







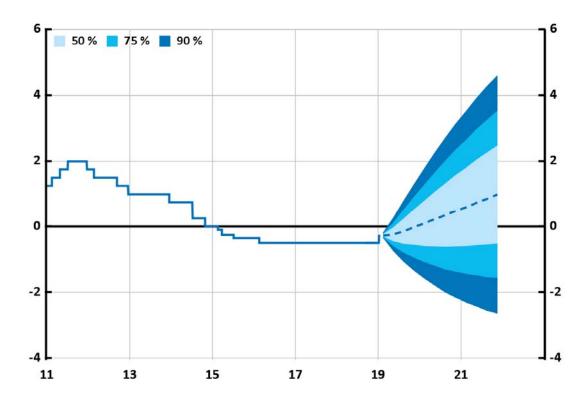






#### Figure 1.1. Repo rate with uncertainty bands

Per cent

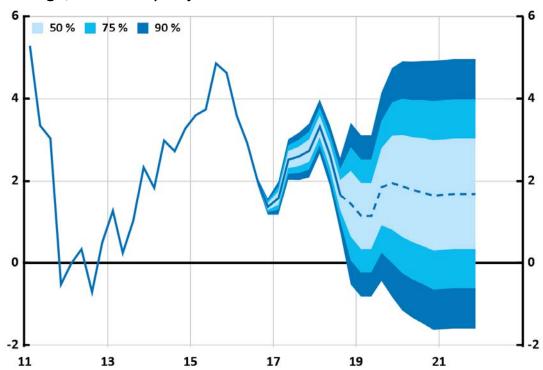


Note. The uncertainty bands for the repo rate are based on the Riksbank's historical forecasting errors and the ability of risk-premium adjusted forward rates to forecast the future repo rate for the period 1999 up to the point when the Riksbank started to publish forecasts for the repo rate during 2007.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



#### Figure 1.2. GDP with uncertainty bands

Annual percentage change, seasonally-adjusted data

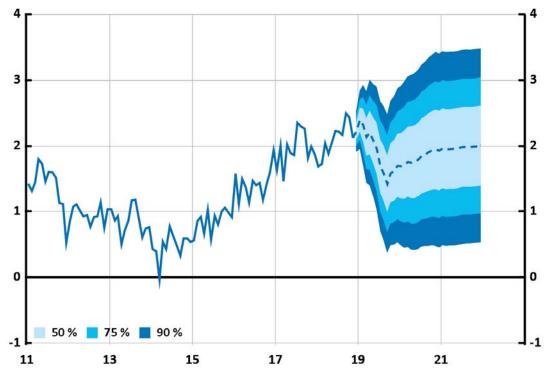


Note. The uncertainty bands are based on the Riksbank's historical forecasting errors. There is also uncertainty for the outcomes for GDP, as the figures in the National Accounts are revised several years after the preliminary publication.



#### Figure 1.3. CPIF with uncertainty bands

Annual percentage change

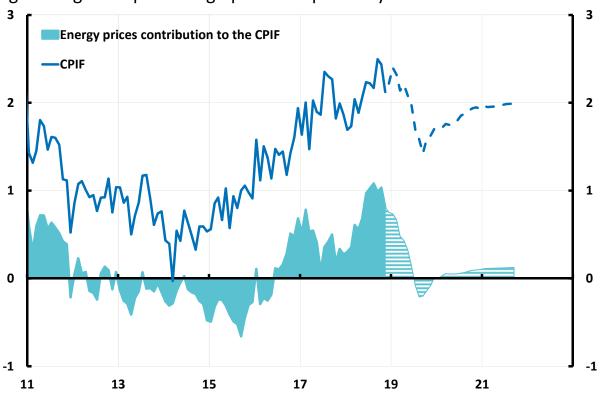


Note. The uncertainty bands are based on the Riksbank's historical forecasting errors.





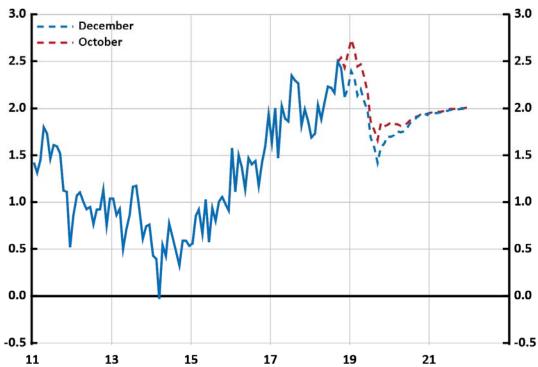
Annual percentage change and percentage points respectively



Note. The contribution of energy prices to the CPIF in the forecast is calculated as the annual percentage change in energy prices multiplied by their current weight in the CPIF.



