

Account of monetary policy 2019

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



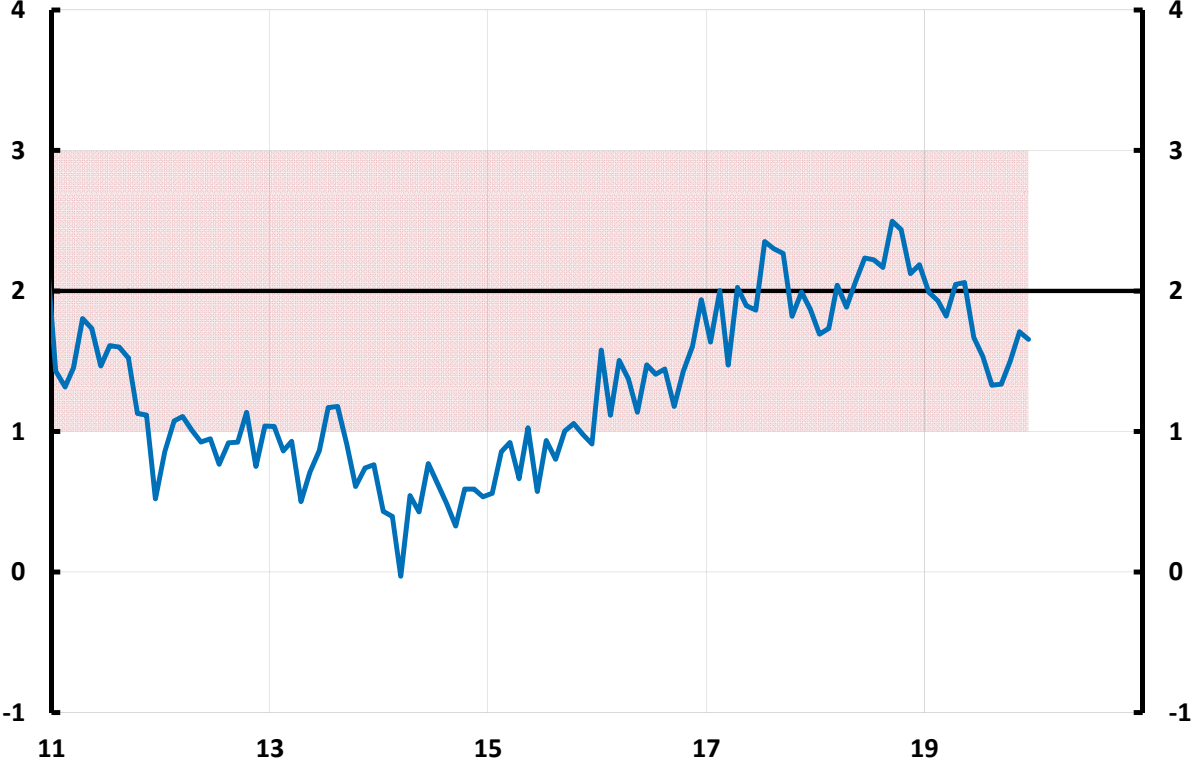
Chapter 1

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



Figure 1.1. The CPIF and variation band

Annual percentage change

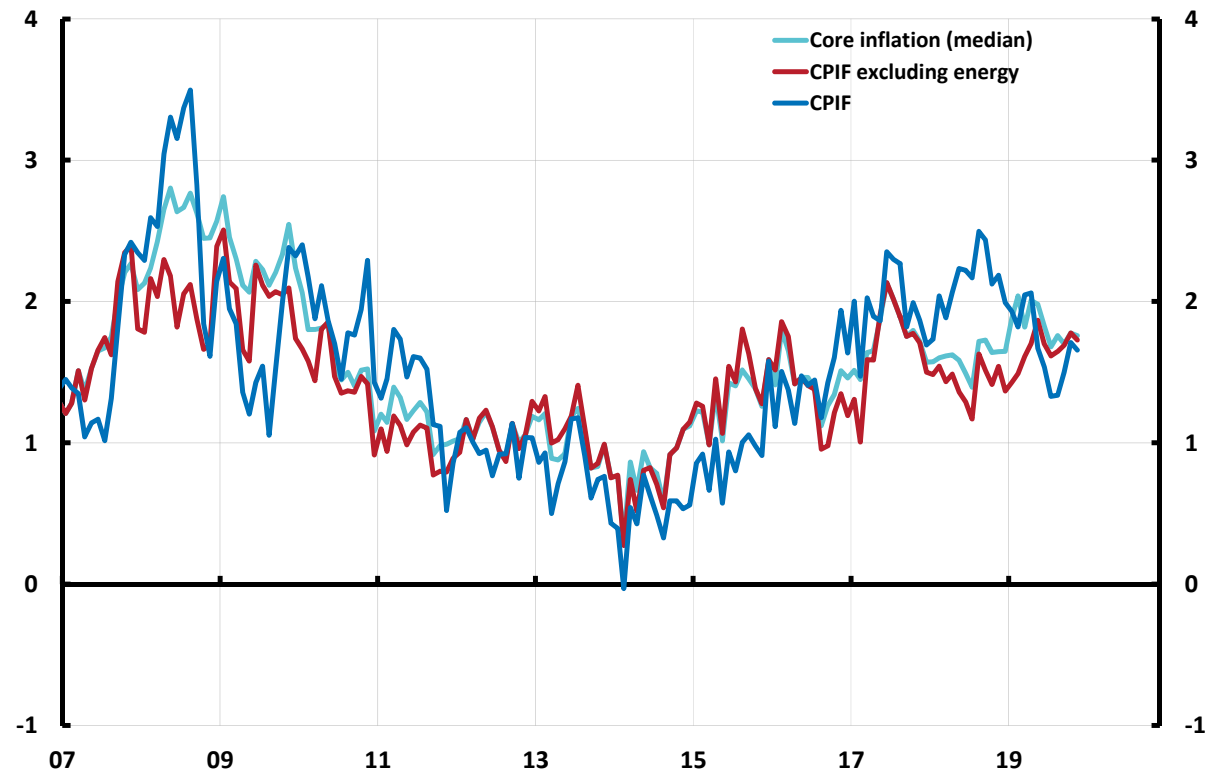


Note. The pink area shows the Riksbank’s variation band and covers about three-quarters of the outcomes since January 1995. The variation band is a means of showing whether the deviation from the inflation target is unusually large.

Sources: Statistics Sweden and the Riksbank

Figure 1.2. CPIF, CPIF excluding energy and core inflation

Annual percentage change

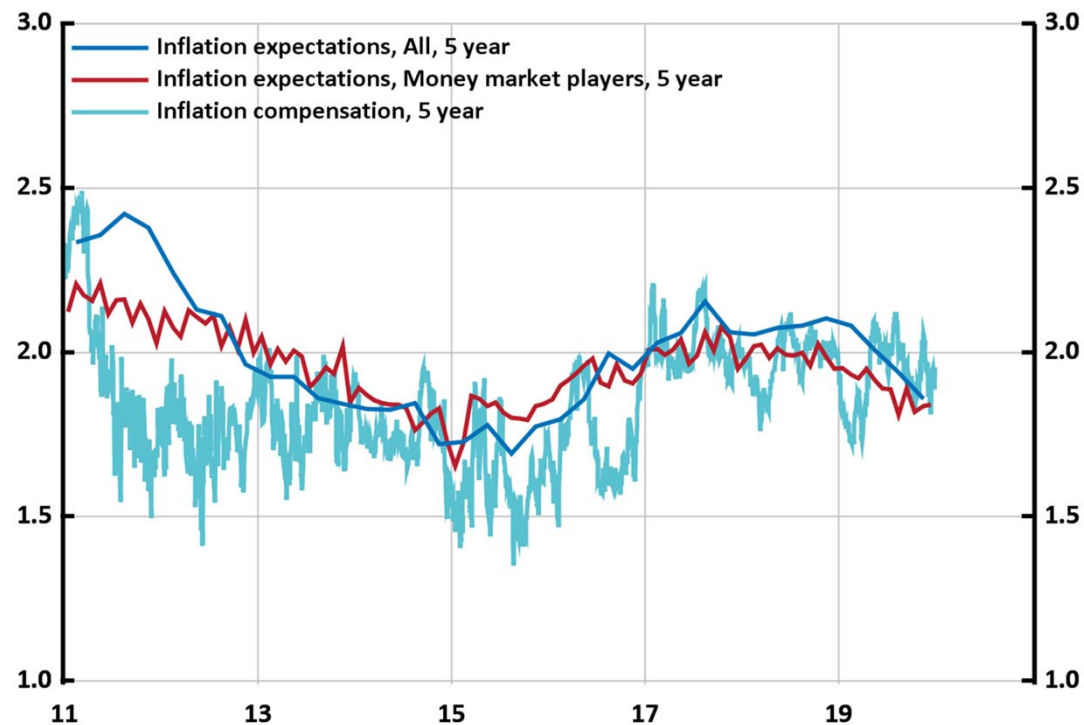


Note. Core inflation refers to the median of a number of measures of core inflation. The measures included are the CPIF excluding energy, UND24, Trim85, CPIF excluding energy and perishables, persistence-weighted inflation (CPIFPV), factors from principal component analysis (CPIFPC) and weighted mean inflation (Trim1).

Sources: Statistics Sweden and the Riksbank

Figure 1.3. Long-term inflation expectations, Sweden

Per cent

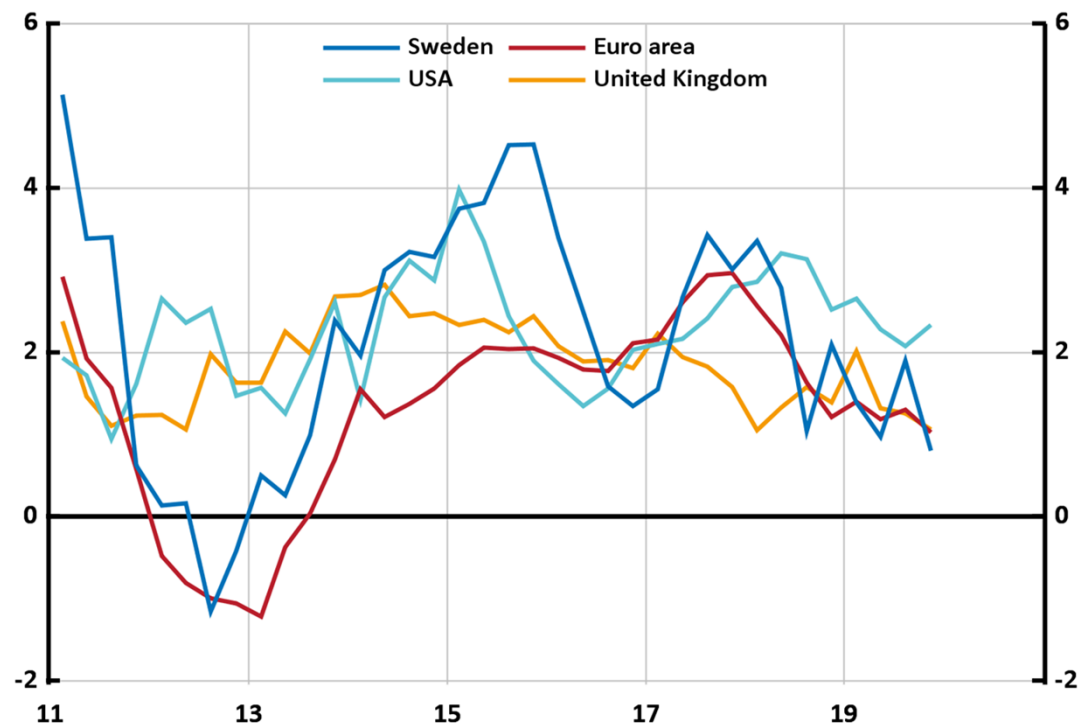


Note. Market-based expectations refer to average inflation over a 5-year period, starting in 5 years' time and calculated from bond yields.

Source: Kantar Sifo Prospera, Macrobond and the Riksbank

Figure 1.4. GDP growth in Sweden and abroad

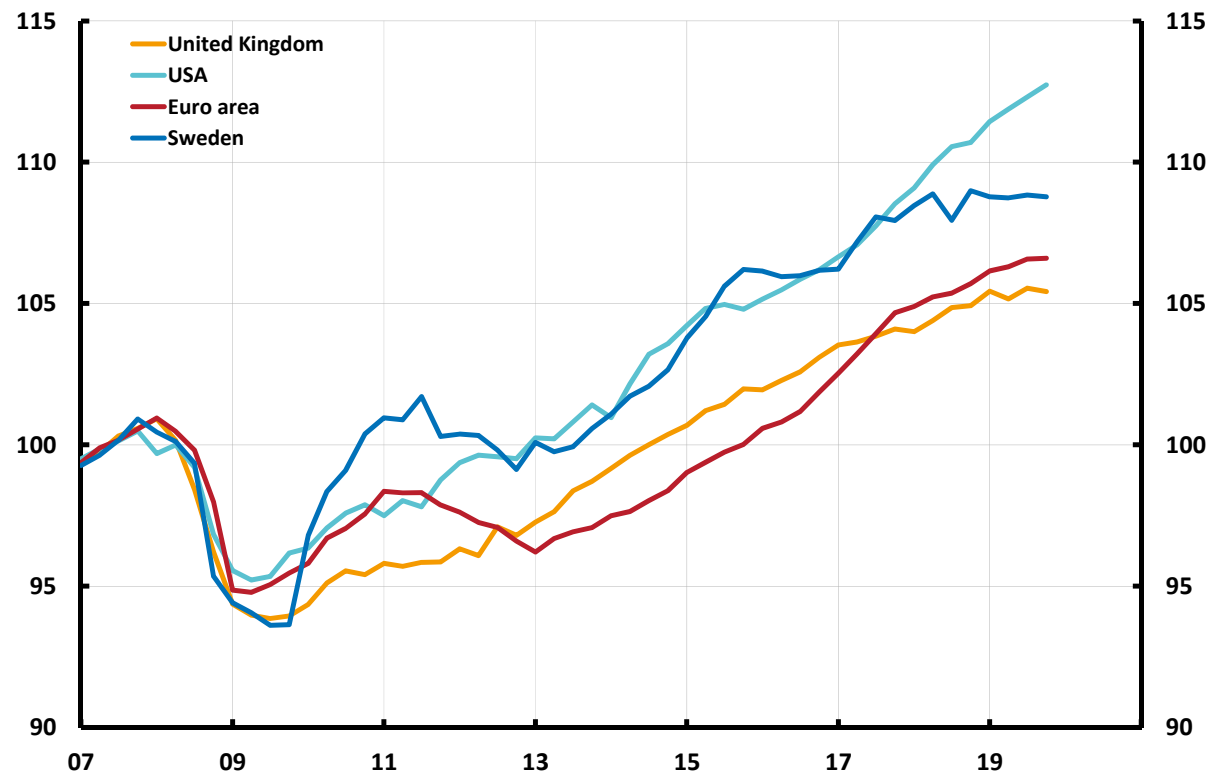
Annual percentage change, seasonally adjusted and calendar adjusted data



Sources: Bureau of Economic Analysis, Eurostat, Office for National Statistics and Statistics Sweden

Figure 1.5. Development in GDP per capita in Sweden and abroad

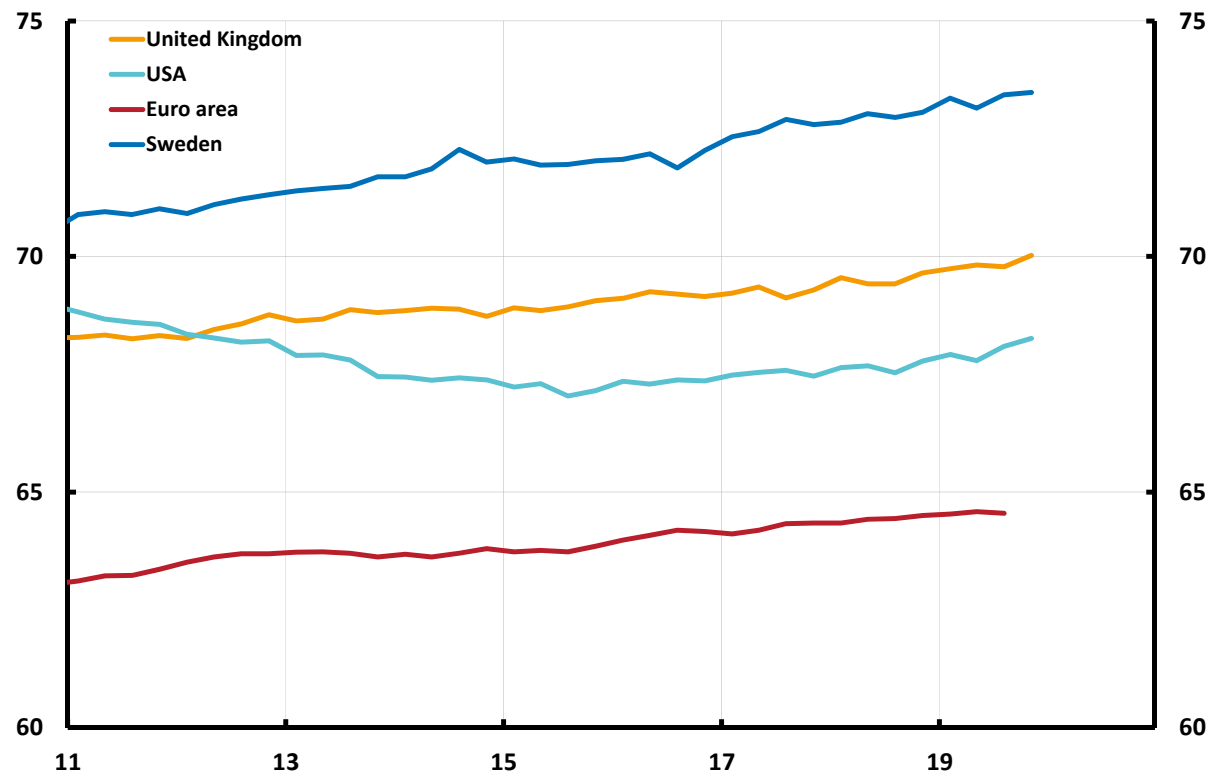
Index, 2007 Q1 = 100



Sources: Eurostat and the OECD

Figure 1.6. Labour force participation

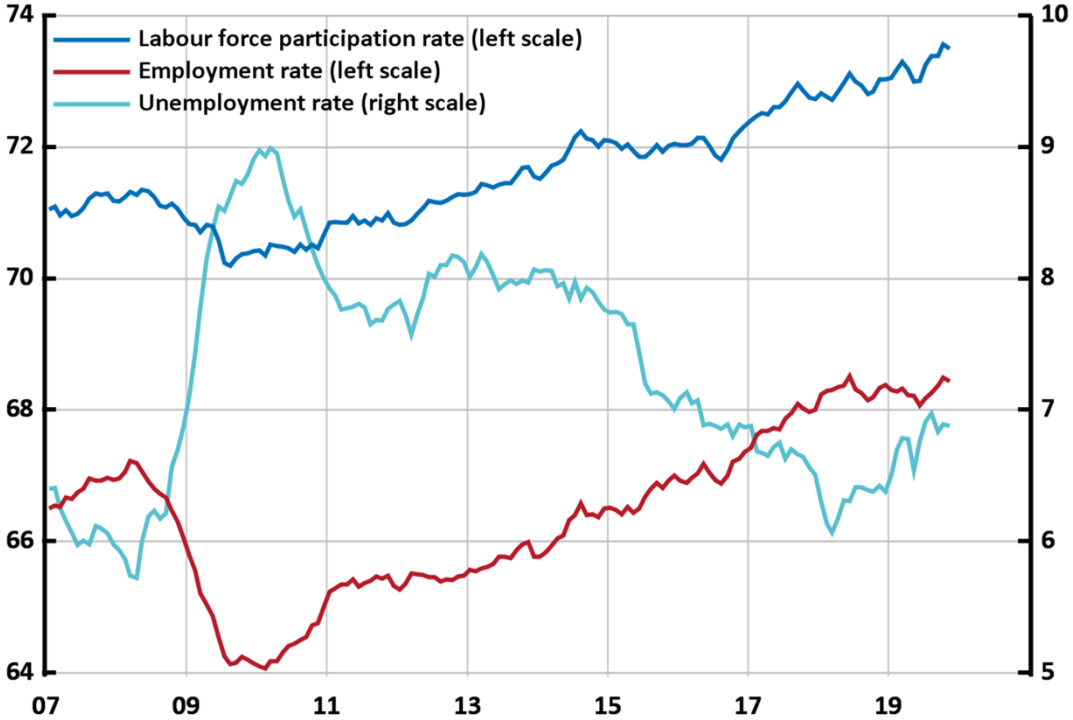
Percentage of population, 15–74 years, seasonally adjusted data



