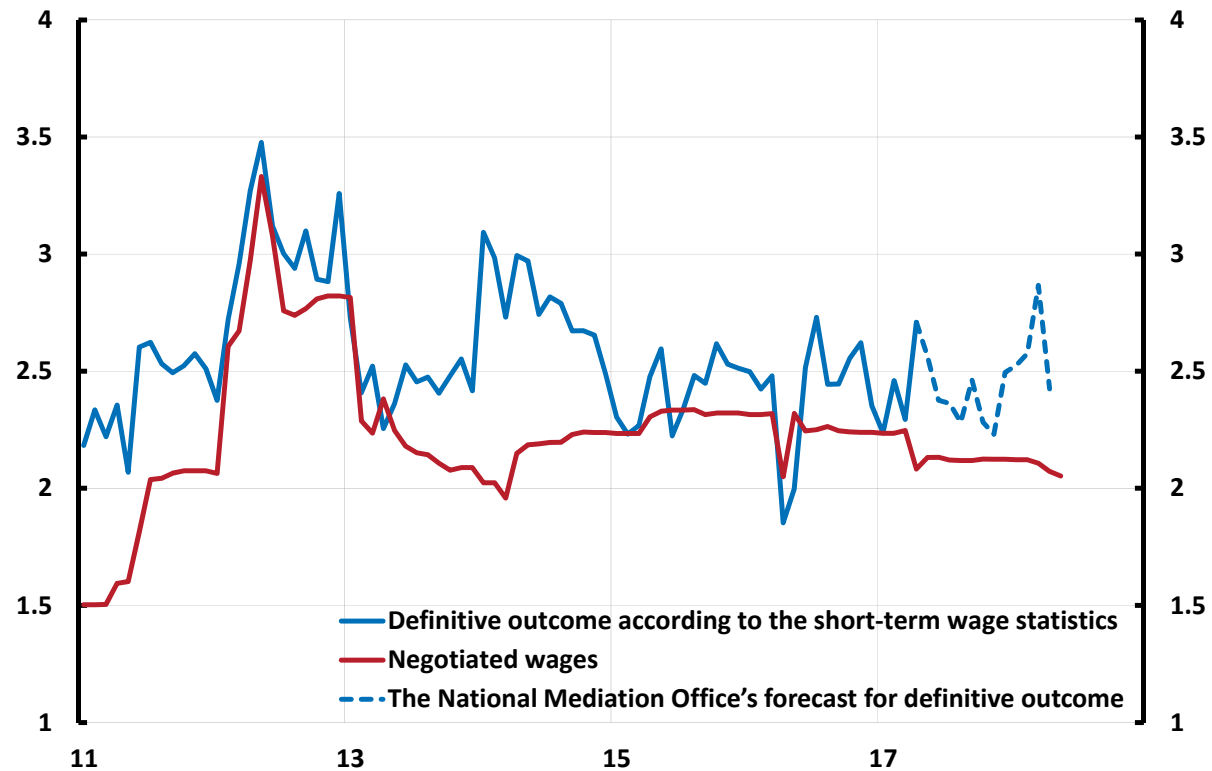


Note. The RU indicator is a statistical measure of resource utilisation which summarise information from a range of indicators for resource utilisation in the Swedish economy. It is normalised so that the mean value is 0 and the standard deviation is 1