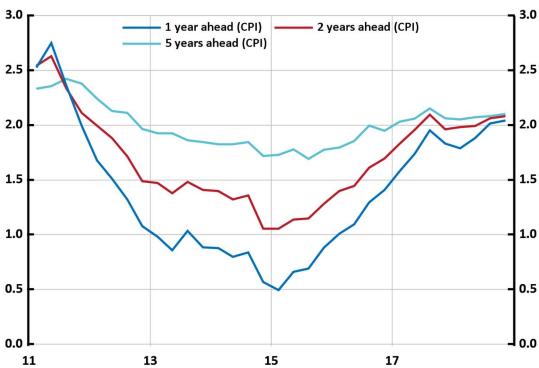
### Figure 1.5. CPIF Annual percentage change





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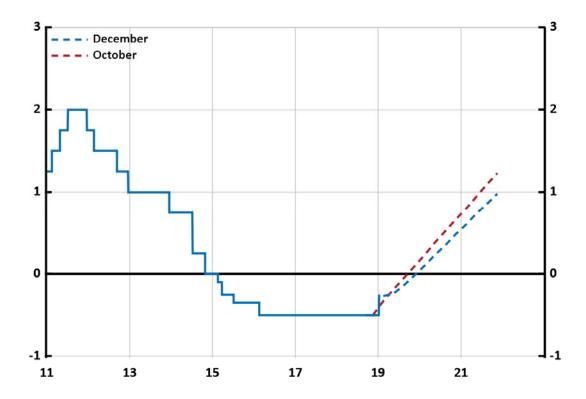
Per cent, mean value



Source: Kantor Sifo Prospera



### Figure 1.7. Repo rate Per cent

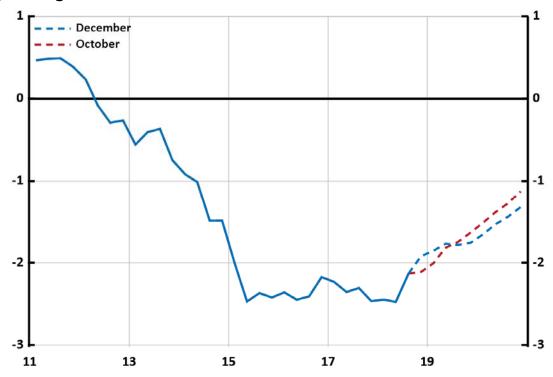


Note. Outcomes are daily data and the forecasts refer to quarterly averages.



#### Figure 1.8. Real repo rate

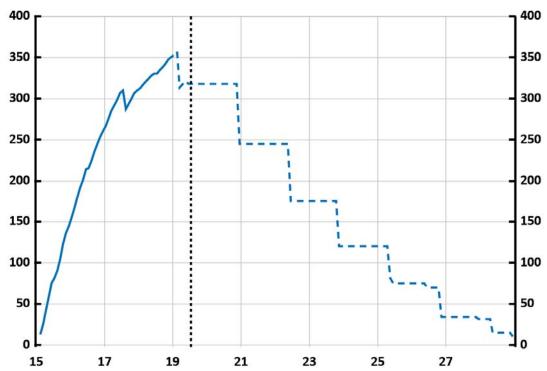
Per cent, quarterly averages



Note. The real repo rate is the Riksbank's expected real interest rate, calculated as a mean value of the Riksbank's repo rate forecast for the year ahead minus the inflation forecast (CPIF) for the corresponding period. Outcomes are based on the latest forecasts at that time.

## Figure 1.9. The Riksbank's holdings of government bonds

Nominal amounts, SEK billion



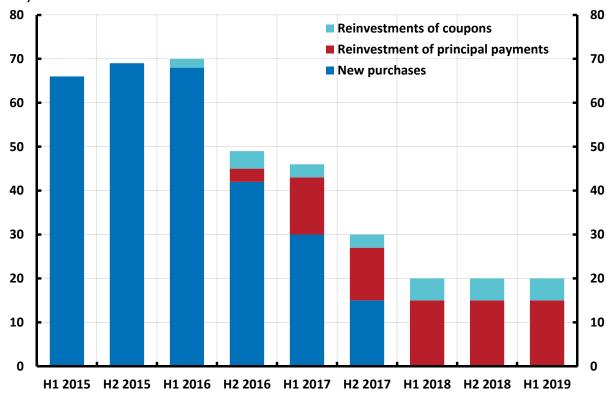
Note. Forecast up until June 2019, after that a technical projection with the assumption that no further reinvestments are made. The development of the holdings is also affected to a certain extent by the bonds' market prices and by which bonds the Riksbank chooses to reinvest in. The vertical line marks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







Nominal amounts, SEK billion

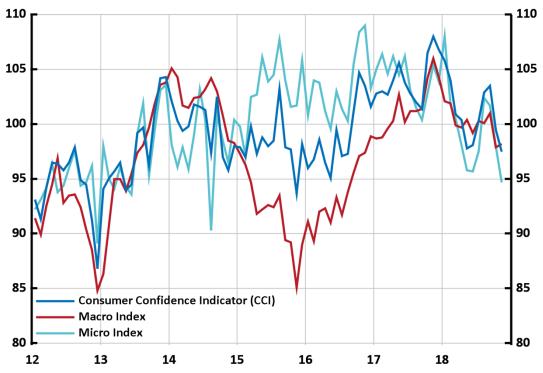


Note. The development for reinvestments from mid-2018 onwards is a forecast and refers to nominal amounts. The final amounts will depend on current market prices.