Source: OECD

Figure 1.7. Labour force, employment and unemployment

Per cent of population and labour force respectively, 15–74 years, seasonally-adjusted data

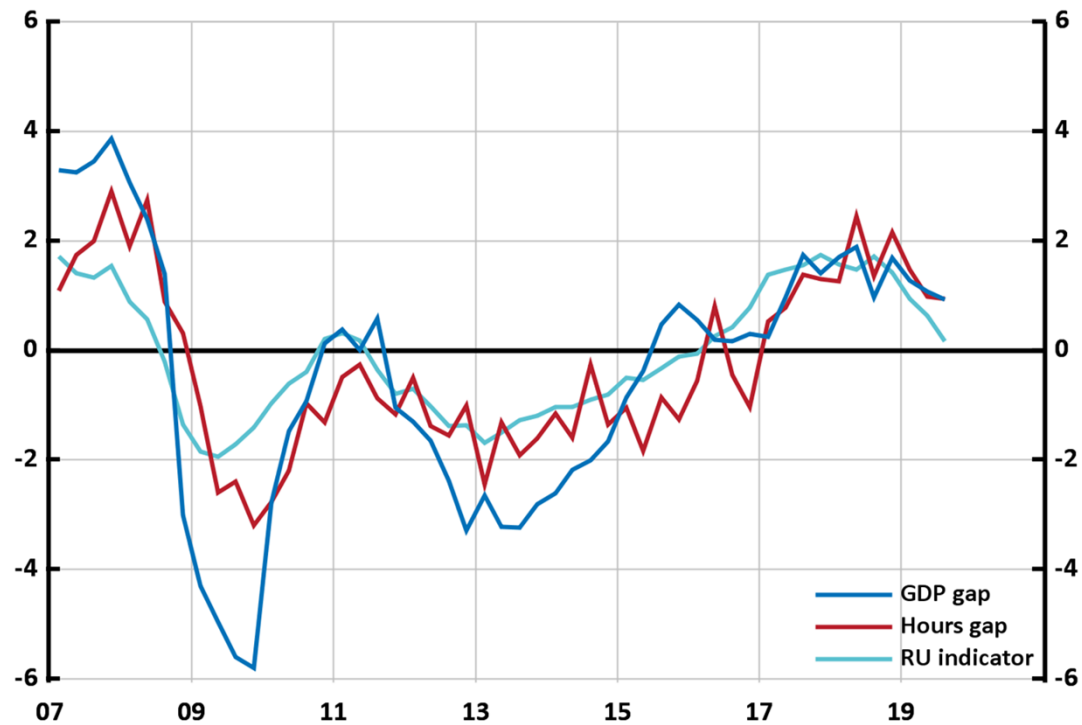


Note. Three-month moving average.

Source: Statistics Sweden

Figure 1.8. GDP and hours gap, and RU indicator

Per cent and standard deviation respectively



Note. The GDP gap refers to the deviation from trend in GDP, calculated using a production function. The hours gap refers to the difference between the actual number of hours worked and the Riksbank's assessment of the trend for the number of hours worked. The RU indicator is normalised so that the mean value is 0 and the standard deviation is 1.

Sources: Statistics Sweden and the Riksbank

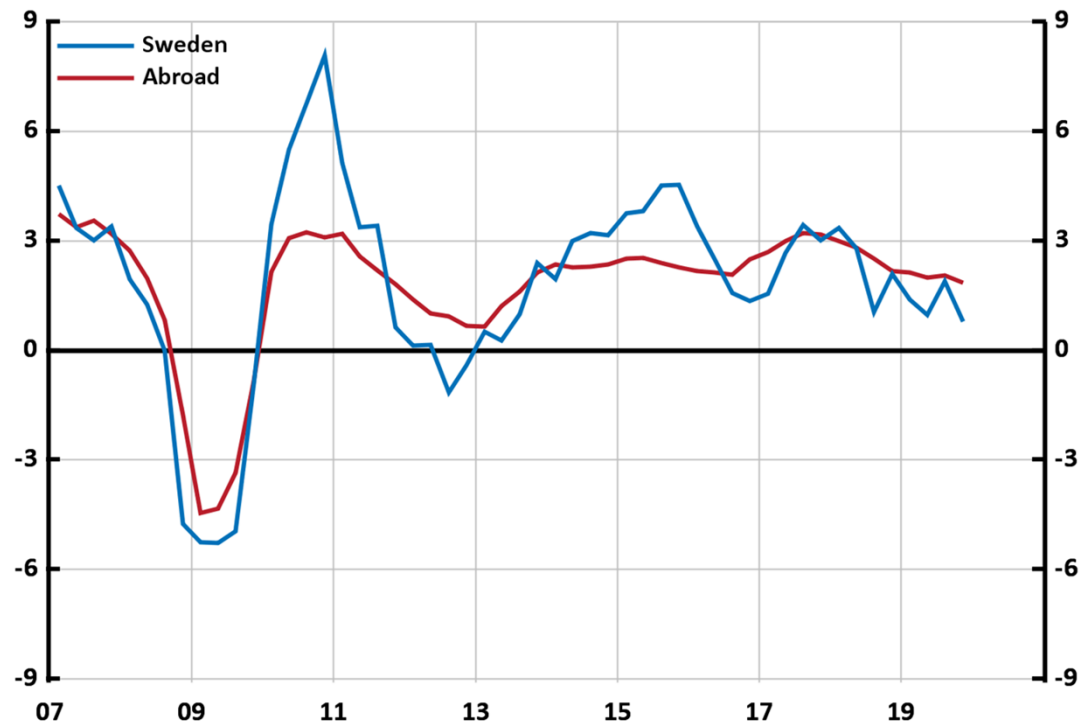
Chapter 2

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



Figure 2.1. GDP growth in Sweden and abroad

Annual percentage change

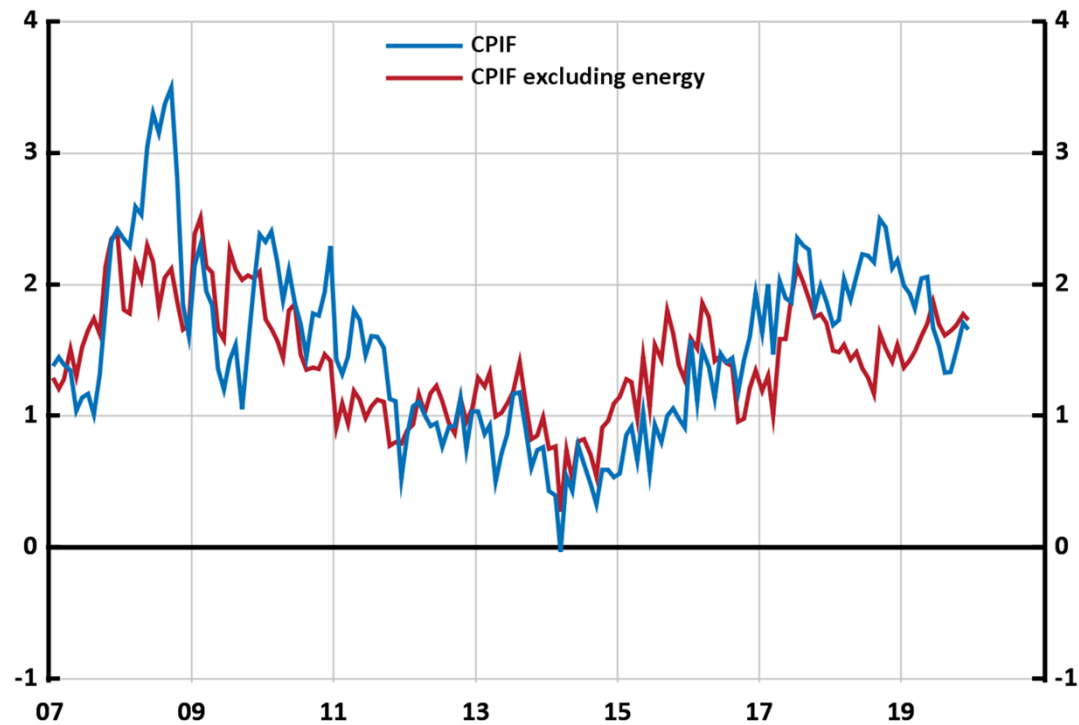


Note. GDP abroad is aggregated with the weights in the krona index (KIX).

Sources: National sources, Statistics Sweden and the Riksbank

Figure 2.2. The CPIF and the CPIF excluding energy

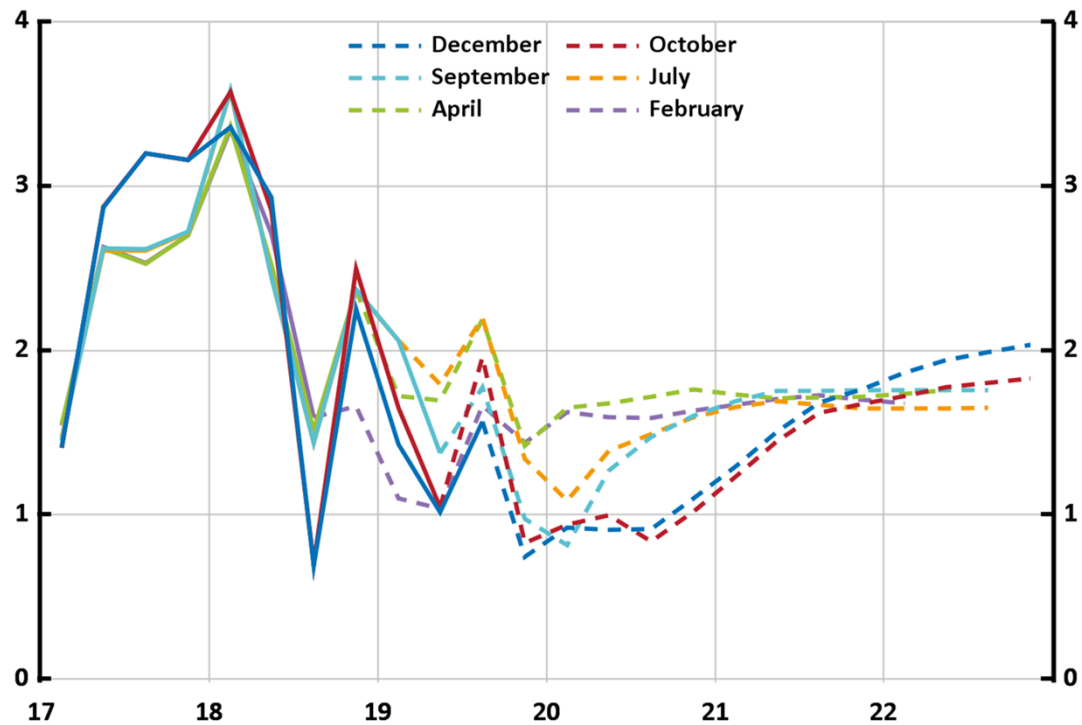
Annual percentage change



Sources: Statistics Sweden and the Riksbank

Figure 2.3. GDP, 2019 forecasts

Annual percentage change

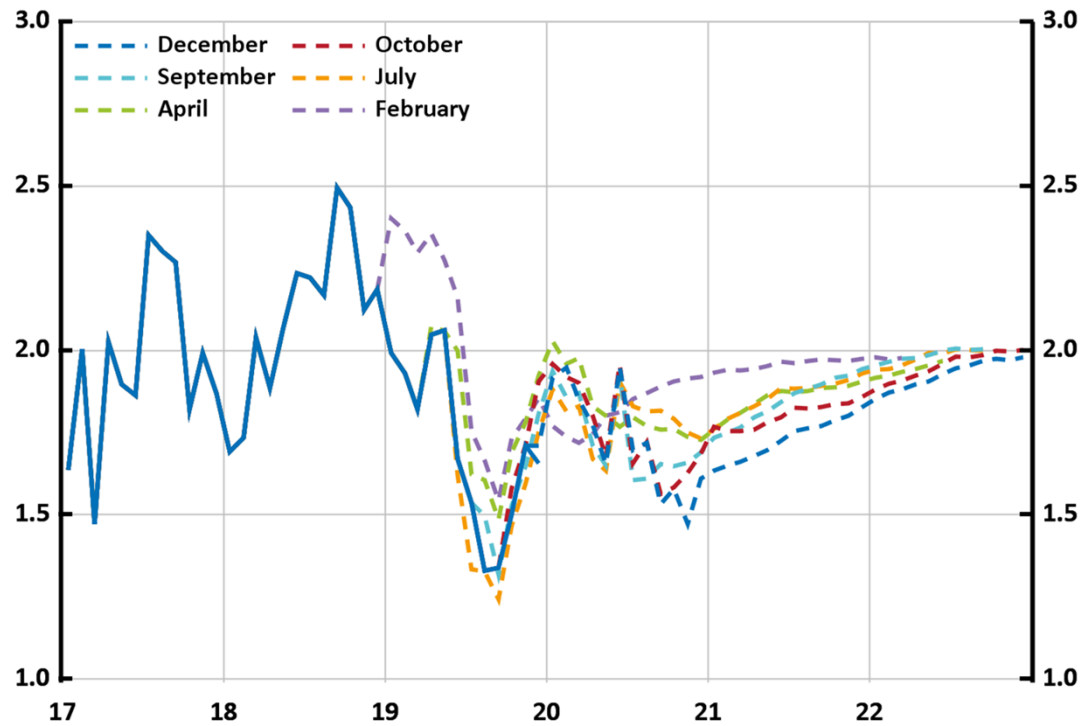


Note. Several outcome lines are shown in the figure. This is because the outcomes have been revised by Statistics Sweden.

Sources: Statistics Sweden and the Riksbank

Figure 2.4. CPIF, 2019 forecasts

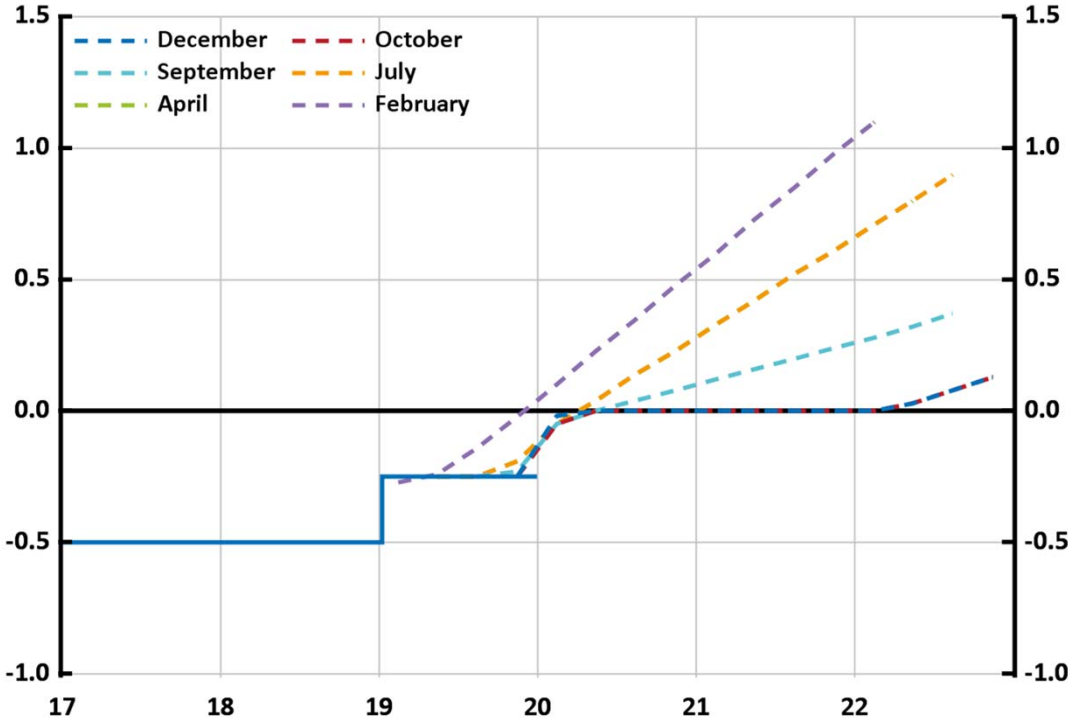
Annual percentage change



Sources: Statistics Sweden and the Riksbank

Figure 2.5. Repo rate, 2019 forecasts

Per cent

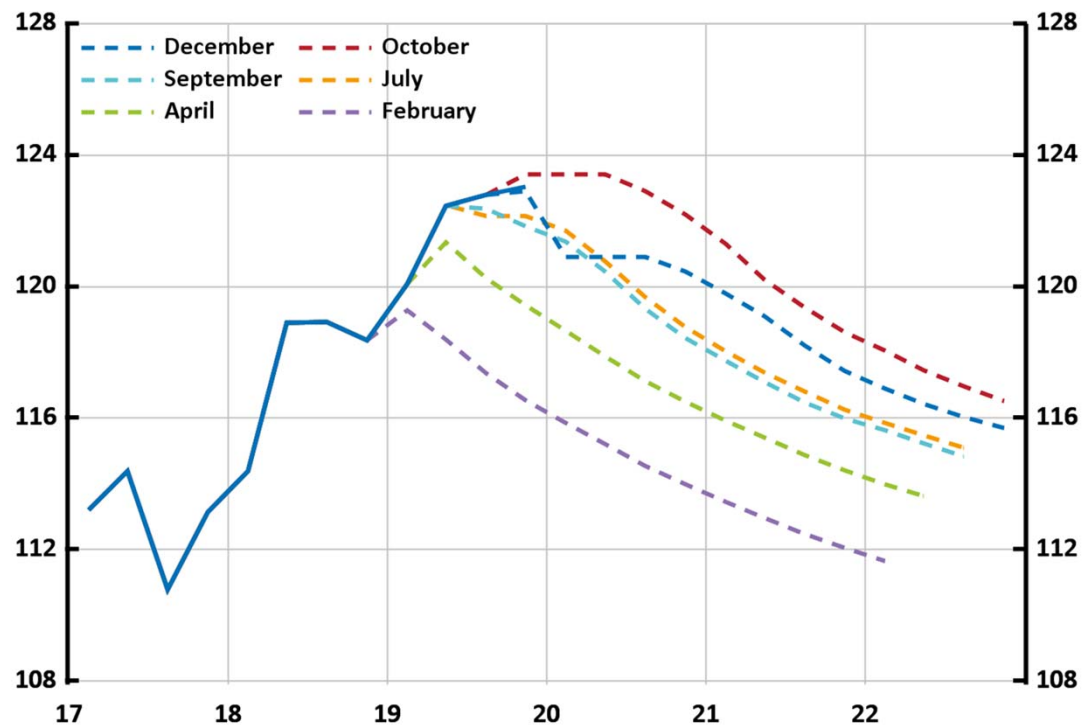


Note. Outcome data are daily rates and forecasts are quarterly averages. The repo-rate path in April is identical to the one in July, and the repo-rate path in December largely coincides with the path in October.