Source: The Riksbank

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

Annual percentage change



Source: National Mediation Office

# Chapter 4

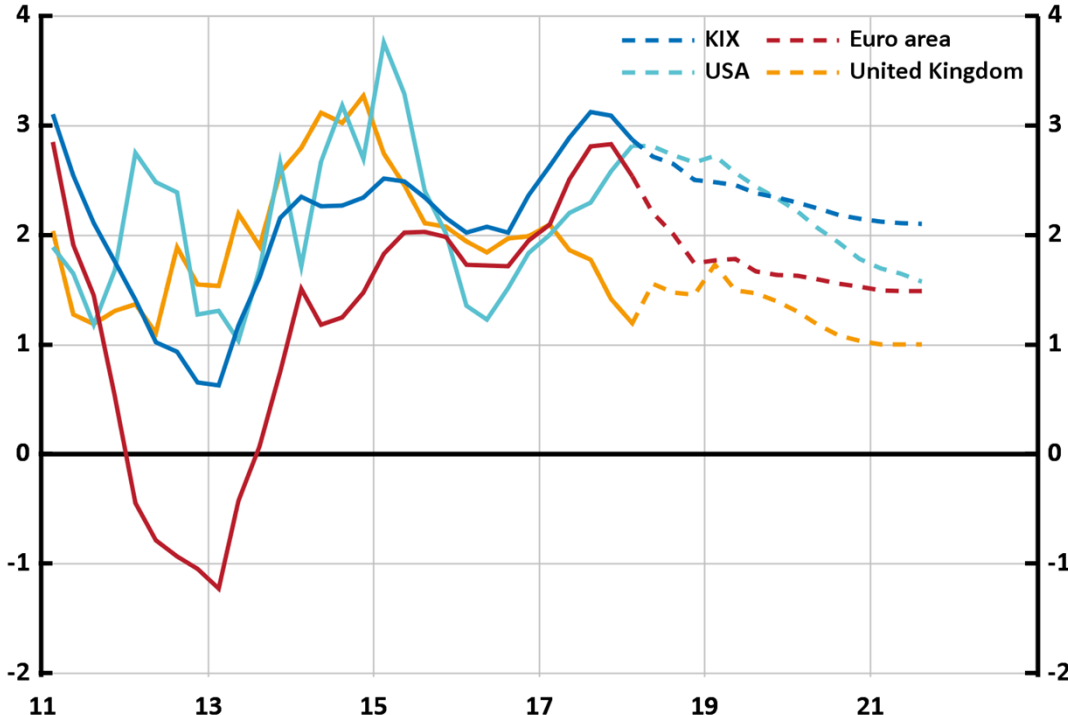
S V E R I G E S R I K S B A N K





# 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, the Office for National Statistics and the Riksbank

# Figure 4.2. Price of crude oil

USD per barrel, Brent oil

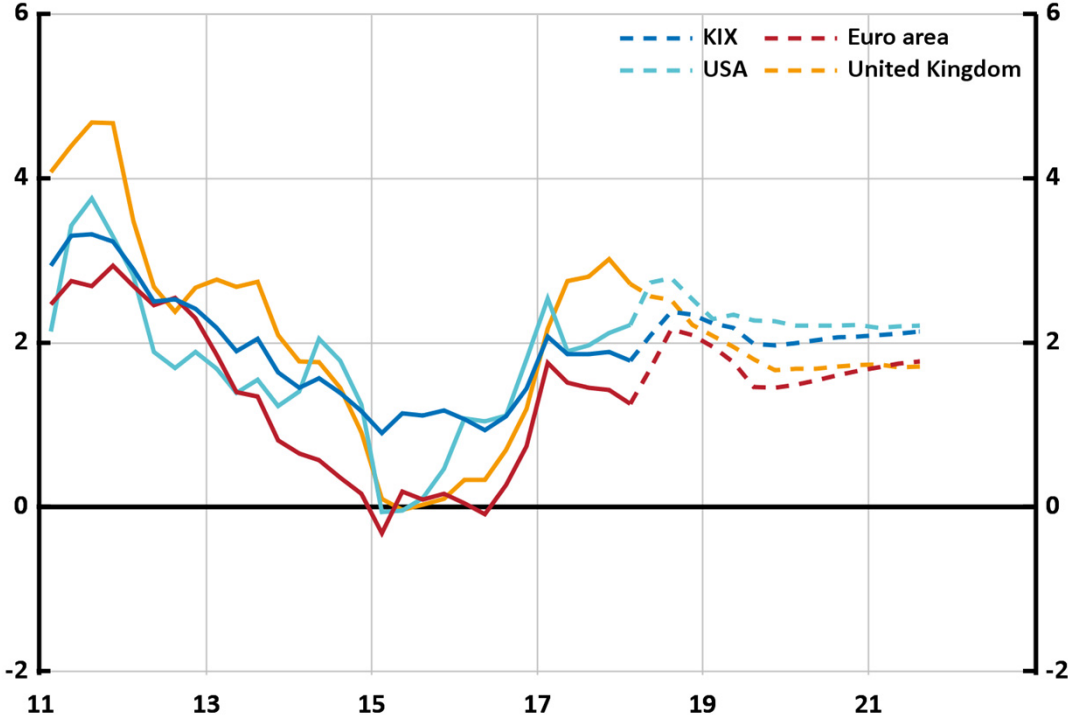


Note. Forward prices are calculated as a 15-day average. The outcome refers to monthly averages of spot prices.

Sources: Macrobond and the Riksbank

# Figure 4.3. Inflation in various countries and regions

Annual percentage change

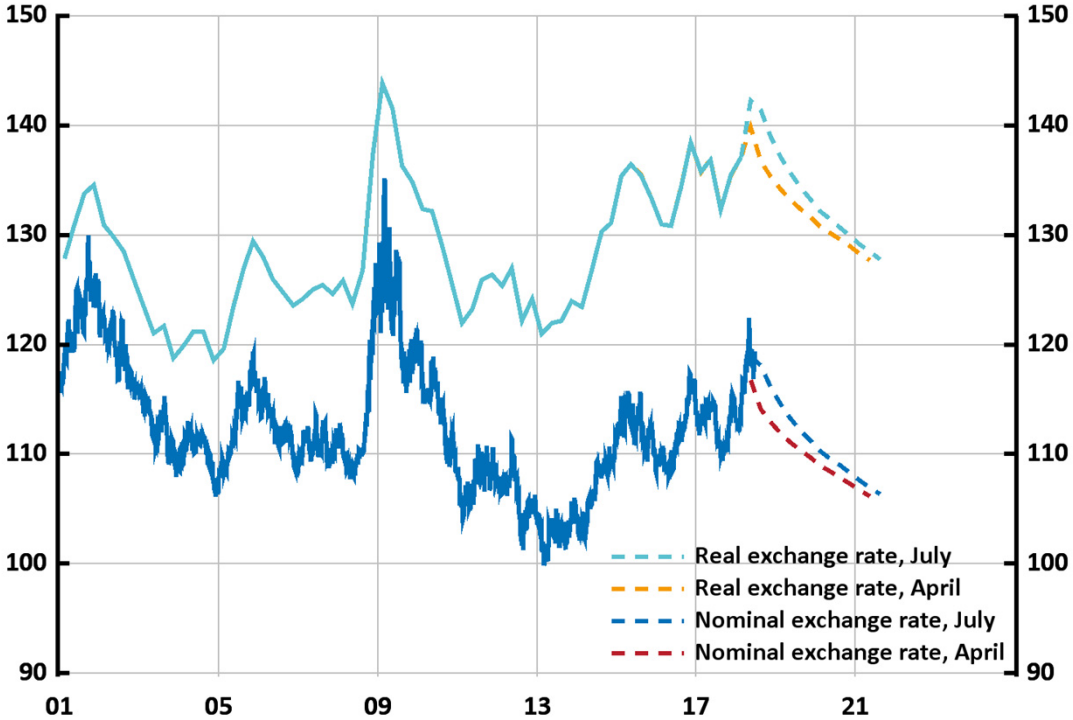


Note. KIX is an aggregate of the countries that are important to Sweden's international transactions.