Source: The Riksbank

Figure 2.6. Competition-weighted nominal exchange rate, KIX, 2019 forecasts

Index, 18 November 1992 = 100

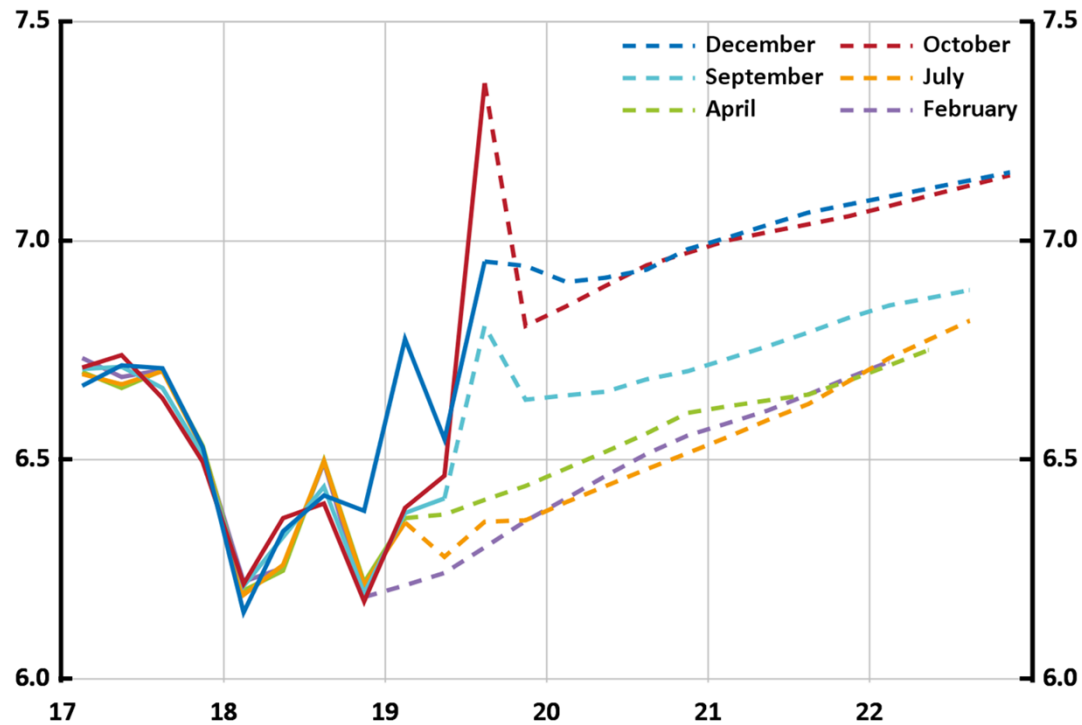


Note. The KIX (krona index) is a weighted average of the currencies in the countries that are important for Sweden's international trade.

Sources: National sources and the Riksbank

Figure 2.7. Unemployment, 2019 forecasts

Percentage of labour force, 15–74 years, seasonally-adjusted data

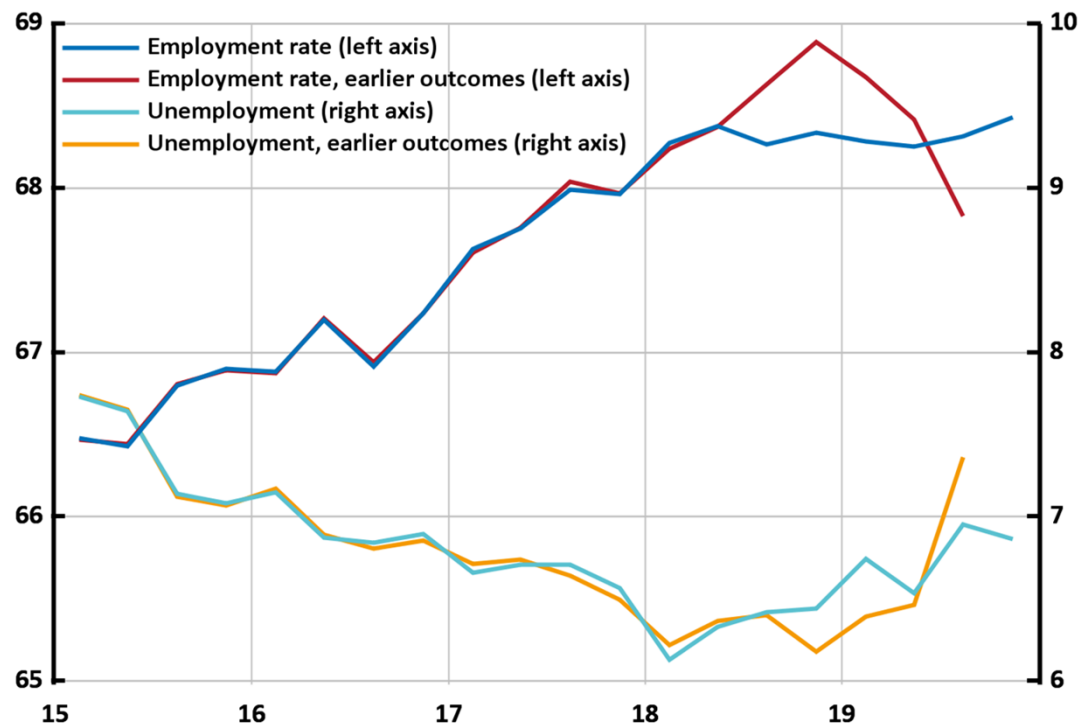


Note. Several outcome lines are shown in the figure. This is partly because the series have been seasonally adjusted and the seasonal adjustment can change when a new outcome is published. In November, Statistics Sweden also revised the outcomes for the period July–September due to quality problems in the previously published statistics. The figure gives the impression that the Riksbank's forecast in October was based on the unrevised outcome. This is incorrect, however. In October, it became known that Statistics Sweden would be revising its statistics and the Riksbank's forecast was therefore based on an assessment of how the statistics would be revised. This assessment turned out to have been relatively correct, as can be seen by comparing the solid blue line with the broken red line.

Sources: Statistics Sweden and the Riksbank

Figure 2.8. Revision of employment rate and unemployment

Percentage of population and labour force respectively, 15–74 years, seasonally-adjusted data

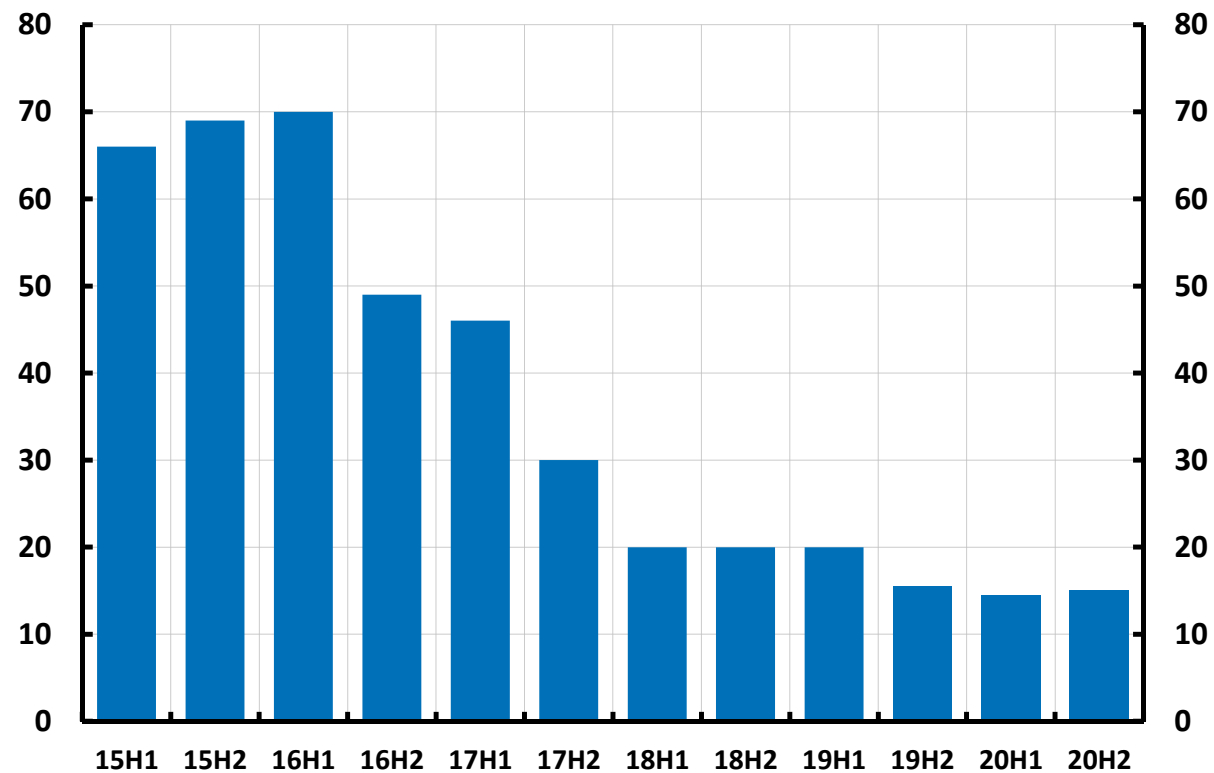


Note. The series refer to quarterly data.

Source: Statistics Sweden

Figure 2.9. The Riksbank's purchases of government bonds

SEK billion

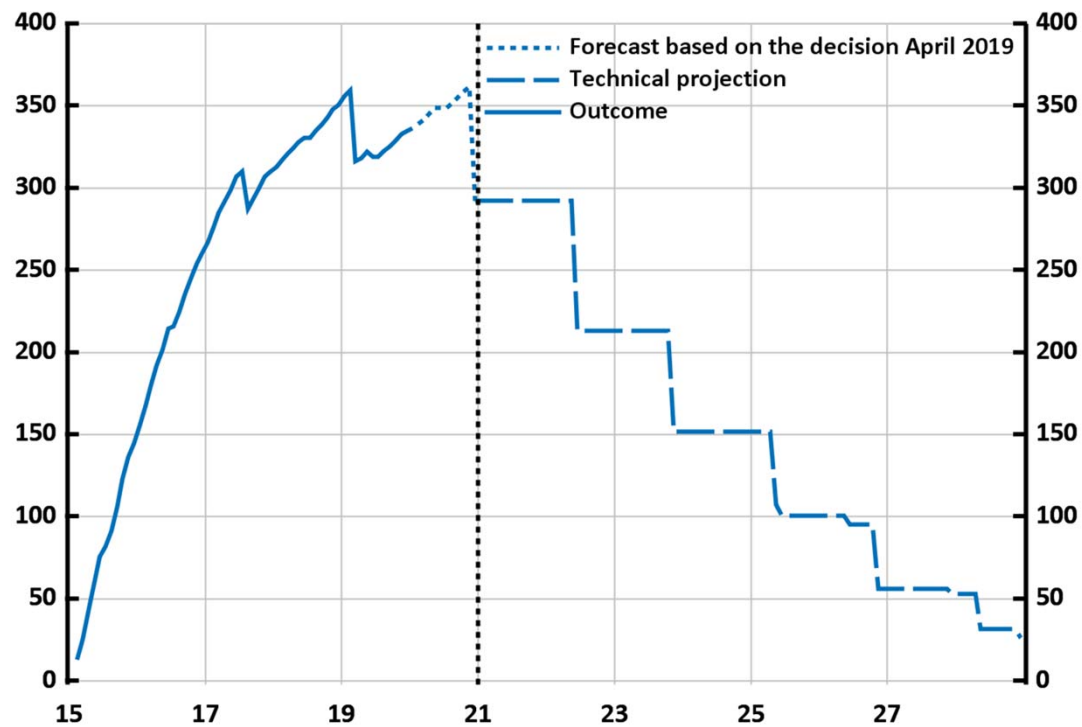


Note. Nominal amount. Development from 2020 on is a forecast. The final amounts will depend on current market prices.

Source: The Riksbank

Figure 2.10. The Riksbank's holdings of government bonds

Nominal amounts, SEK billion

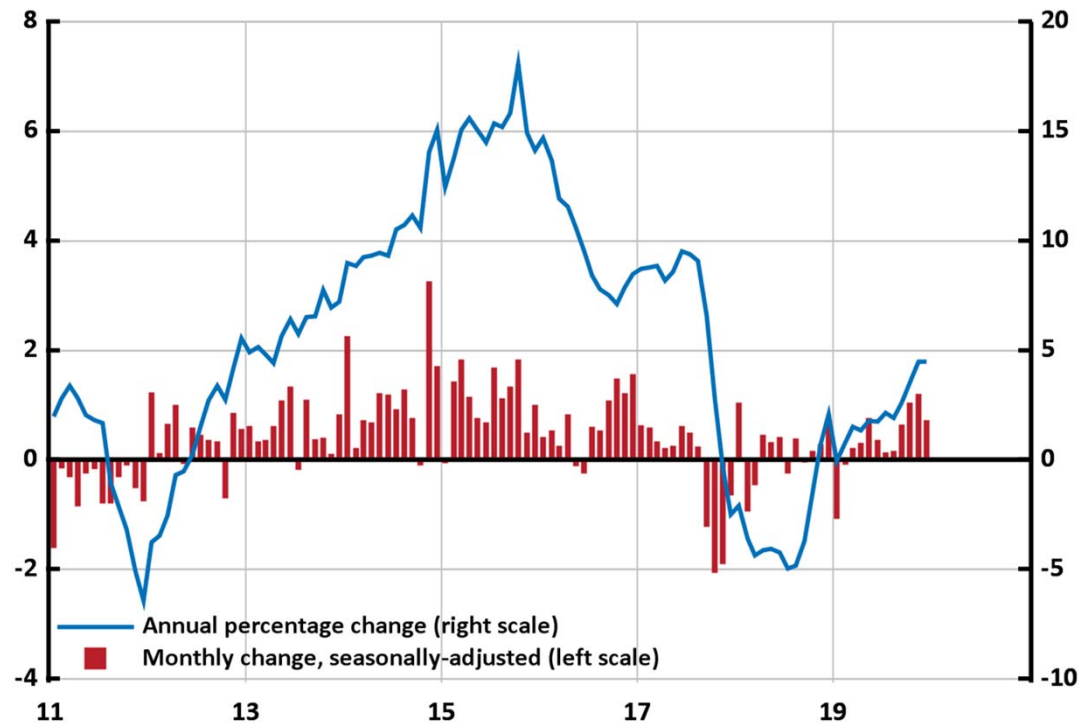


Note. Forecast until December 2020, then subsequently a technical projection under the assumption that no further purchases are made. This was the assessment for the period until and including the monetary policy meeting in February. The vertical line marks the shift between forecast and technical projection.

Source: The Riksbank

Figure 2.11. Housing prices according to HOX Sweden

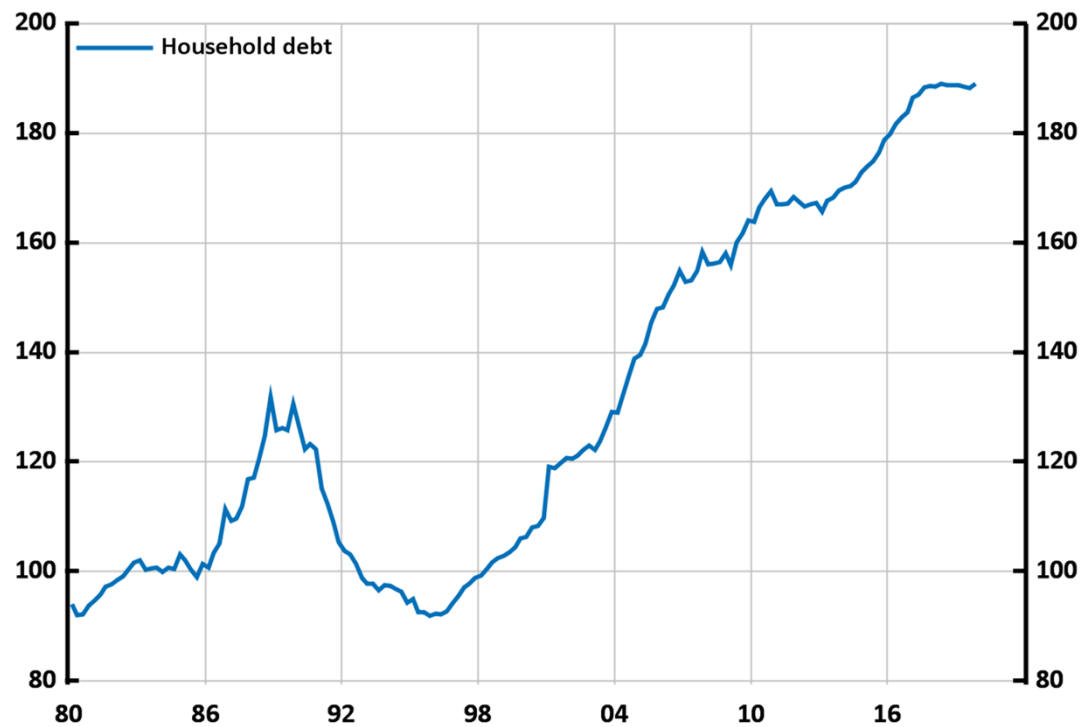
Per cent



Sources: Valueguard and the Riksbank

Figure 2.12. Household debt

Percentage of annual disposable income

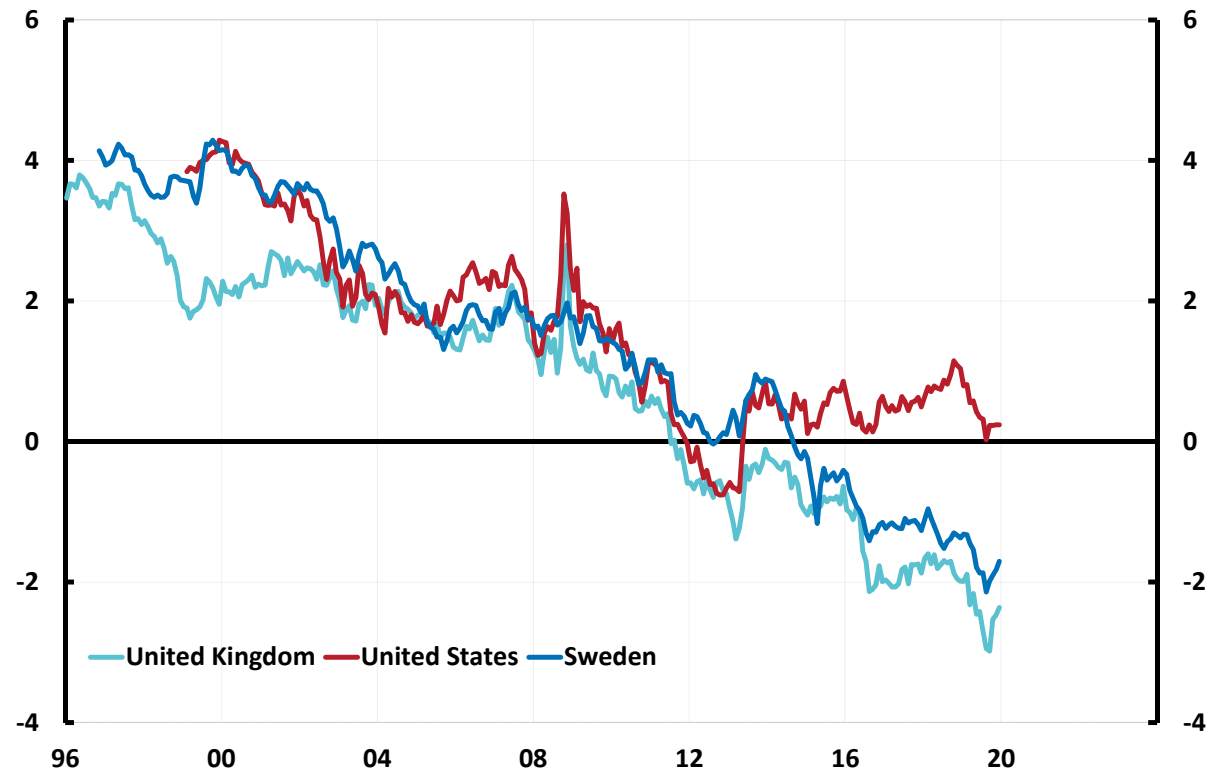


Note. Total household debt as a share of disposable household income added together over the last four quarters.

Sources: Statistics Sweden and the Riksbank

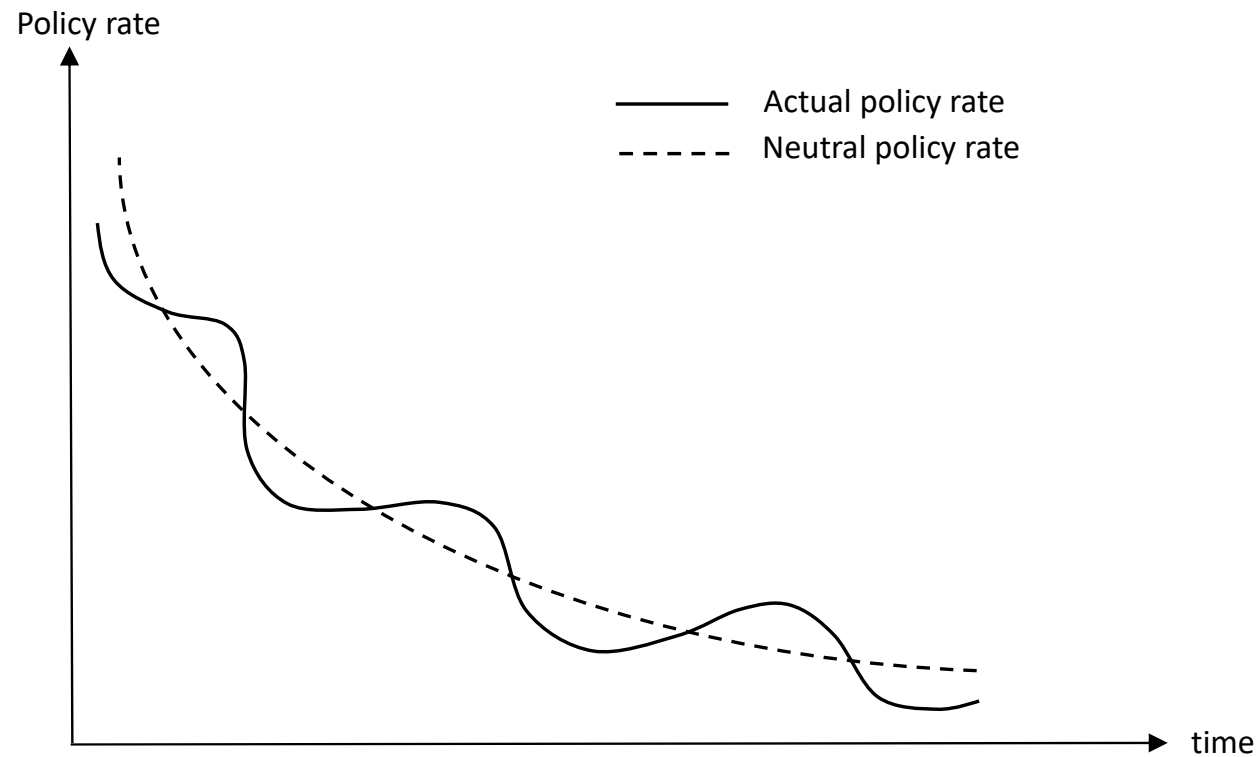
Figure 2.13. Real government bond yields, 10-year maturity

Per cent



Sources: National central banks and the Riksbank

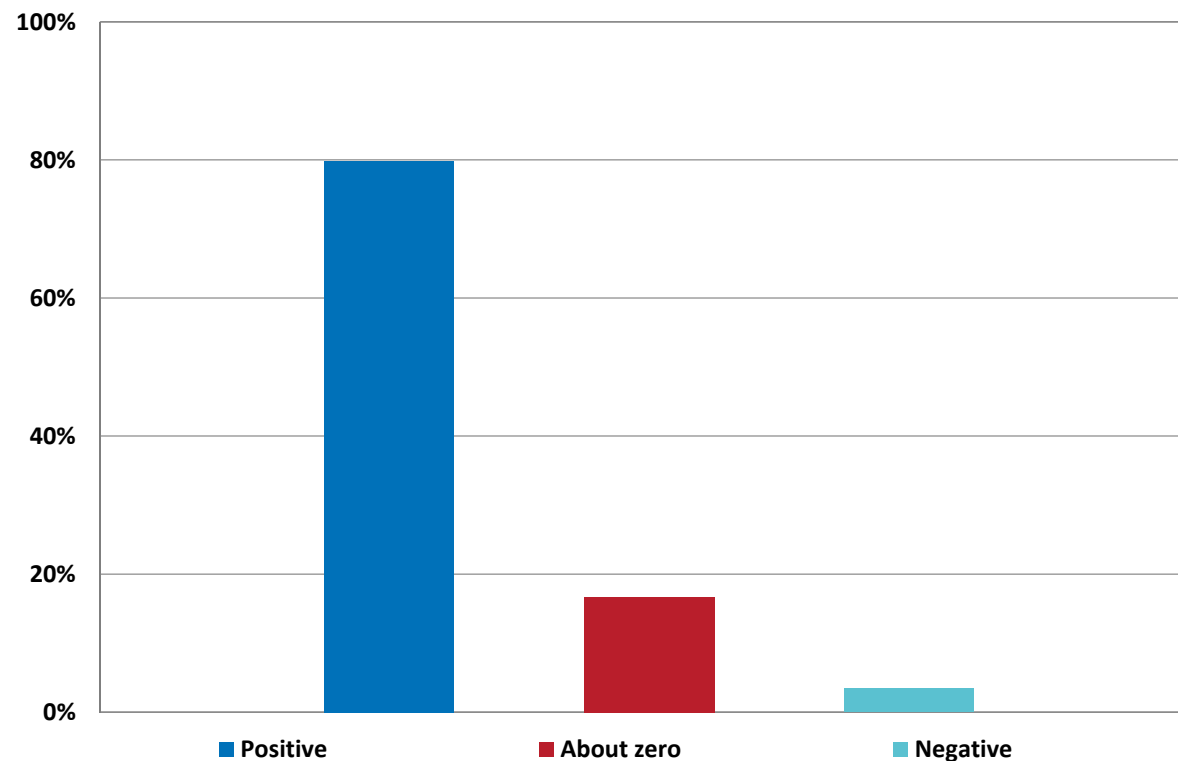
Figure 2.14. The average policy rate has fallen



Source: The Riksbank

Figure 2.15. Question in the Riksbank's business survey

Regarding the low interest rates over the past five years: What is your assessment of the net effect on your business? Per cent

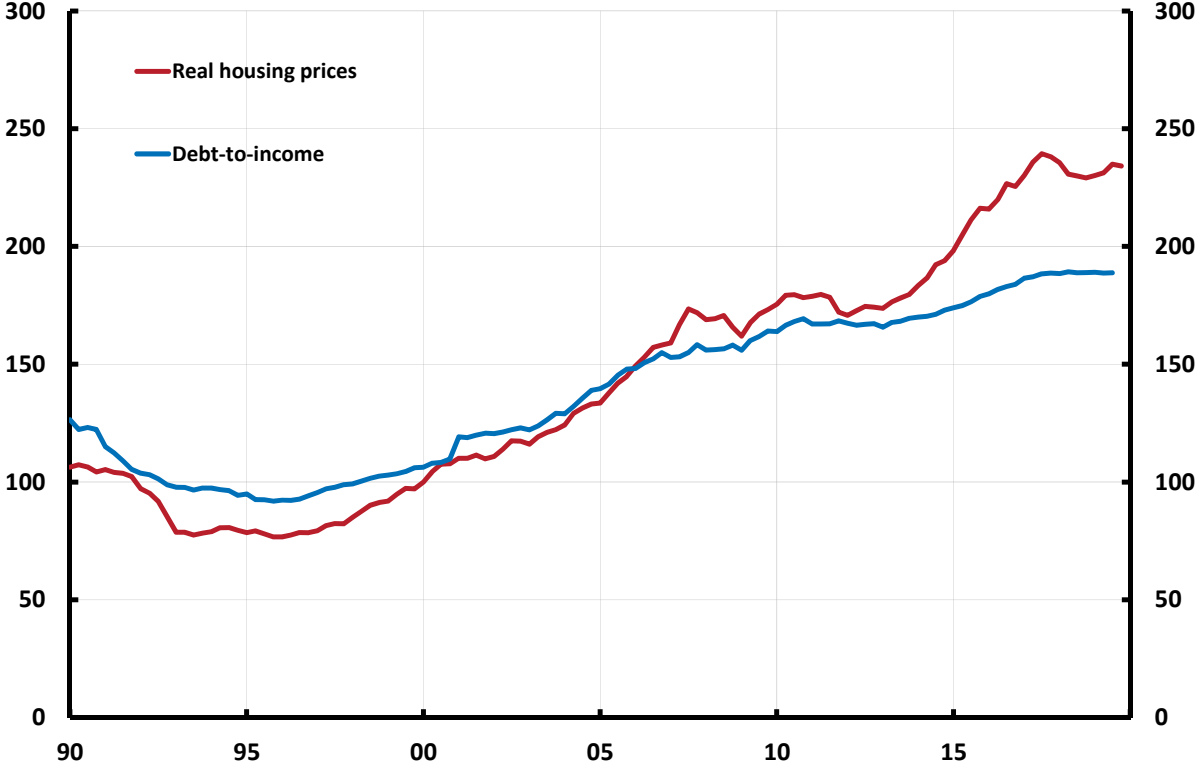


Note. Weighted share of companies choosing each response alternative.

Source: The Riksbank's Business survey

Figure 2.16. Households' debt-to-income ratio and real housing prices

Per cent and index, 2000 Q1 = 100



Note. The debt-to-income ratio refers to the percentage of households' debts in relation to their annual disposable incomes. Real house prices refer to the property index (single-family dwellings) deflated using the CPIF.

Sources: Statistics Sweden and the Riksbank

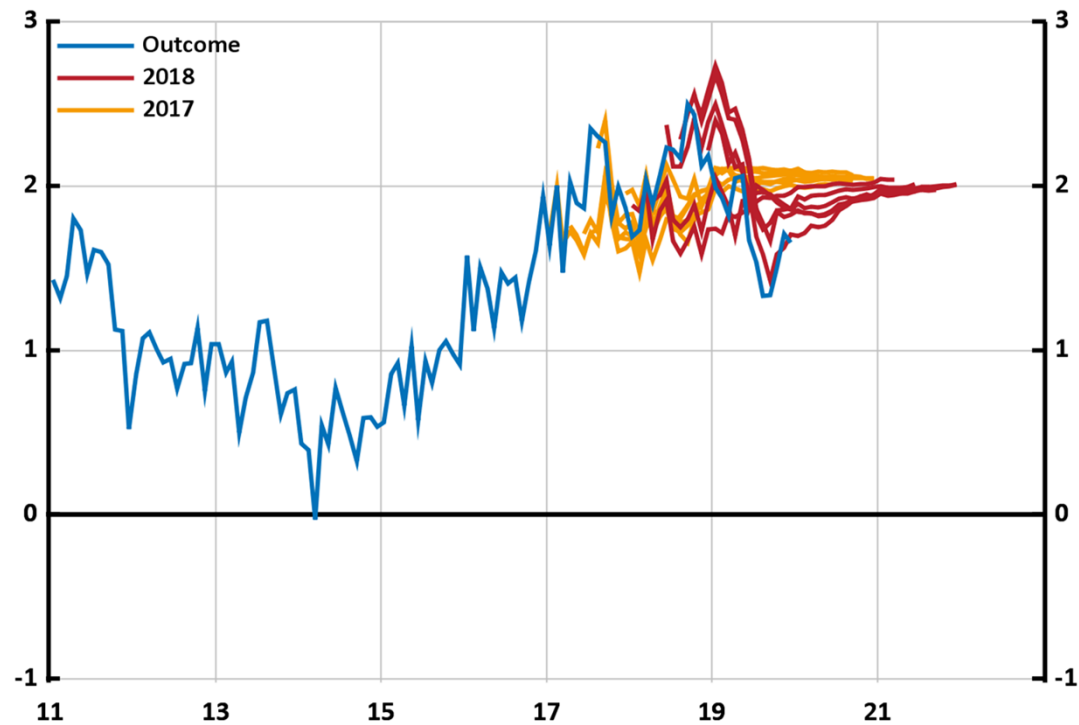
Chapter 3

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



Figure 3.1. CPIF, outcomes and forecasts

Annual percentage change

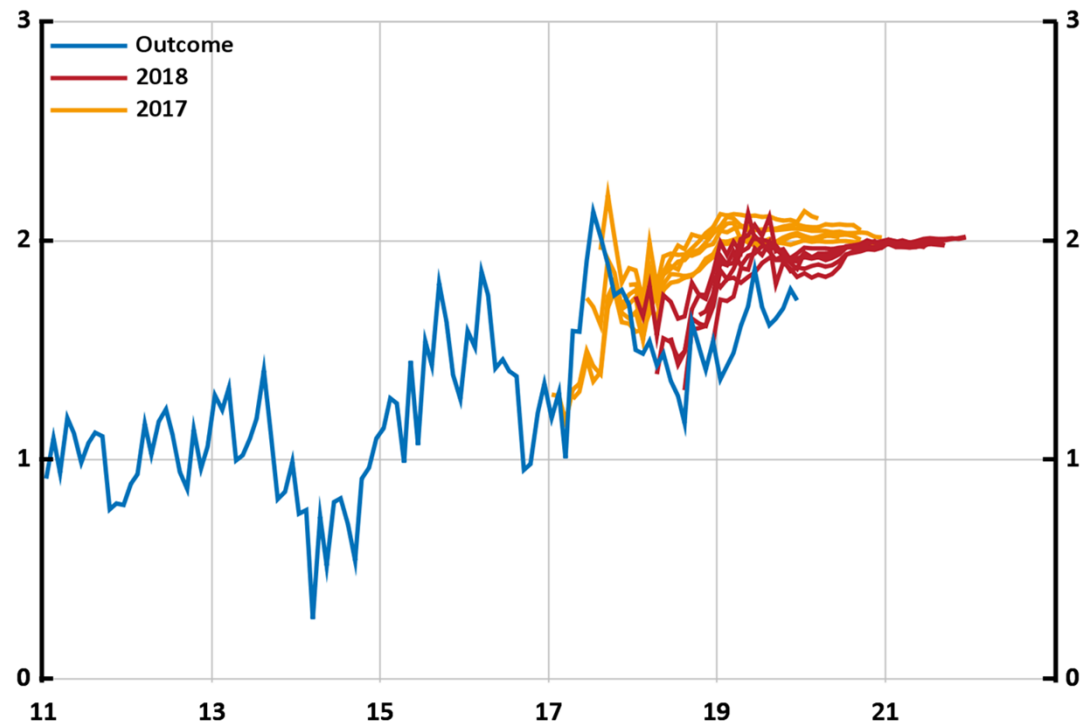


Note. The yellow and red lines refer to the Riksbank's forecasts in 2017 and 2018.

Sources: Statistics Sweden and the Riksbank

Figure 3.2. CPIF excluding energy, outcomes and forecasts

Annual percentage change

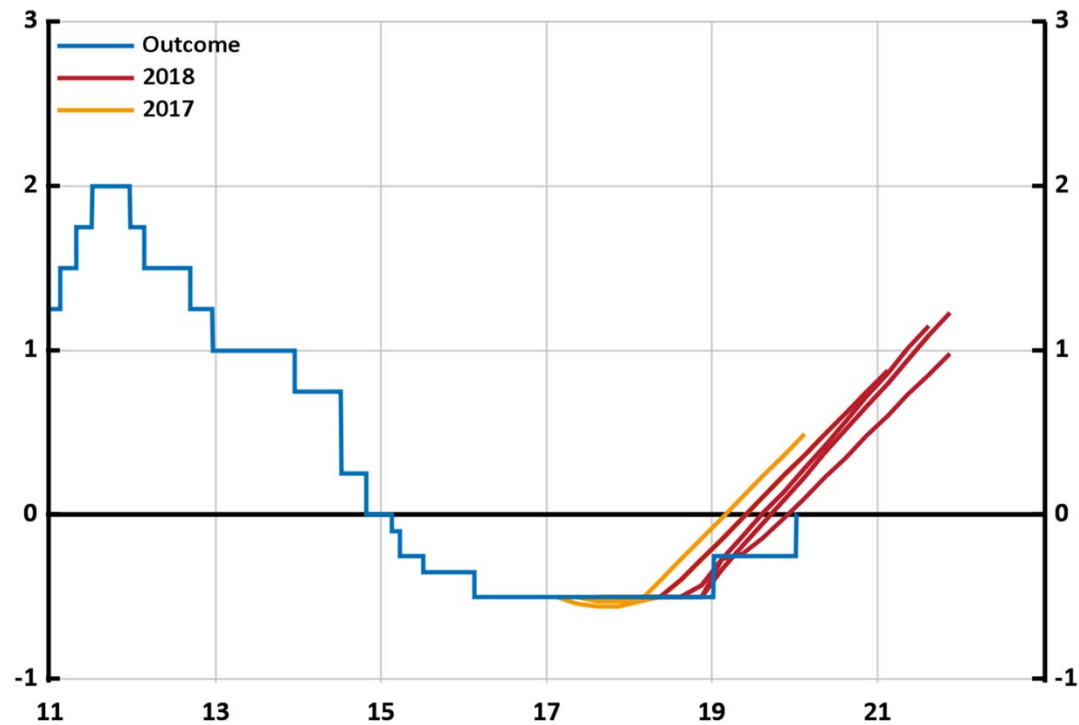


Note. The yellow and red lines refer to the Riksbank's forecasts in 2017 and 2018.