Sources: 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

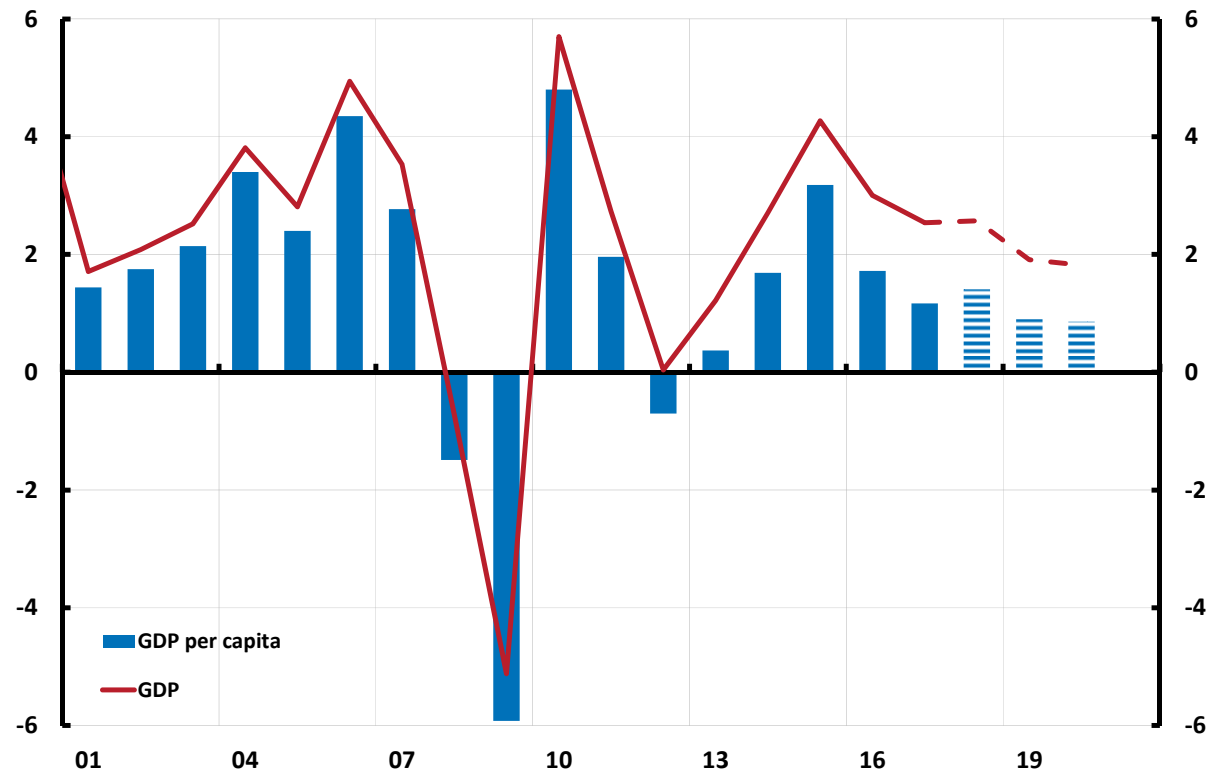


Note. The real exchange rate is calculated using the CPI for Sweden and the CPI for the rest of the world. Outcomes are daily data for the nominal exchange rate, outcomes for the real exchange rate and forecasts refer to quarterly averages. The KIX is an aggregate of 32 countries that are important for Sweden's international transactions.

Sources: National sources, Statistics Sweden and the Riksbank

# Figure 4.5. GDP and GDP per capita

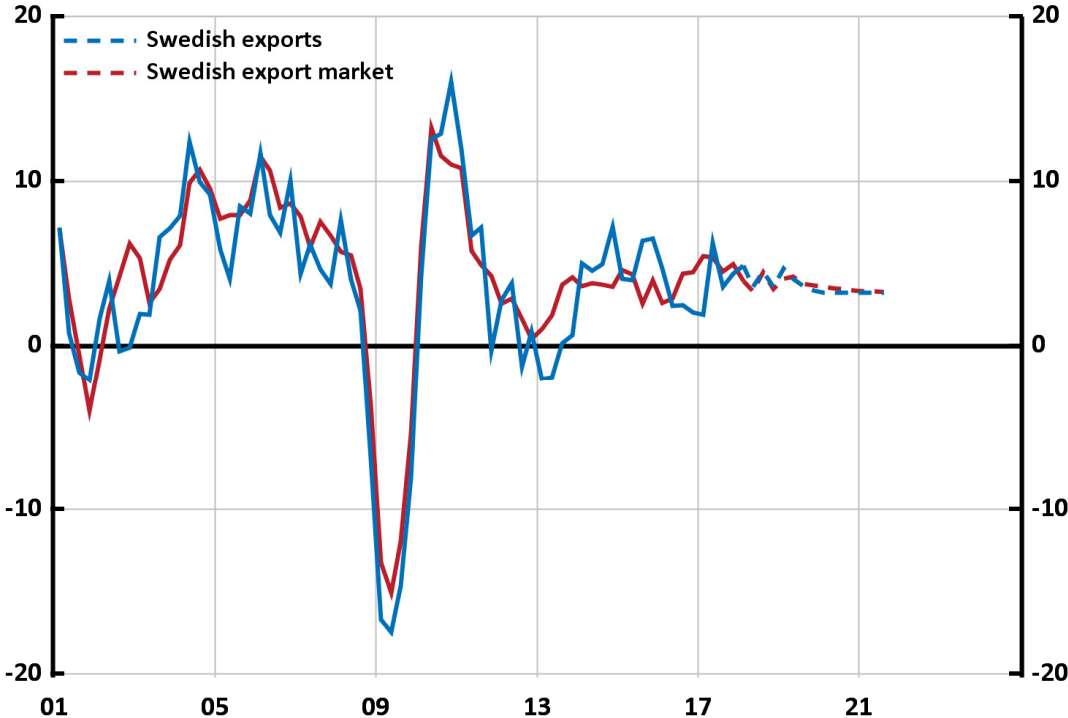
Annual percentage change, seasonal- and calendar-adjusted data