Sources: Statistics Sweden and the Riksbank

Figure 3.3. Repo rate, outcomes and forecasts

Per cent

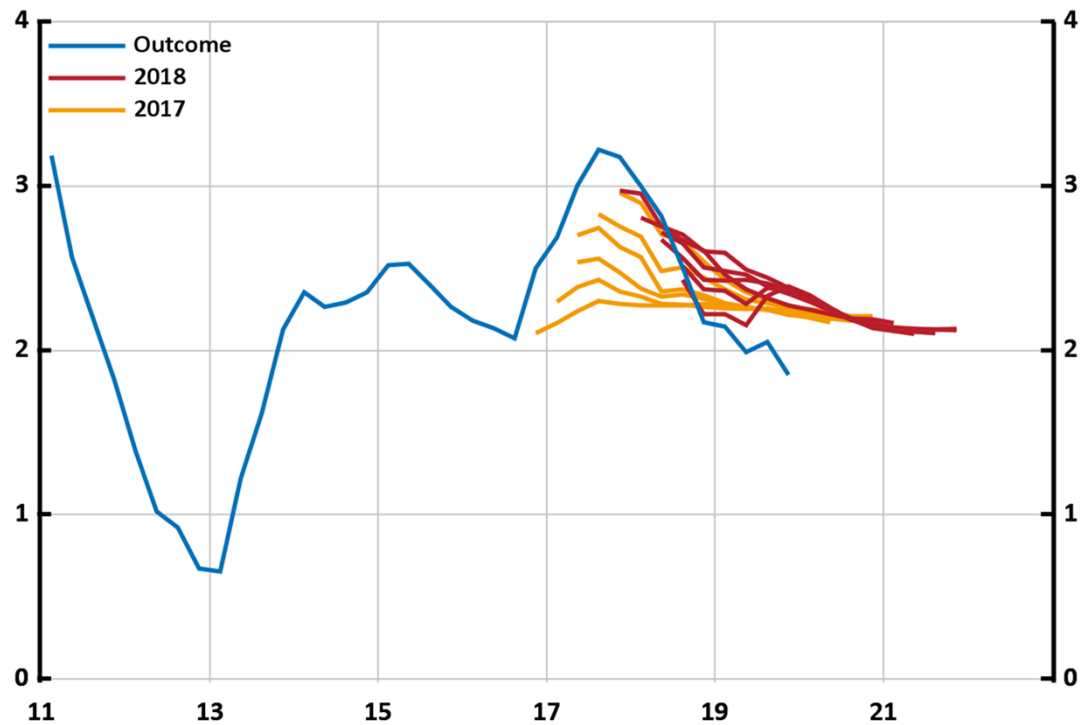


Note. The yellow and red lines refer to the Riksbank's forecasts in 2017 and 2018. Several of the forecasts made in 2017 largely coincide with each other. Outcomes are daily data and forecasts refer to quarterly averages.

Source: The Riksbank

Figure 3.4. GDP abroad, outcomes and forecasts

KIX-weighted, annual percentage change

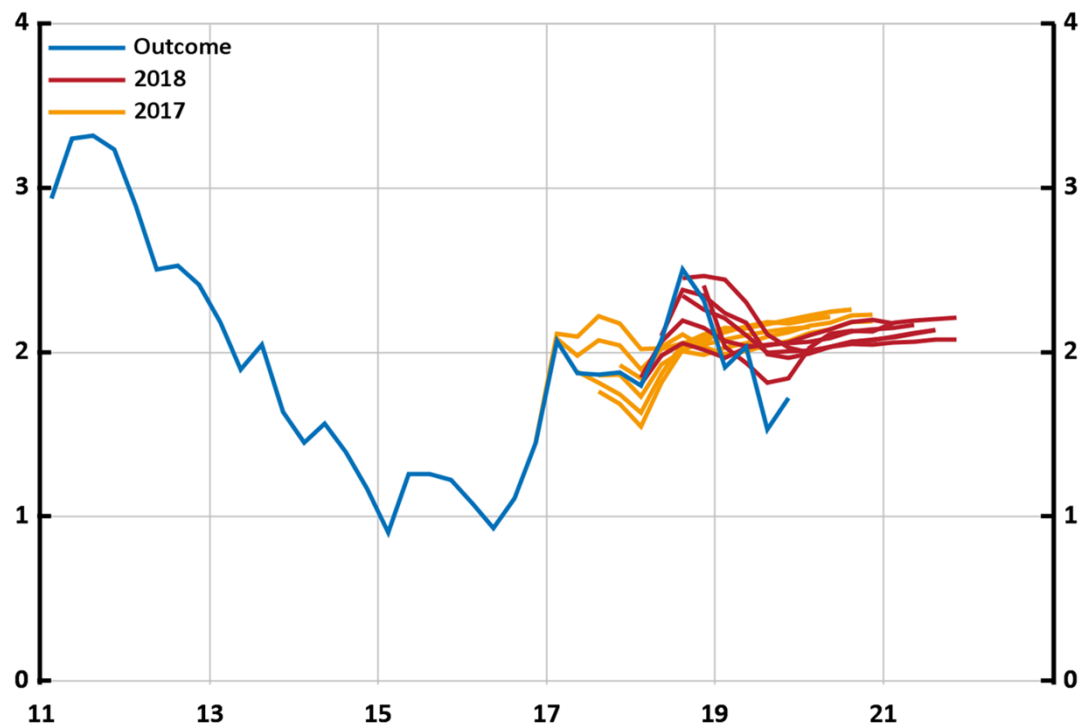


Note. The yellow and red lines refer to the Riksbank's forecasts in 2017 and 2018. The KIX is an aggregate of countries that are important for Sweden's international transactions.

Sources: National sources and the Riksbank

Figure 3.5. Inflation abroad, outcome and forecasts

KIX-weighted, annual percentage change

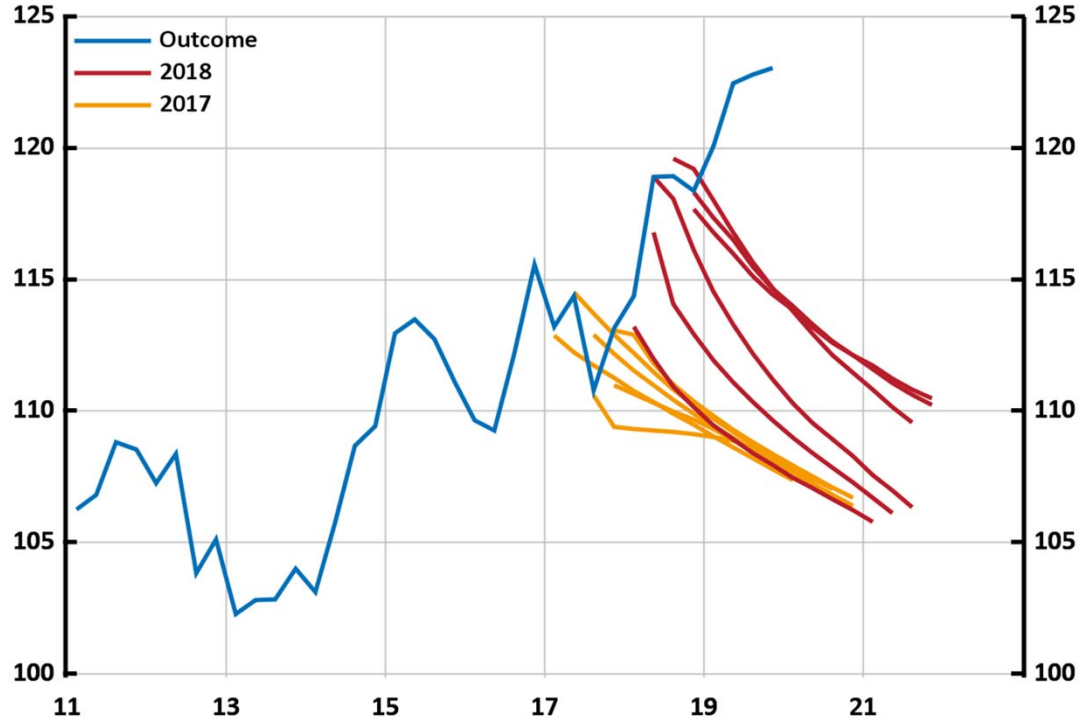


Note. The yellow and red lines refer to the Riksbank's forecasts in 2017 and 2018. The KIX is an aggregate of countries that are important for Sweden's international transactions.

Sources: National sources and the Riksbank

Figure 3.6. KIX-weighted nominal exchange rate, outcome and forecasts

Index, 18 November 1992 = 100

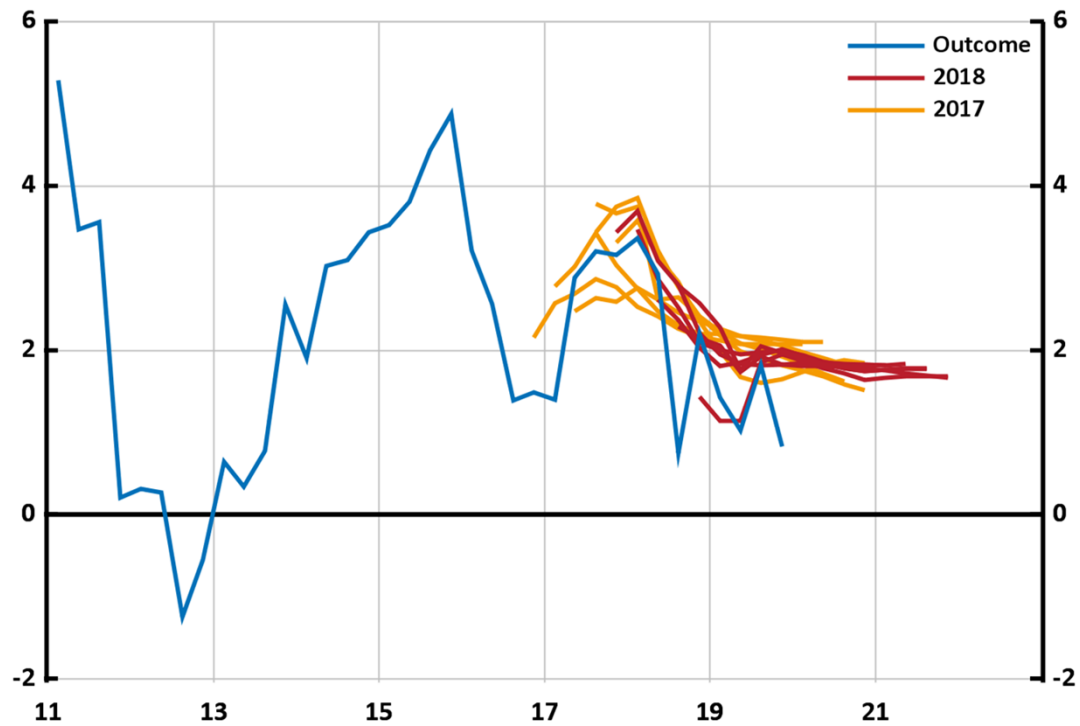


Note. The yellow and red lines refer to the Riksbank’s forecasts in 2017 and 2018. The KIX (krona index) is an weighted average of the krona exchange rate against currencies in countries that are important for Sweden's international transactions. A higher value indicates a weaker exchange rate.

Sources: National sources and the Riksbank

Figure 3.7. GDP, outcomes and forecasts

Annual percentage change, calendar-adjusted data

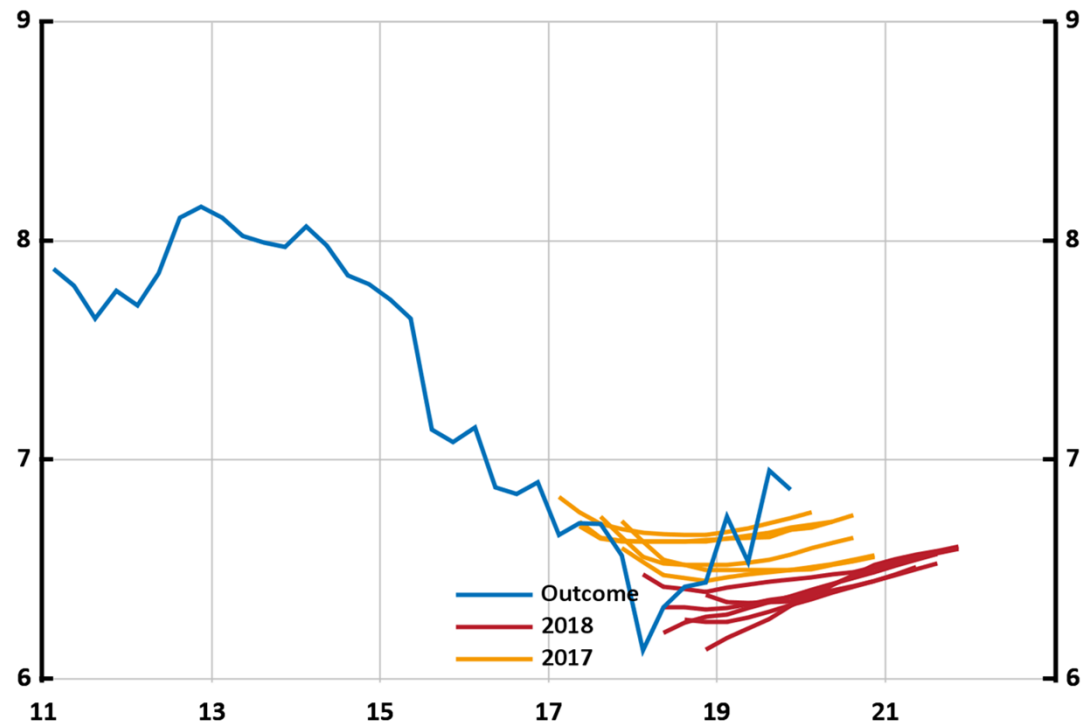


Note. The yellow and red lines refer to the Riksbank's forecasts in 2017 and 2018.

Sources: Statistics Sweden and the Riksbank

Figure 3.8. Unemployment, outcomes and forecasts

Percentage of labour force, 15–74 years, seasonally adjusted data

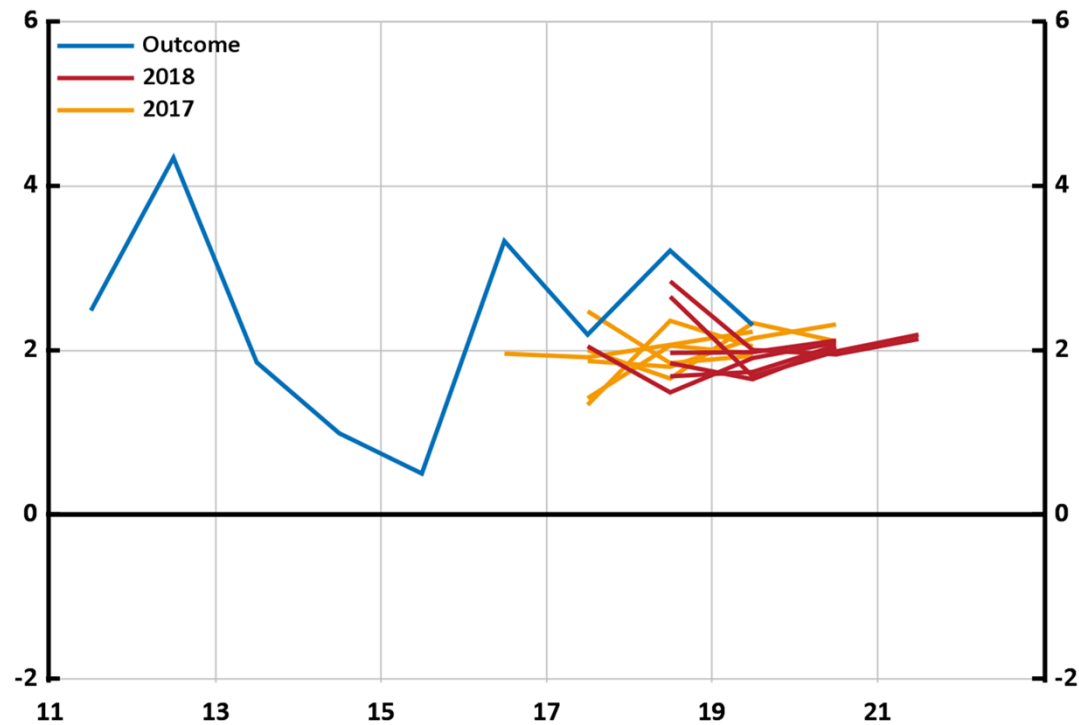


Note. The yellow and red lines refer to the Riksbank's forecasts in 2017 and 2018.

Sources: Statistics Sweden and the Riksbank

Figure 3.9. Unit labour costs, outcomes and forecasts

Annual percentage change

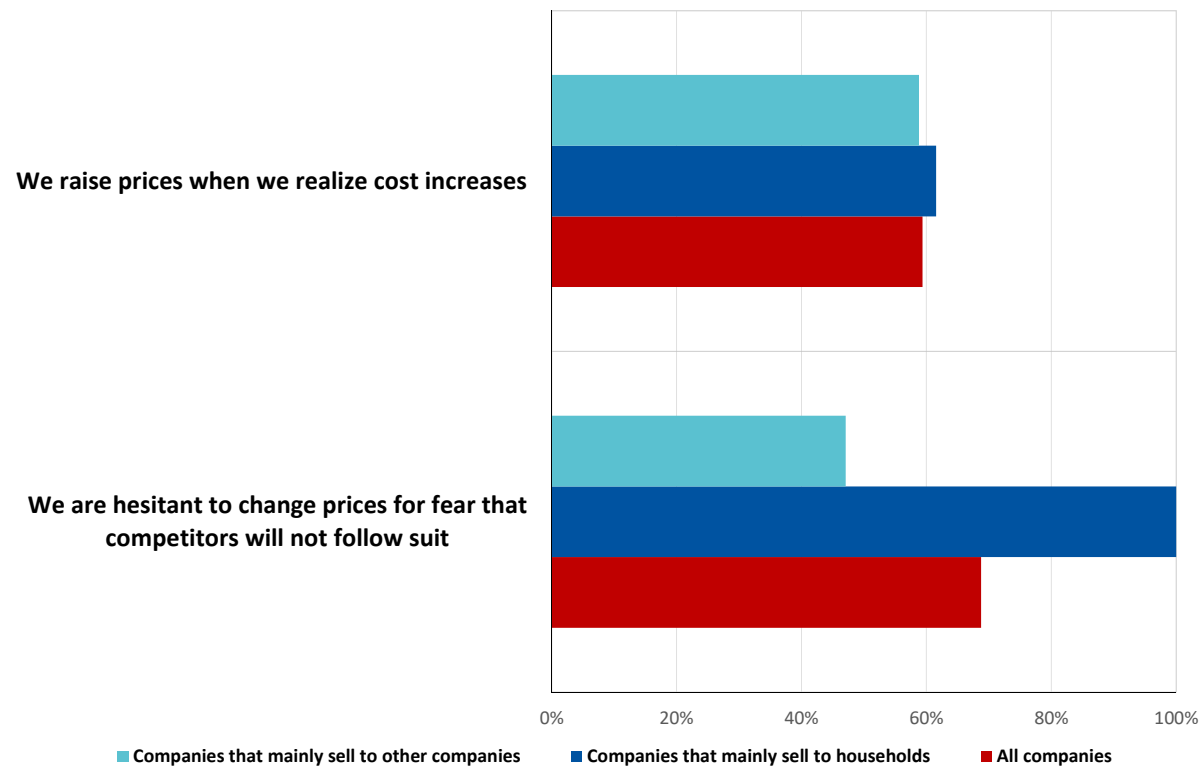


Note. The yellow and red lines refer to the Riksbank's forecasts in 2017 and 2018.

Sources: Statistics Sweden and the Riksbank

Figure 3.10. Statements that companies think best describe their pricing behaviour

Share of companies choosing each response alternative, per cent

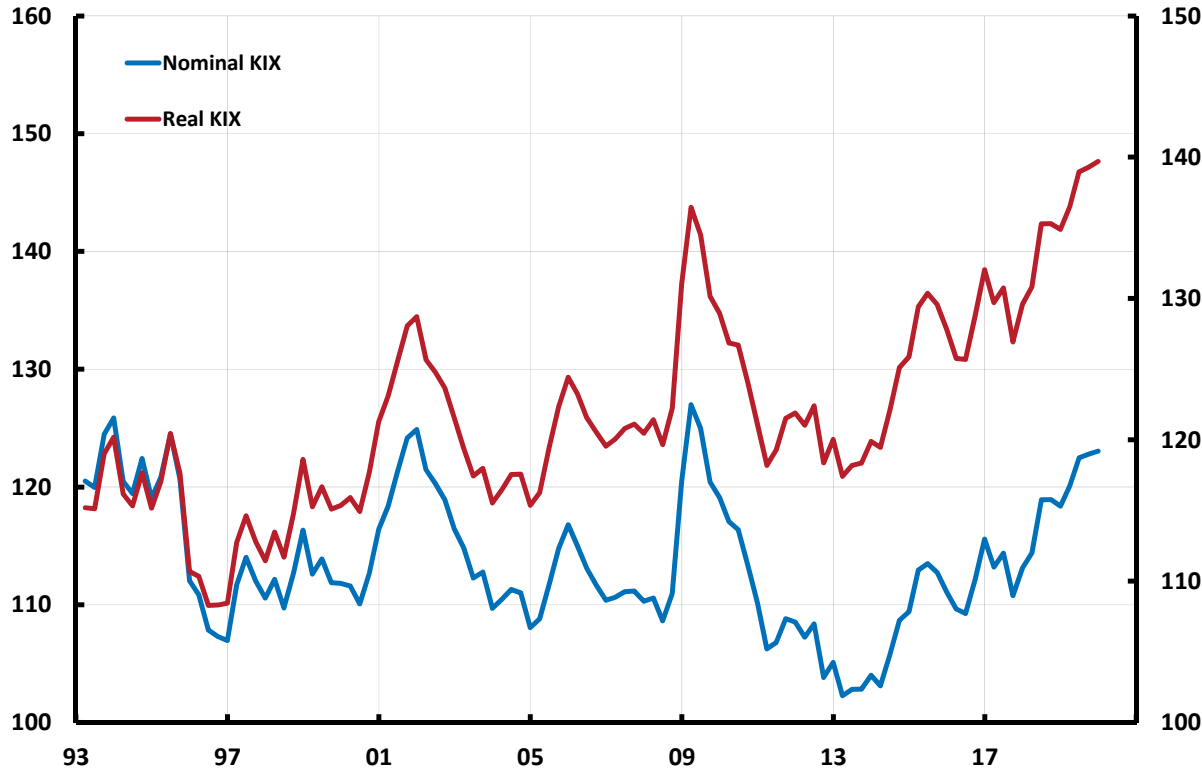


Note. The figure shows a sample of responses about pricing behaviour in Figure 5 in the article “Why don’t prices change more?” in the Riksbank’s Business Survey, May 2019. The question was: Which of the following statements corresponds best with how you decide your sales prices (choose one or more alternatives)? A total of 32 companies answered the question, two of whom stated that the public sector was responsible for the largest share of their revenue.

Source: The Riksbank’s Business Survey

Figure 3.11. Nominal and real krona exchange rates according to the krona index (KIX)

Index, 18 November 1992 = 100

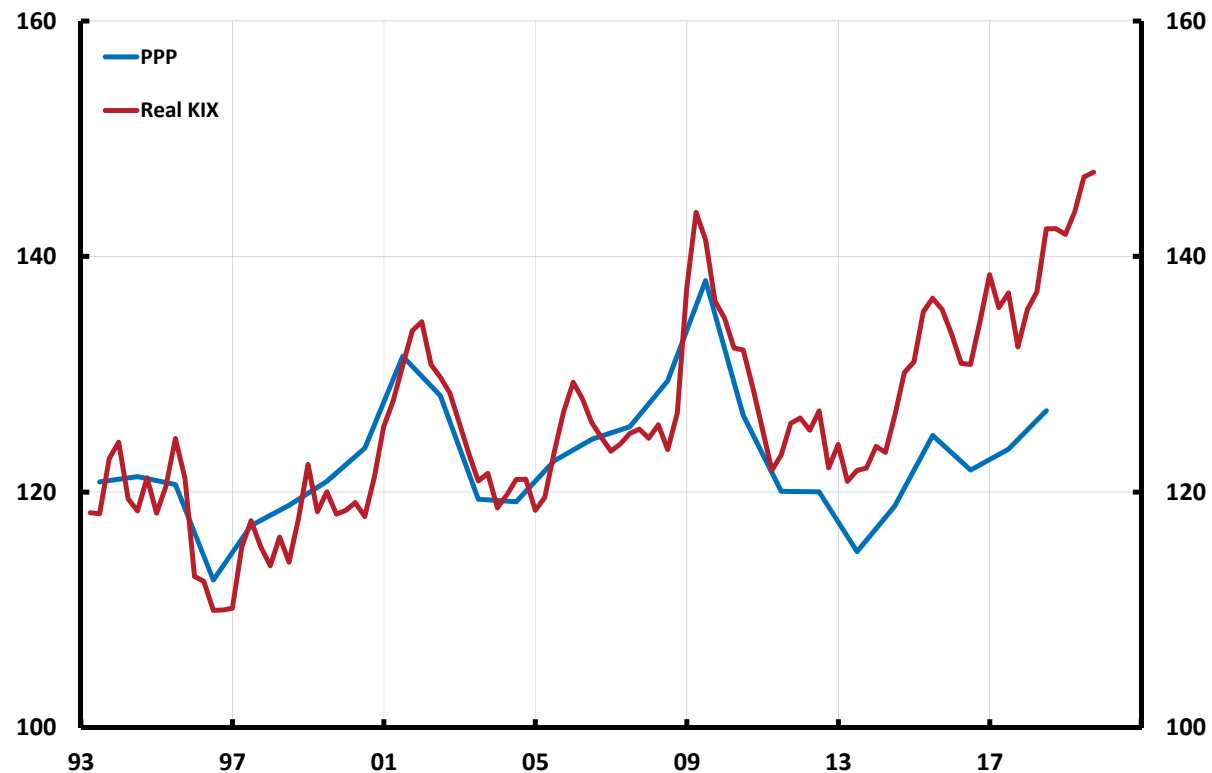


Note. The real exchange rate is calculated using the CPI for Sweden and the CPI for the rest of the world. The KIX (krona index) is a weighted average of the currencies in the countries that are important for Sweden’s international trade. A higher value indicates a weaker exchange rate.

Sources: National sources, Statistics Sweden and the Riksbank

Figure 3.12. Different measures of the Swedish real effective exchange rate

Index, 18 November 1992 = 100

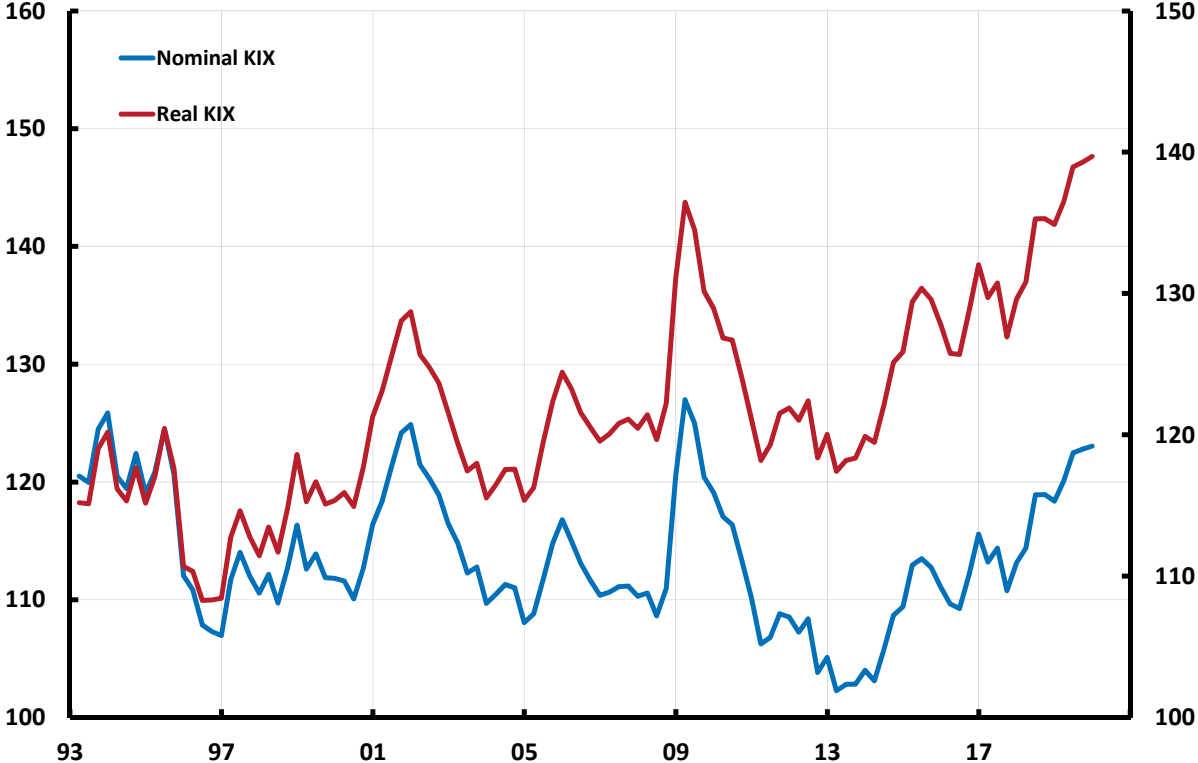


Note. The real exchange rate is calculated using the CPI for Sweden and the CPI for the rest of the world. The KIX (krona index) is a weighted average of the currencies in the countries that are important for Sweden's international trade. A higher value indicates a weaker exchange rate. PPP refers to annual data. The sample is limited to countries and years in which the is data available for the measures based on the PPP.

Sources: National sources, Statistics Sweden and the Riksbank

Figure 3.13. Nominal and real krona exchange rates according to the krona index (KIX)

Index, 18 November 1992 = 100

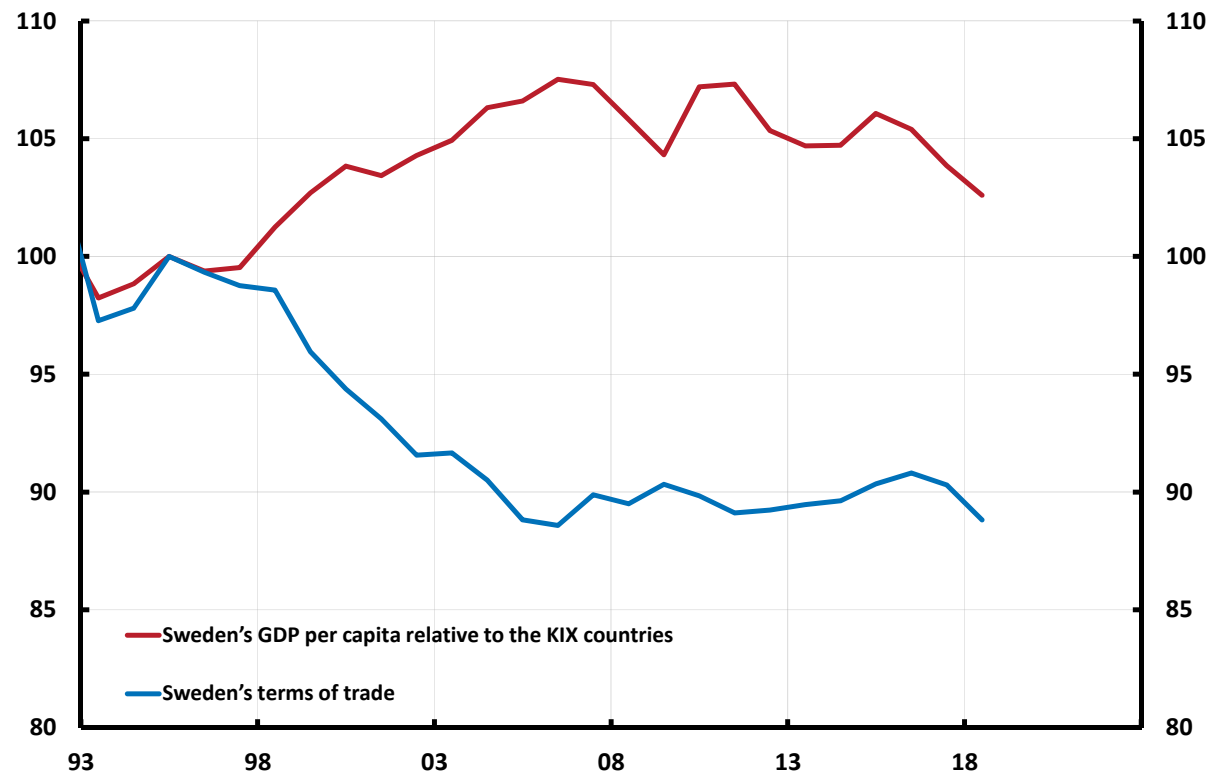


Note. The real exchange rate is calculated using the CPI for Sweden and the CPI for the rest of the world. The KIX (krona index) is a weighted average of the currencies in the countries that are important for Sweden’s international trade. A higher value indicates a weaker exchange rate.

Sources: National sources, Statistics Sweden and the Riksbank

Figure 3.14. Sweden's terms of trade and GDP per capita relative to other countries

Index 1995 = 100

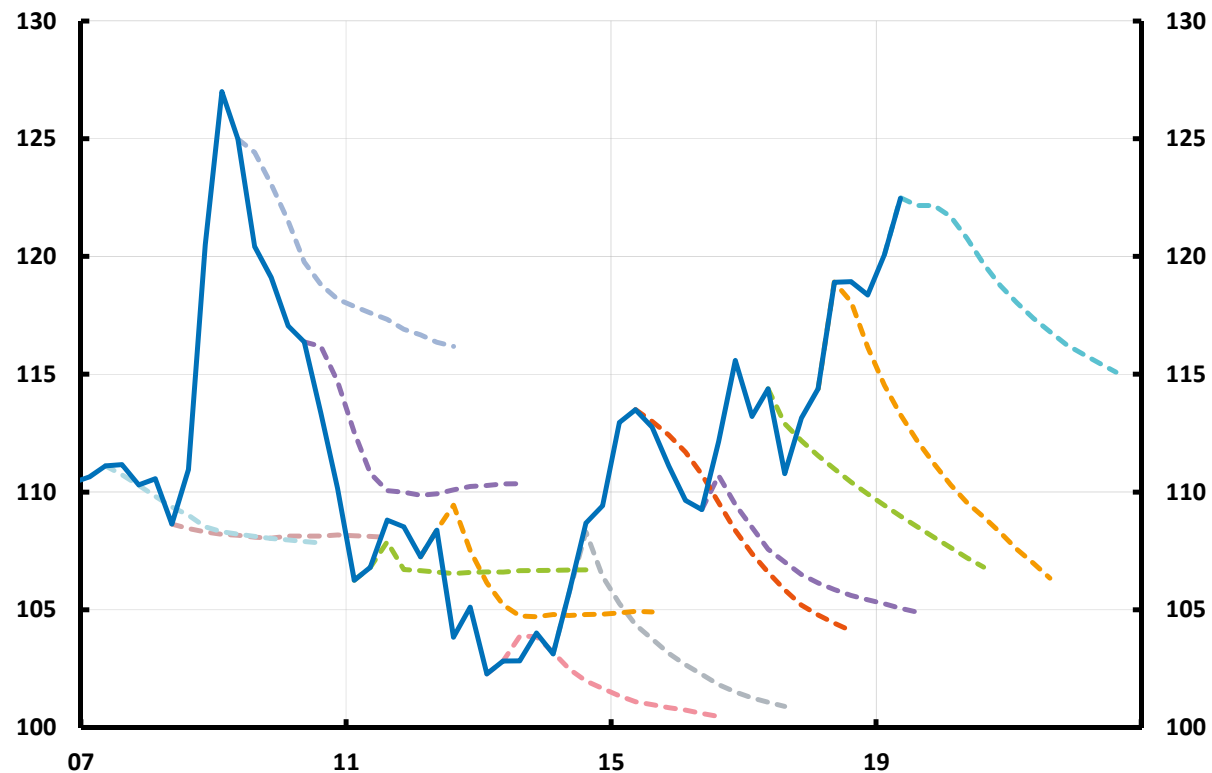


Note. Data for the euro area as a whole prior to 1995 is missing and has been replaced by an aggregate of a smaller group of countries. Overall, this means that the sample is limited to 18 KIX countries for the period prior to 1995, which corresponds to 84 per cent of KIX with 1994 weights. Prior to 1995, constant KIX weights from 1994 are used.

Sources: IMF and World Bank

Figure 3.15. A sample of the Riksbank's krona forecasts 2007–2019

Index, 18 November 1992 = 100

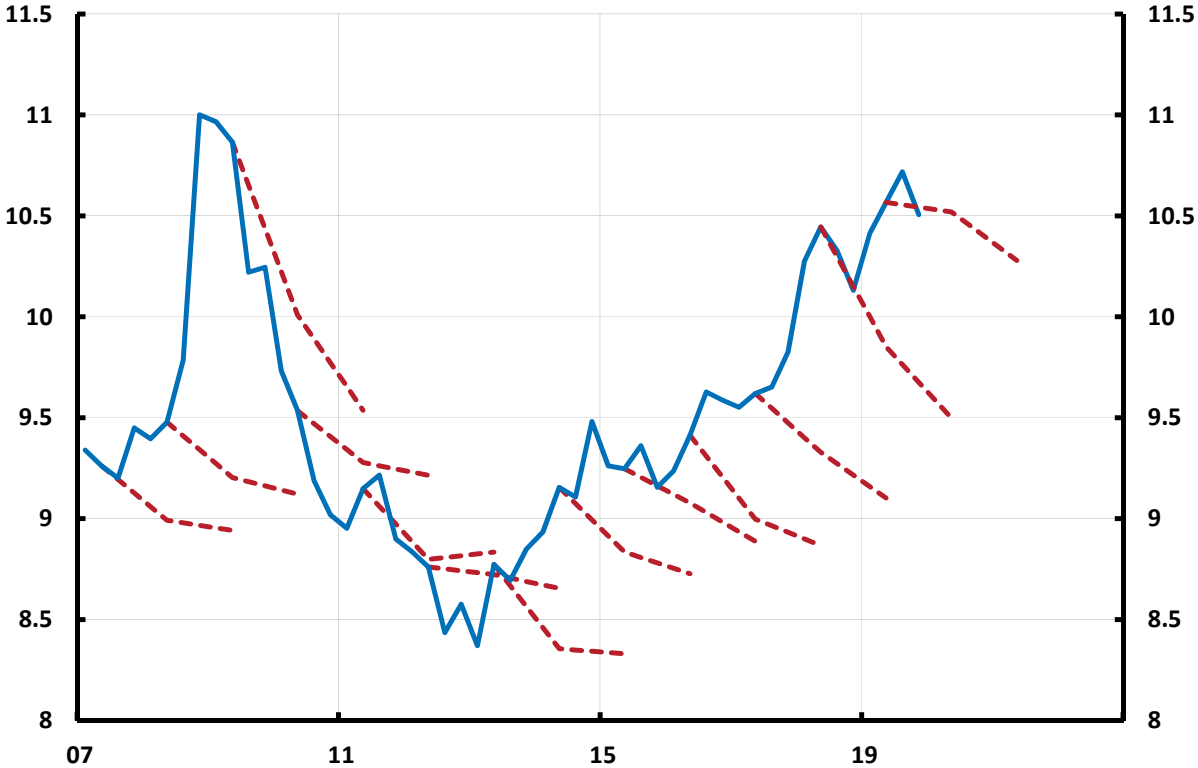


Note. The real exchange rate is calculated using the CPI for Sweden and the CPI for the rest of the world. The KIX (krona index) is a weighted average of the currencies in the countries that are important for Sweden's international trade. A higher value indicates a weaker exchange rate.