Sources: Statistics Sweden and the Riksbank

# Figure 4.6. Exports and the Swedish export market

Annual percentage change, calendar-adjusted data

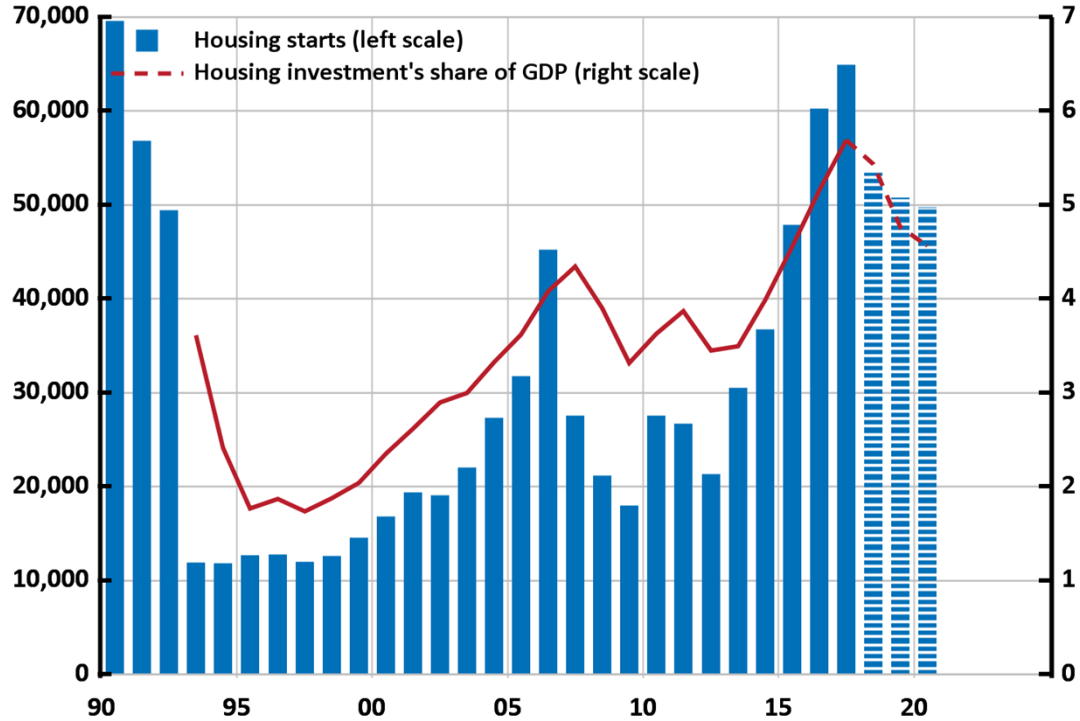


Note. The Swedish export market index aims to measure import demand in the countries to which Sweden exports. This is calculated by aggregating imports in the countries included in KIX and covers around 85 per cent of the total Swedish export market.

Sources: Statistics Sweden and the Riksbank

# Figure 4.7. Housing starts and housing investments

Number and per cent, respectively

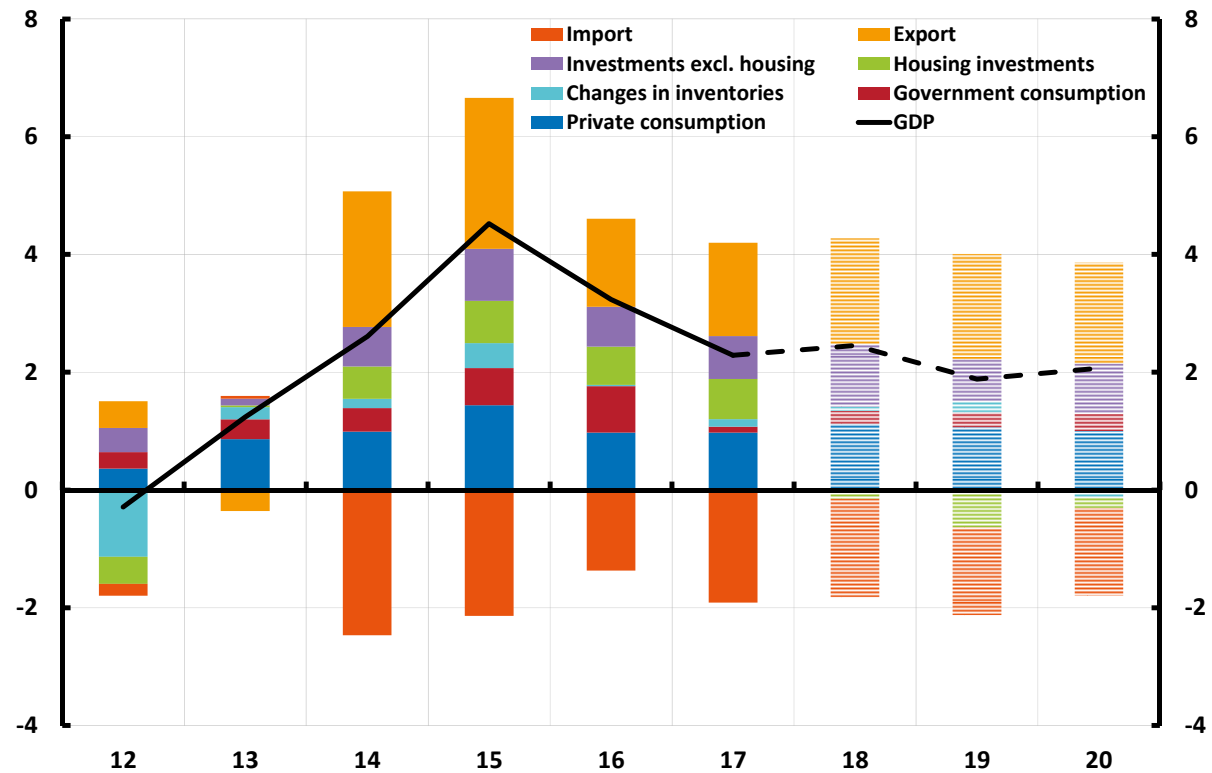


Note. Housing investment's share of GDP is calculated at current prices.