Sources: National sources, Statistics Sweden and the Riksbank

Figure 3.16. A sample of Swedish money market participants' krona forecasts 2007–2019

Kronor per euro

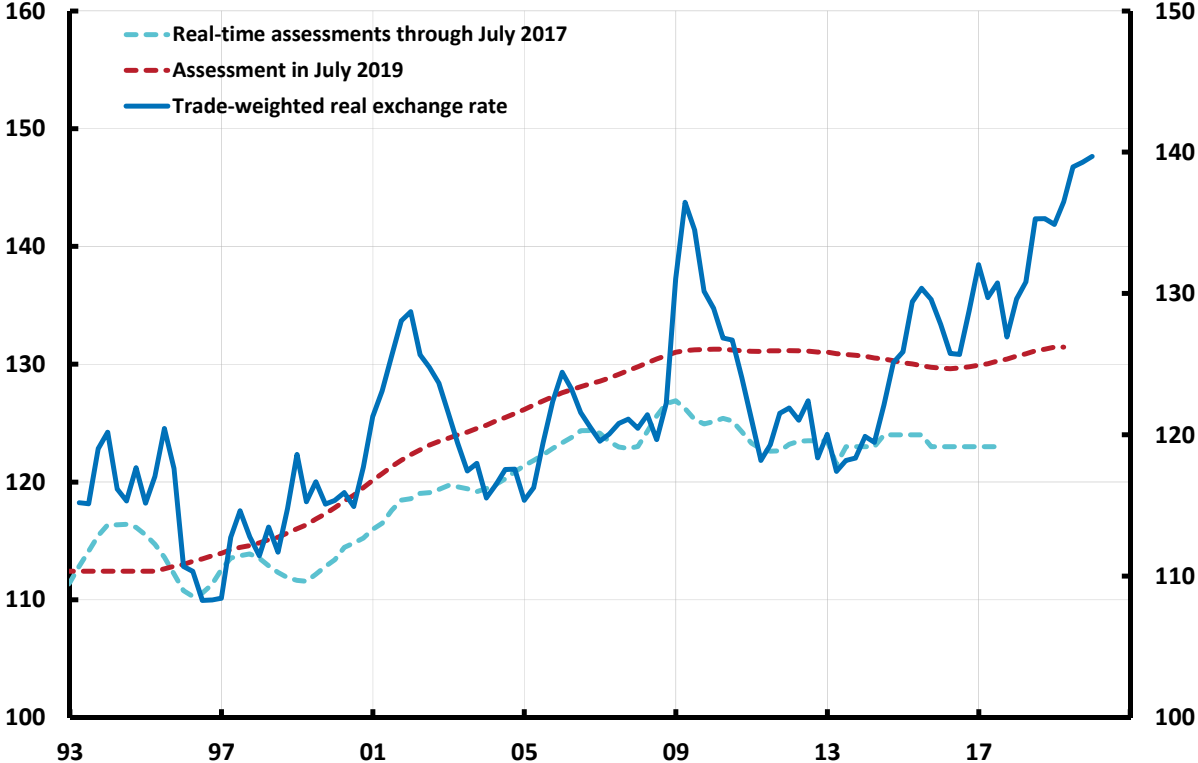


Note. The forecasts have been taken from Prospera’s quarterly survey for the second quarter of the year for the years 2007–2019.

Sources: Kantar Sifo Prospera and the Riksbank

Figure 3.17. Historical assessments of the krona's equilibrium real exchange rate

Index, 18 November 1992 = 100



Note. The real exchange rate is calculated using the CPIX for Sweden and the CPI for the rest of the world. The KIX (krona index) is a weighted average of the currencies in the countries that are important for Sweden's international trade. A higher value indicates a weaker exchange rate.

Sources: National sources, Statistics Sweden and the Riksbank

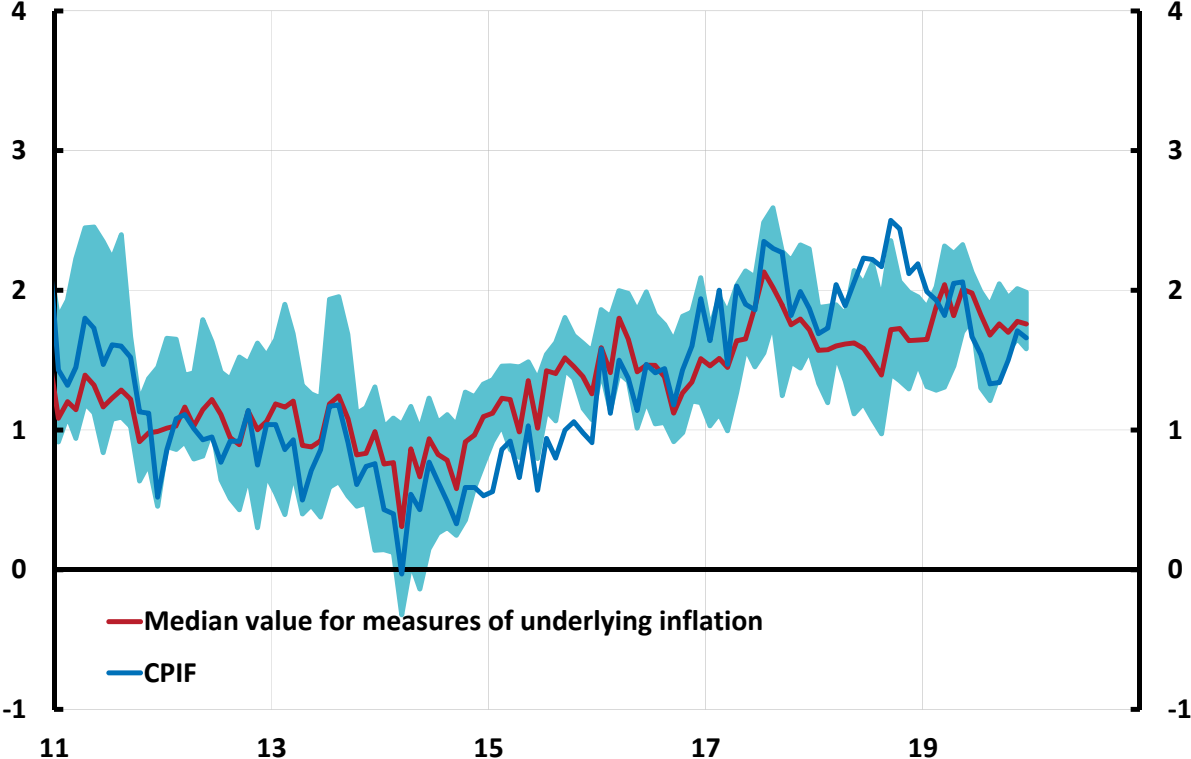
Chapter 4

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



Figure 4.1. The CPIF and different measures of underlying inflation

Annual percentage change

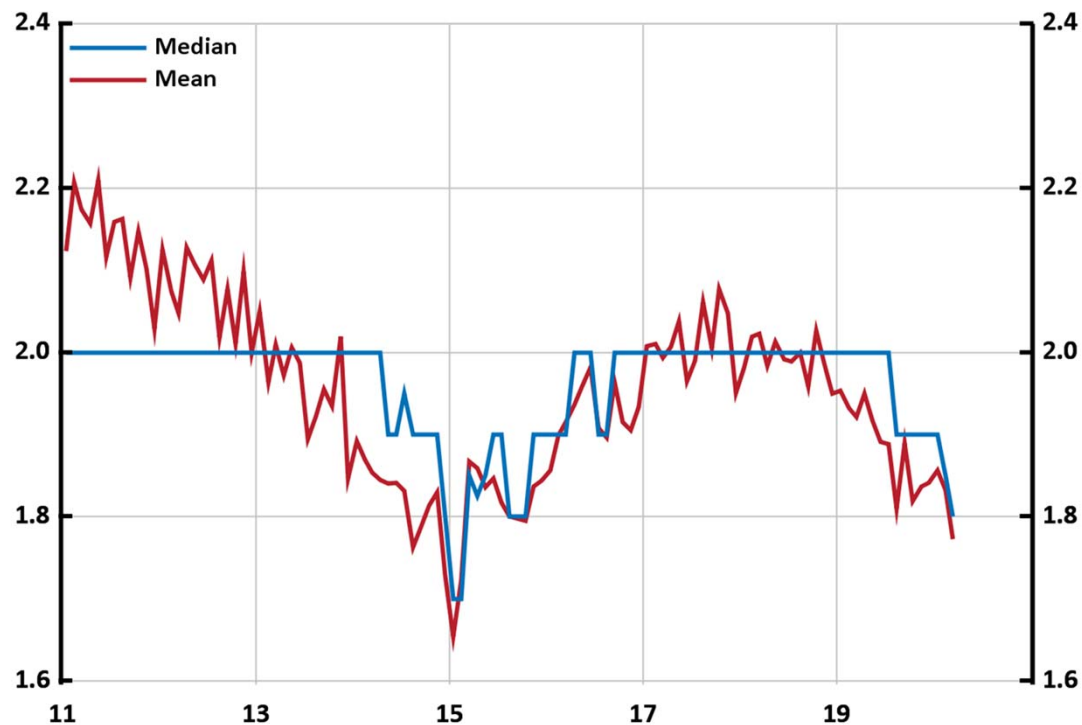


Note. The field shows the highest and lowest outcomes among different measures of underlying inflation. The measures included are the CPIF excluding energy, UND24, Trim85, CPIF excluding energy and perishables, persistence-weighted inflation (CPIFPV), factors from principal component analysis (CPIFPC) and weighted mean inflation (Trim1).

Sources: Statistics Sweden and the Riksbank

Figure 4.2. Inflation expectations among money market participants, 5 years ahead

Per cent

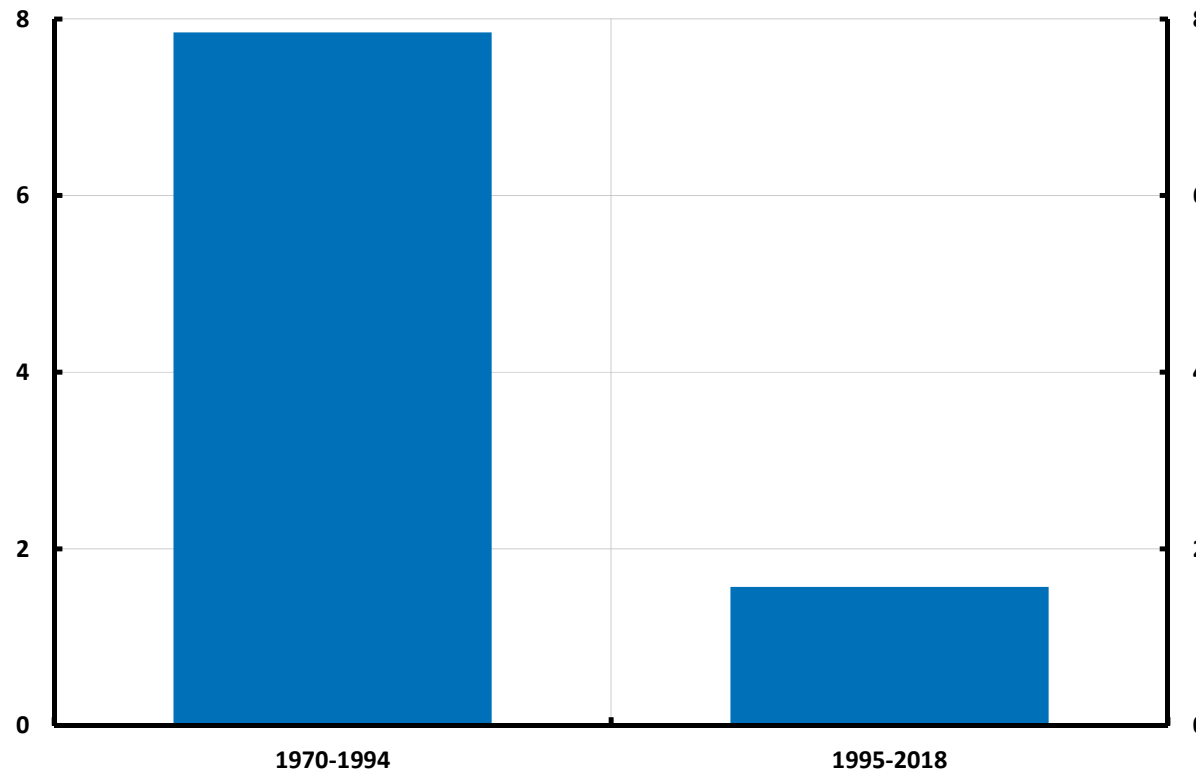


Note. Refers to CPI inflation. The median shows the inflation value that has an equal amount of measures above as below it. Unlike the average value, the median value is not sensitive to extreme values.

Source: Kantar Sifo Prospera

Figure 4.3. Significantly lower CPIF inflation during the period with inflation targeting

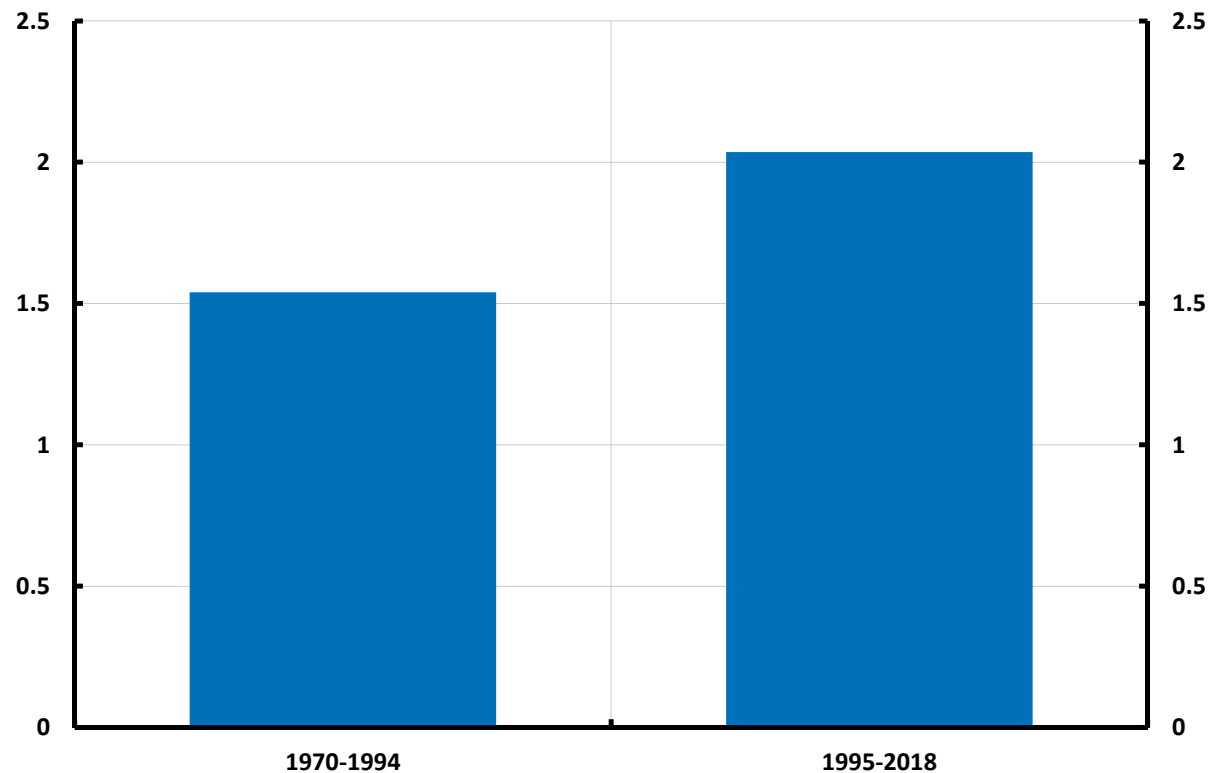
Per cent, average



Sources: Statistics Sweden and the Riksbank

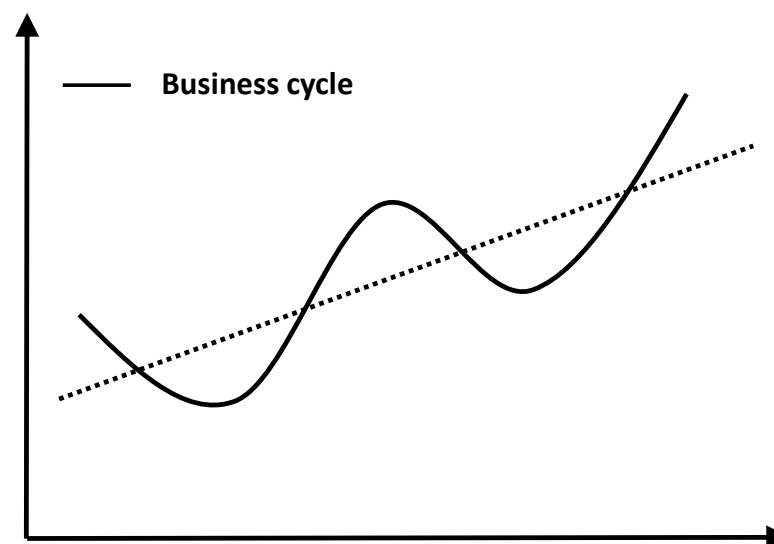
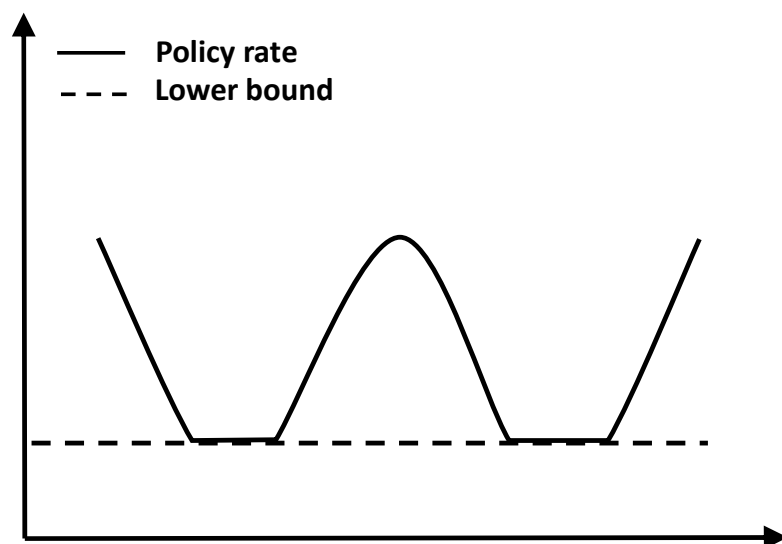
Figure 4.4. Higher growth in GDP per capita during the period of inflation targeting