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

# Figure 4.8. Contribution to GDP growth

Annual percentage change and contribution to annual GDP growth

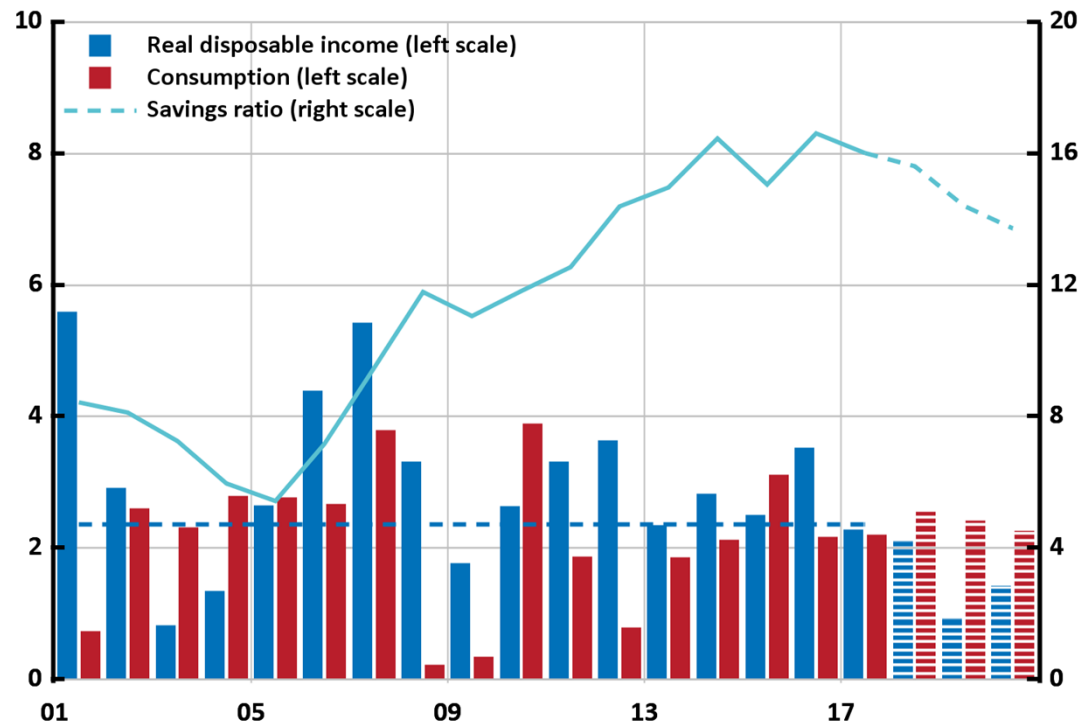


Sources: Statistics Sweden and the Riksbank



# Figure 4.9. Households' real disposable income, consumption and savings ratio

Annual percentage change and per cent of disposable income

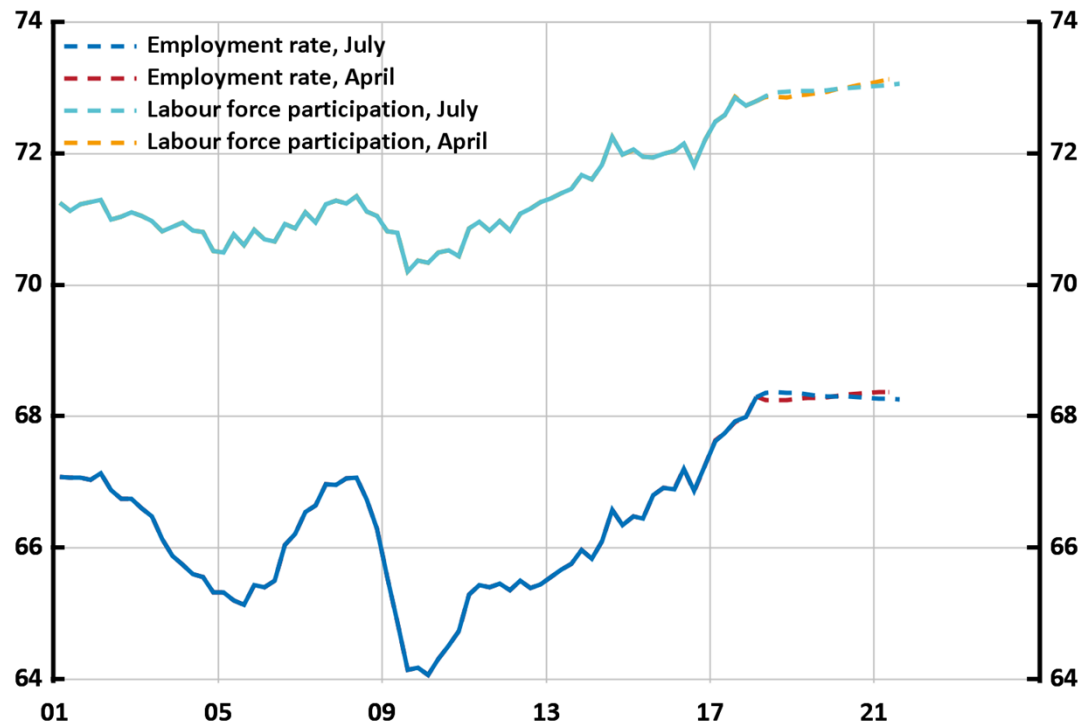


Note. Disposable income has been deflated using the household consumption deflator. Broken line is the average of consumption growth 1994–2017.