Per cent, average



Sources: National Institute of Economic Research and the Riksbank

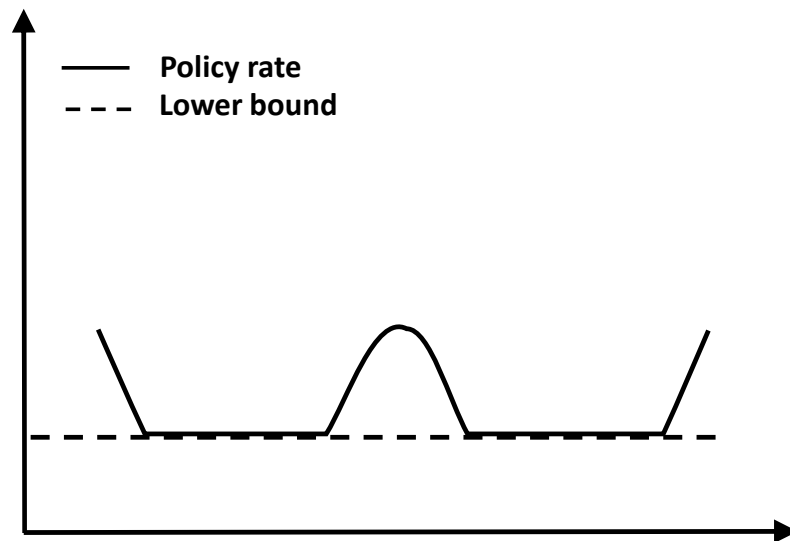
Figure 4.5. More scope to cut the interest rate with a credible inflation target of 2 per cent – and easier to counteract recessions



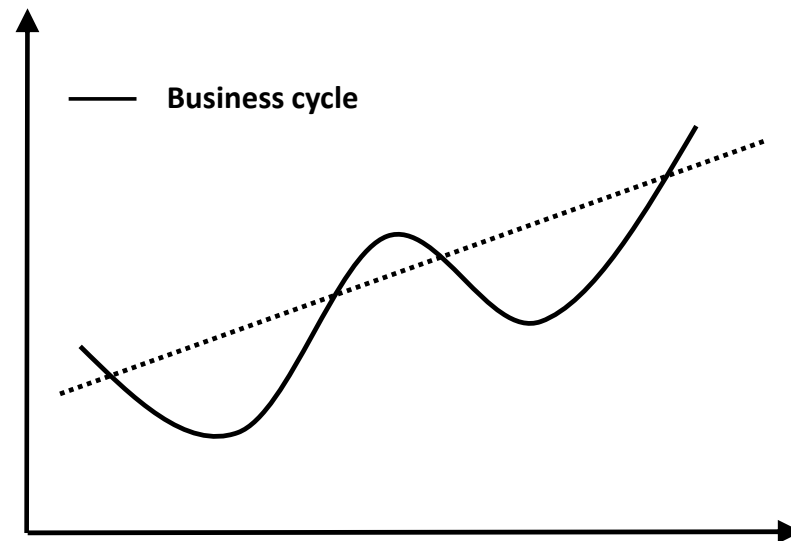
Note. Development of the policy rate and milder recessions, respectively

Source: The Riksbank

Figure 4.6. Less scope to cut the interest rate with lower average inflation



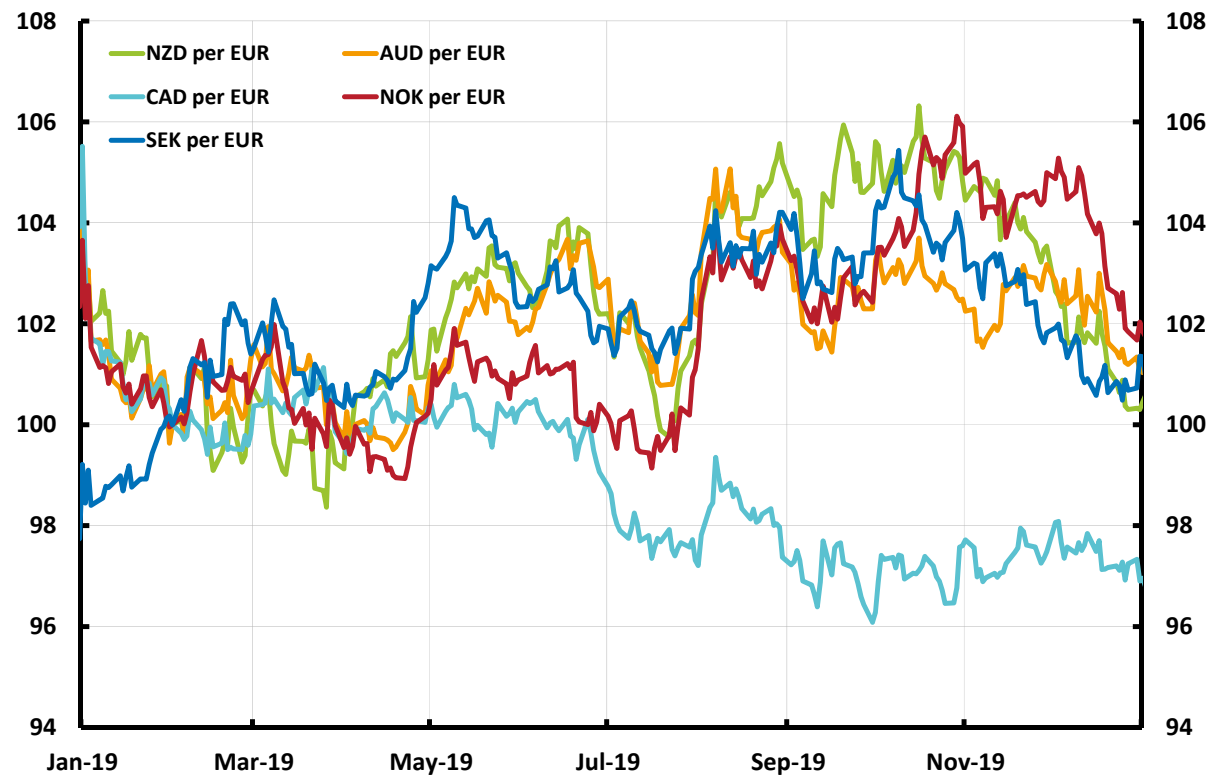
Note. Development of the policy rate and deeper recessions



Source: The Riksbank

Figure 4.7. Currencies in small open economies against the euro, 2019

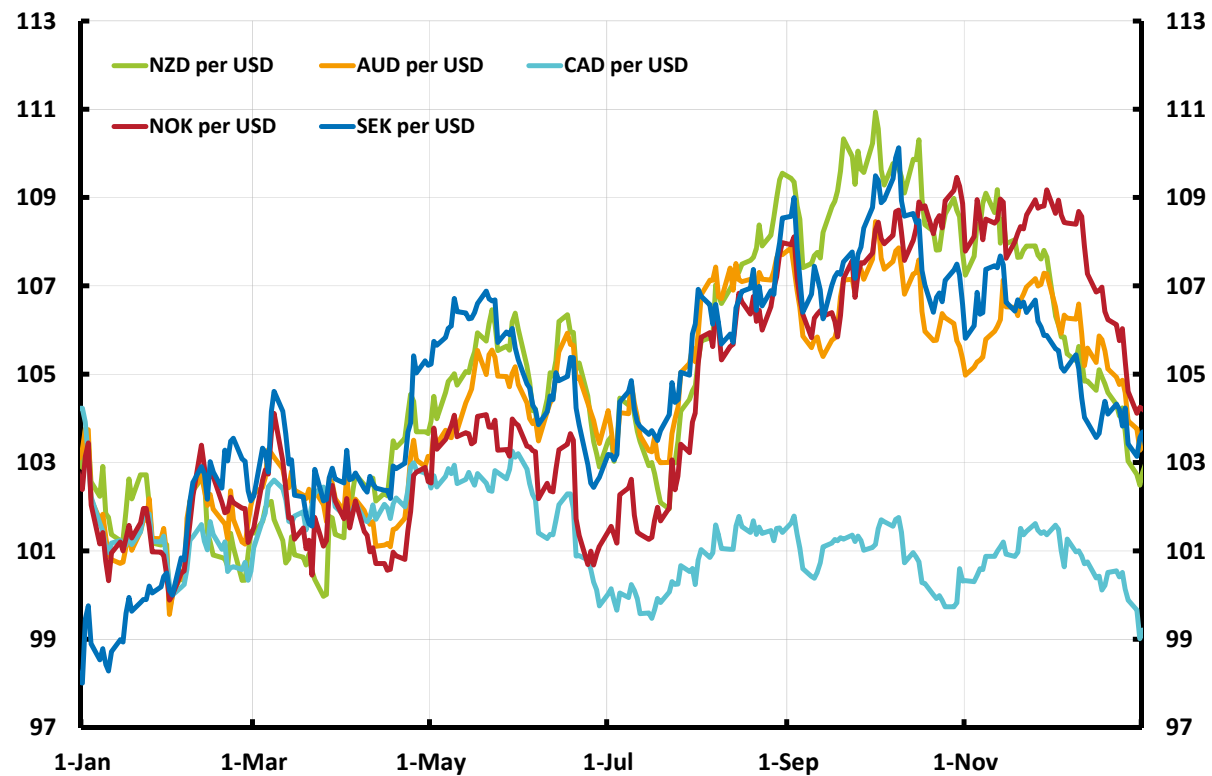
Index 1 February 2019 = 100



Source: Macrobond

Figure 4.8. Currencies in small open economies against the dollar, 2019

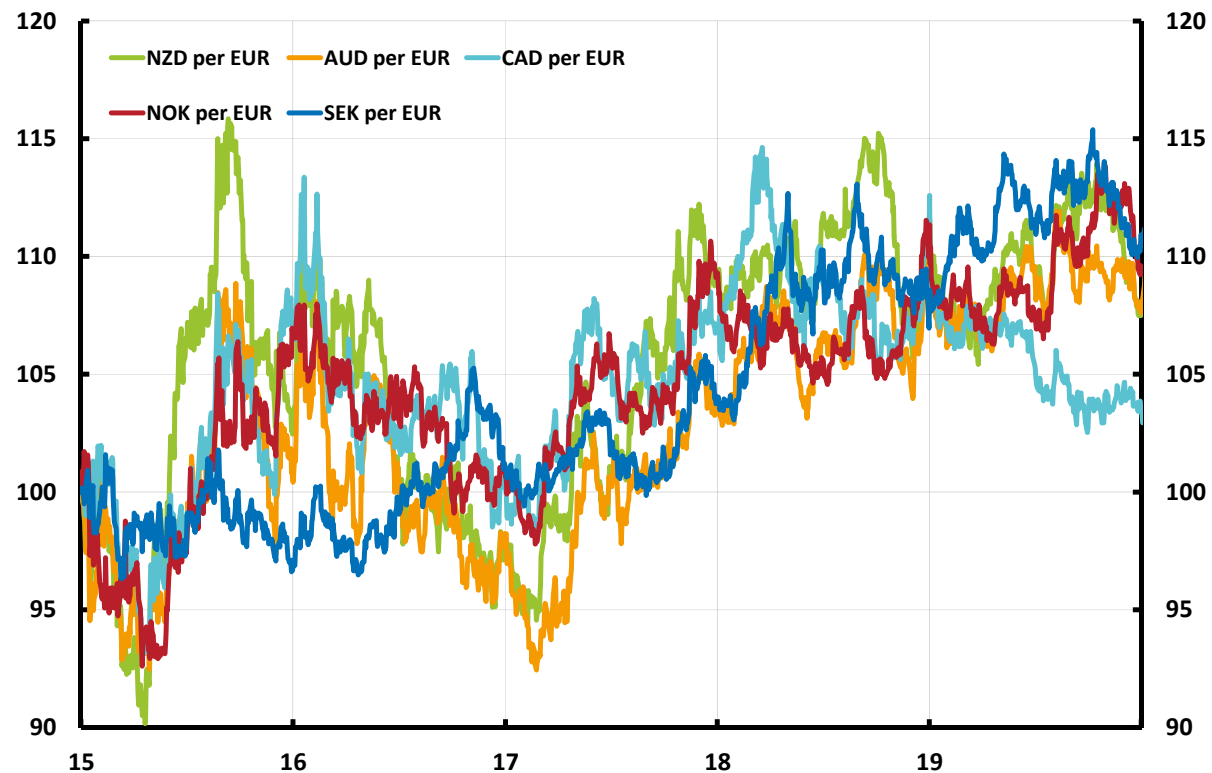
Index 1 February 2019 = 100



Source: Macrobond

Figure 4.9. Currencies in small open economies against the euro

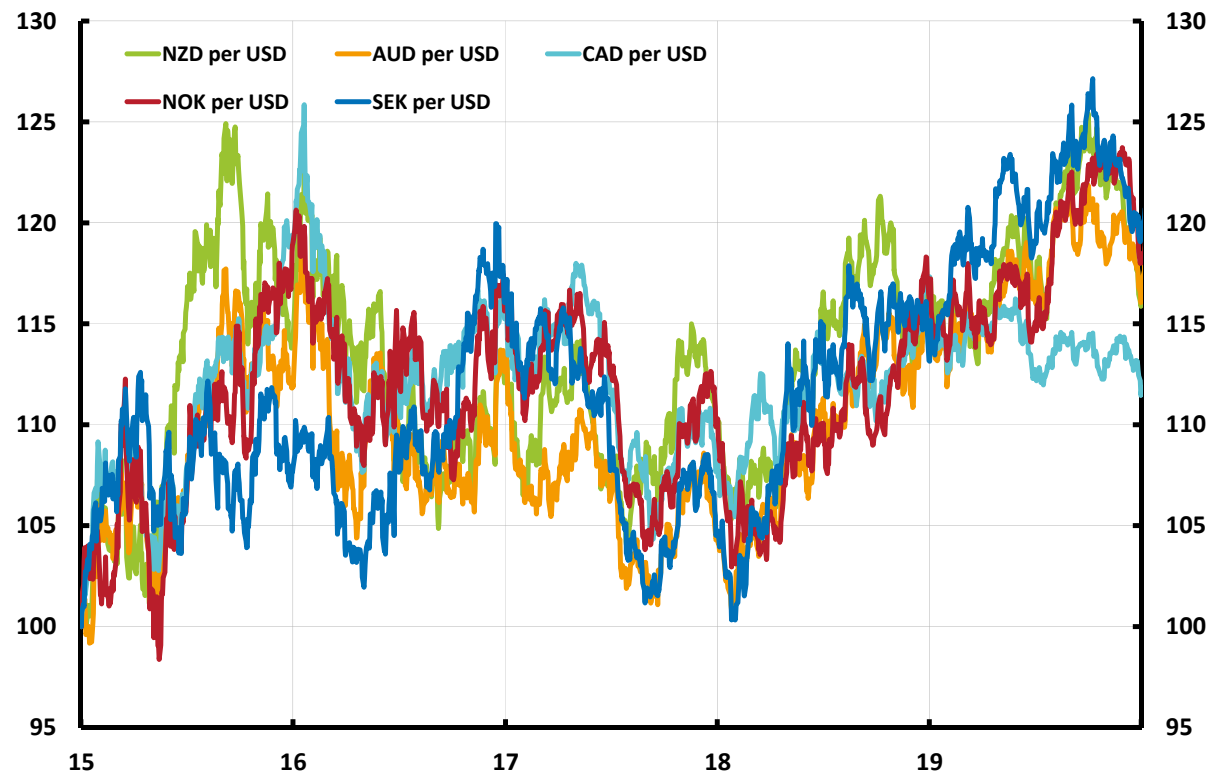
Index 1 January 2015 = 100



Source: Macrobond

Figure 4.10. Currencies in small open economies against the dollar

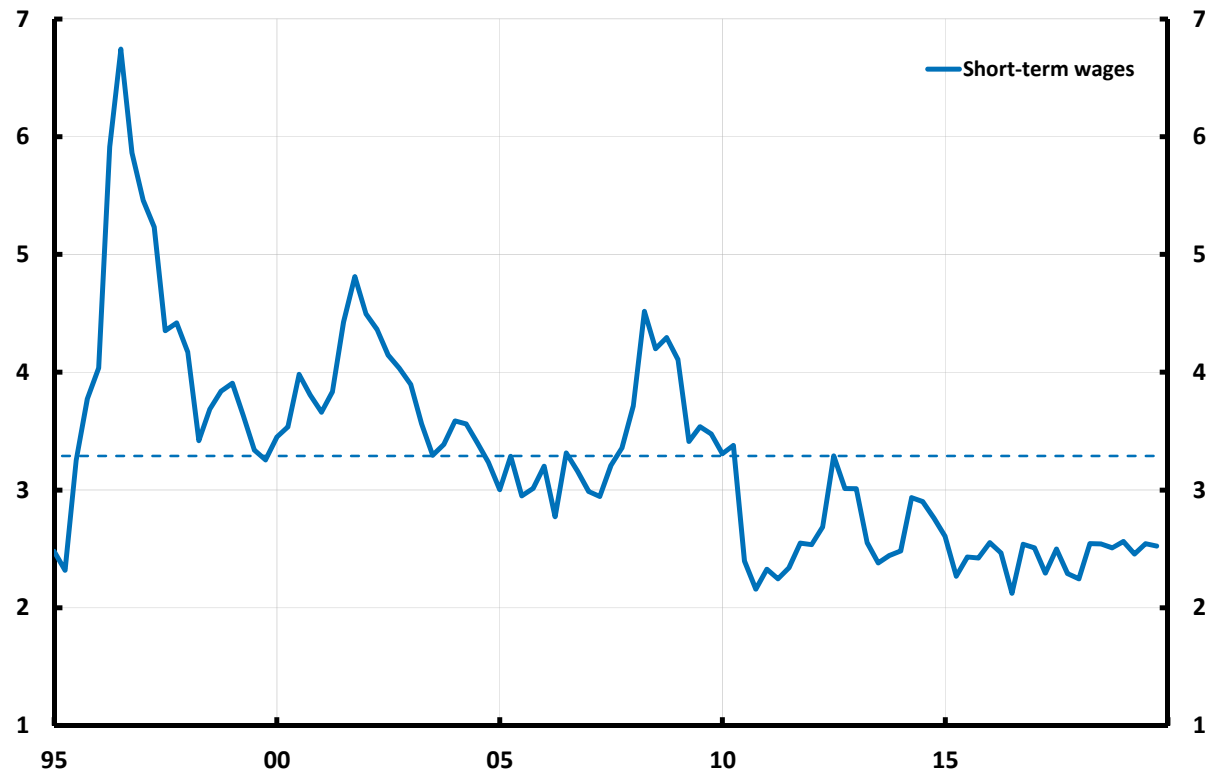
Index 1 January 2015 = 100



Source: Macrobond

Figure 4.11. Wages

Annual percentage change



Note. The broken line represents mean values from 1992 to 2019.

Sources: Swedish National Mediation Office and the Riksbank