Sources: Statistics Sweden and the Riksbank

# Figure 4.10. Employment rate and labour force participation

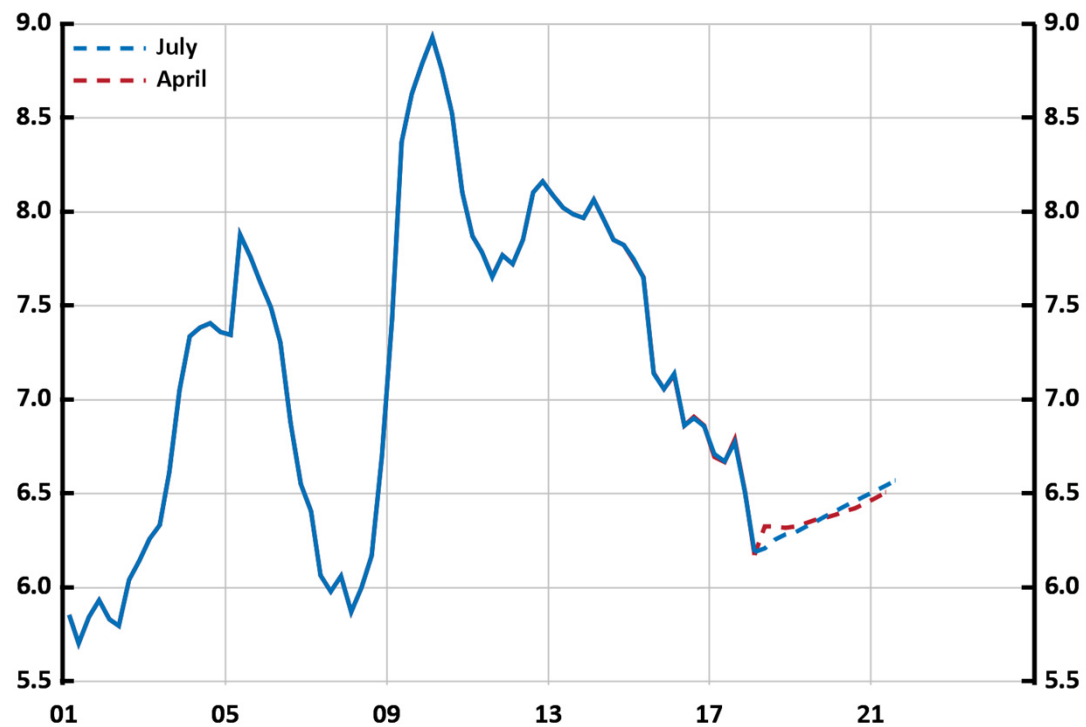
Percentage of the population, aged 15–74, seasonally-adjusted data



Sources: Statistics Sweden and the Riksbank

# Figure 4.11. Unemployment

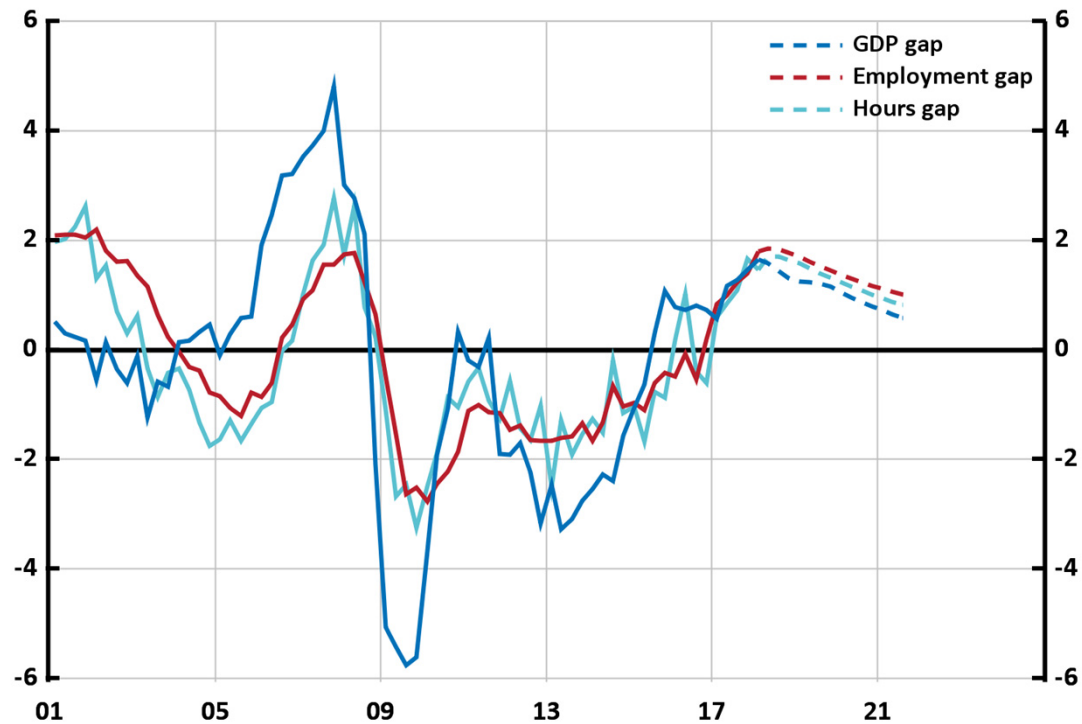
Per cent of the labour force, 15–74 years, seasonally-adjusted data



Sources: Statistics Sweden and the Riksbank

# Figure 4.12. GDP gap, employment gap and hours gap

Per cent

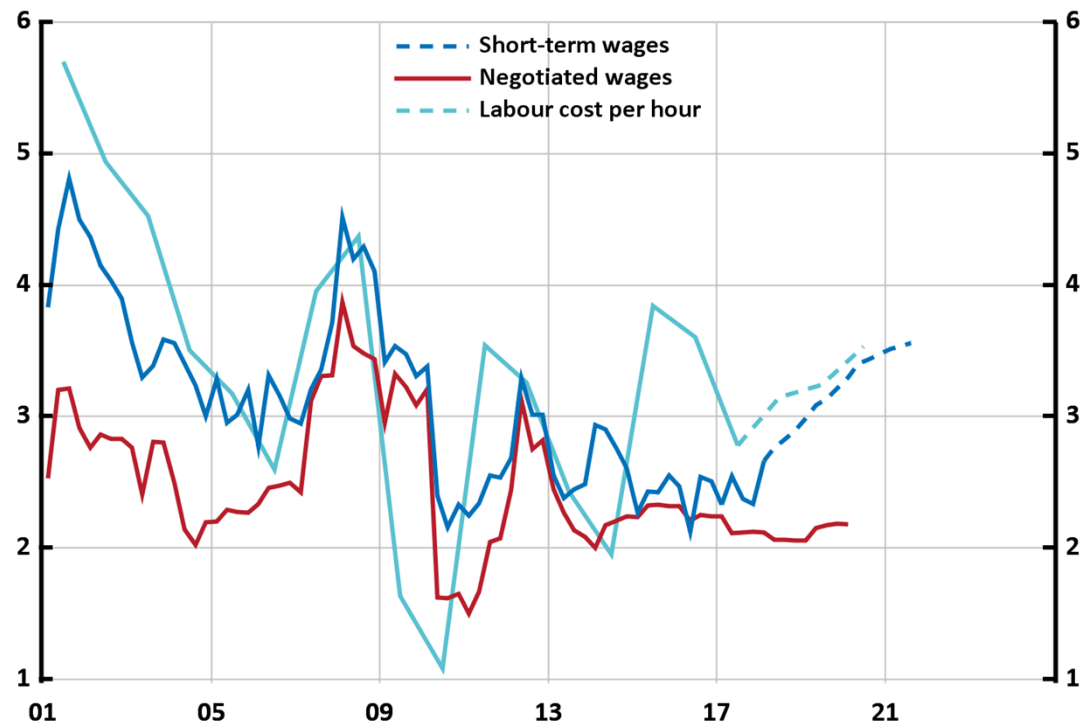


Note. The gaps refer to the deviation in GDP, the number of those employed and the number of hours worked from the Riksbank's assessed trends.

Sources: Statistics Sweden and the Riksbank

# Figure 4.13. Wages and labour costs in the whole economy

Annual percentage change

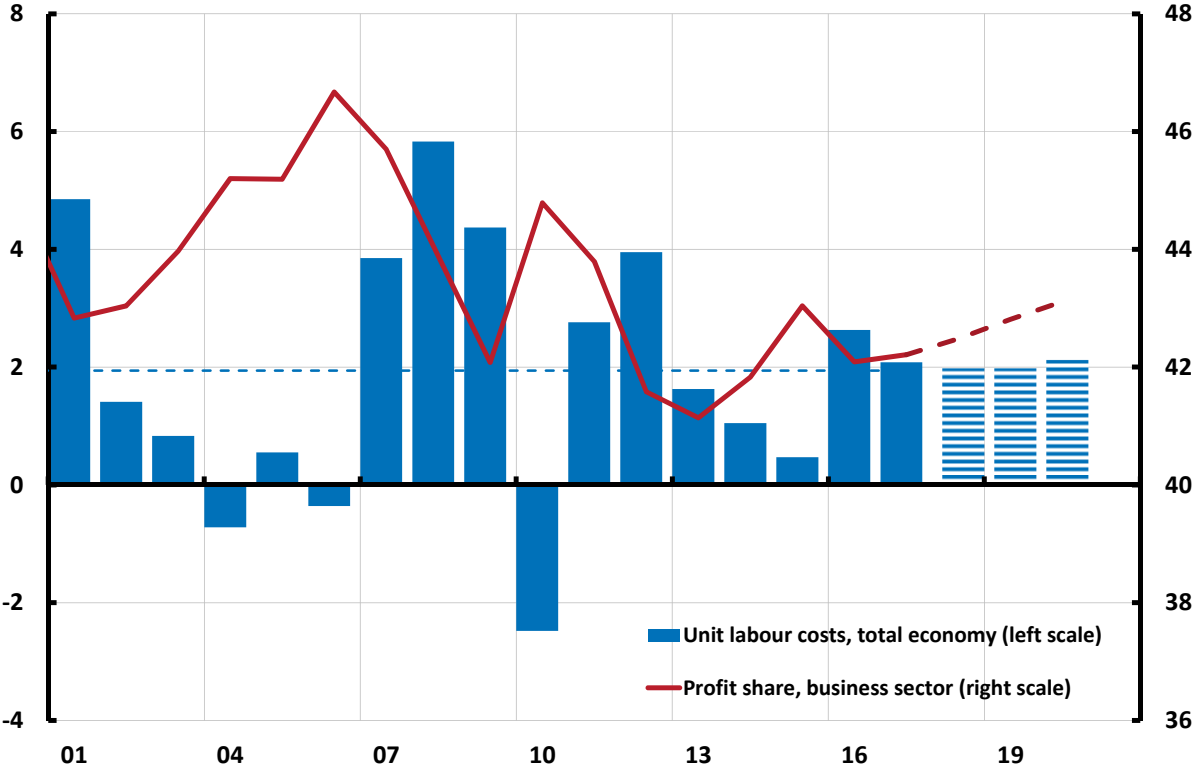


Note. The National Mediation Office's forecast of final outcome 2017Q2–2018Q1.

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

# Figure 4.14. Unit labour costs and profit share

Annual percentage change and per cent of added value, respectively

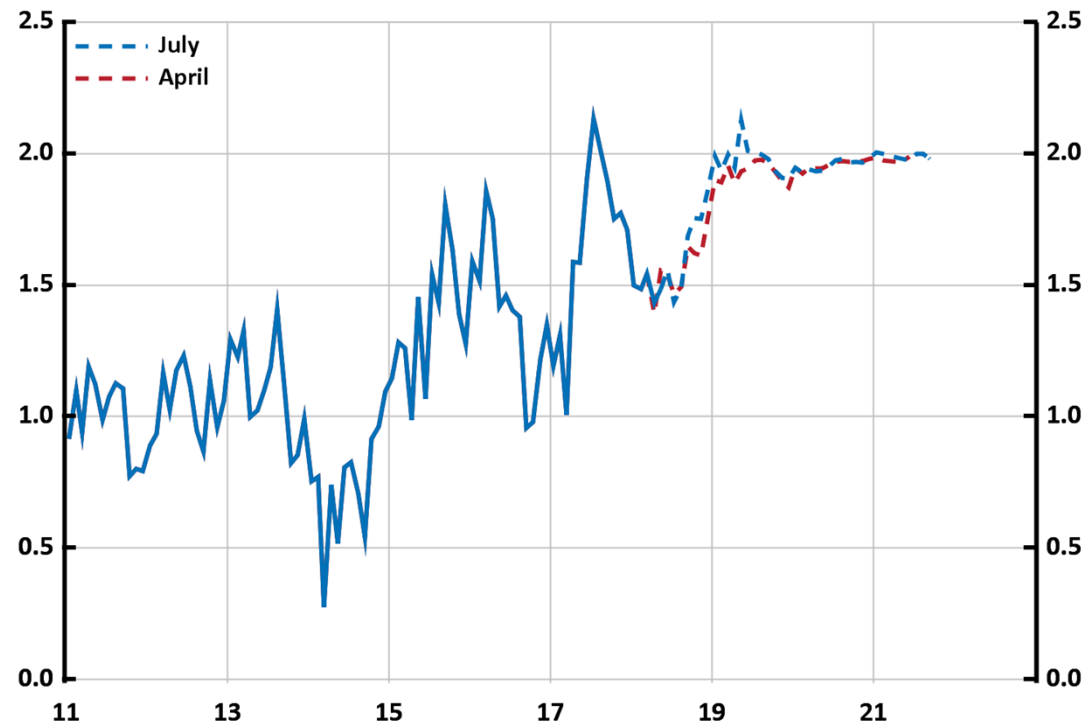


Note. Profits refer to operating surplus as a percentage of total value added in the business sector. The broken line refers to the average rate of increase in unit labour costs (entire economy) since 1994.

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

# Figure 4.15. CPIF excluding energy

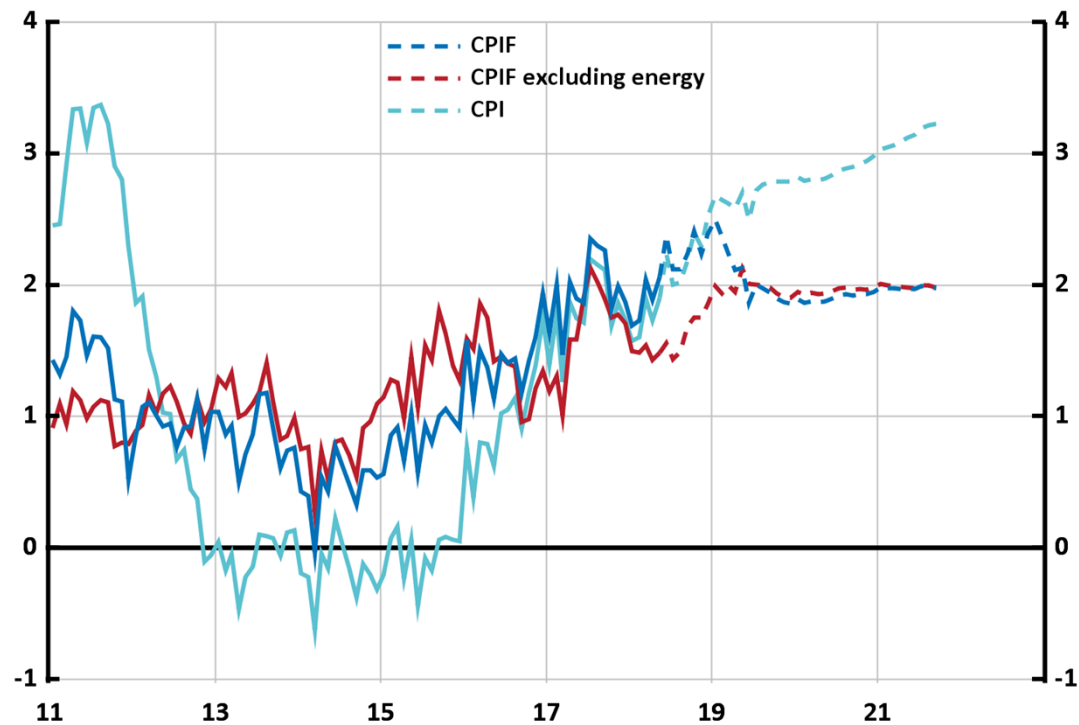
Annual percentage change



Sources: Statistics Sweden and the Riksbank

# Figure 4.16. CPIF, CPIF excluding energy and CPI

Annual percentage change



Sources: Statistics Sweden and the Riksbank