#### Figure 1.11. Confidence indicators, households

Index, average = 100, standard deviation = 10



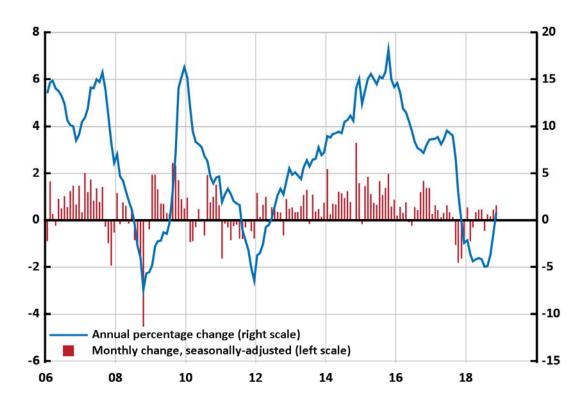
Note: Micro and macro index summarising households' views on their own finances and on the Swedish economy.

Source: National Institute of Economic Research





Per cent

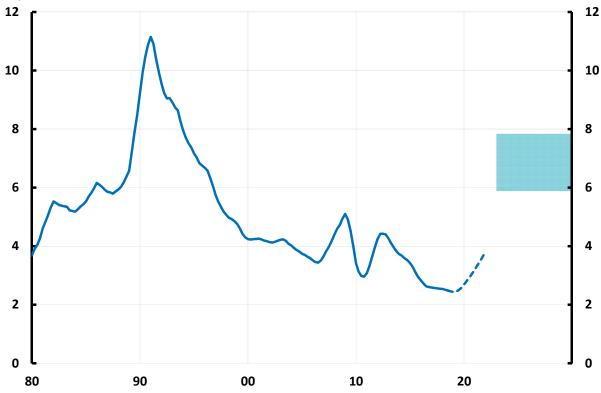


Sources: Valueguard and the Riksbank



#### Figure 1.13. Households' interest expenditure

Percentage of disposable income

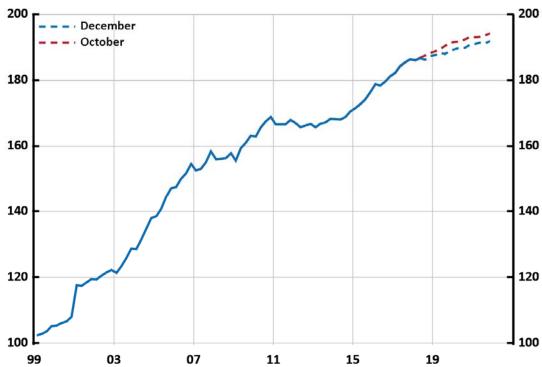


Note. Four-quarter moving average. The broken line represents the Riksbank's forecast. The blue field illustrates an interval for interest expenditure that is calculated on the current debt-to-income ratio, a long-term interval for the repo rate of 2.5–4 per cent and an assumption of a 2 per cent margin between the repo rate and the interest rate faced by households. Interest expenses are adjusted for tax deduction for interest expenditure.



#### Figure 1.14. 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.



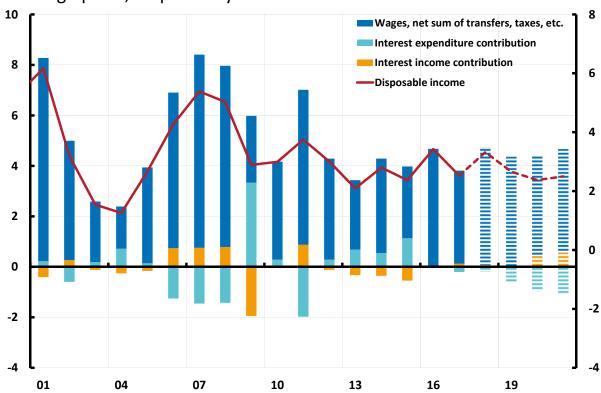






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Per cent and percentage point, respectively

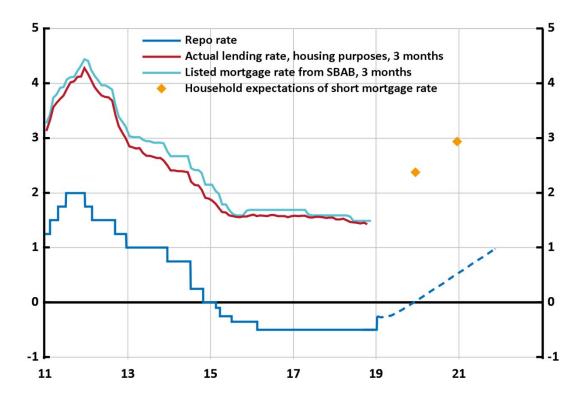


Note. Wages refers to payroll expenses. Net of transfer payments, taxes, etc., are a collective item that refers to the sum of all other income minus tax. Interest income and expenditure are inclusive of FISIM adjustment but before tax, in contrast to the calculations presented in the text.



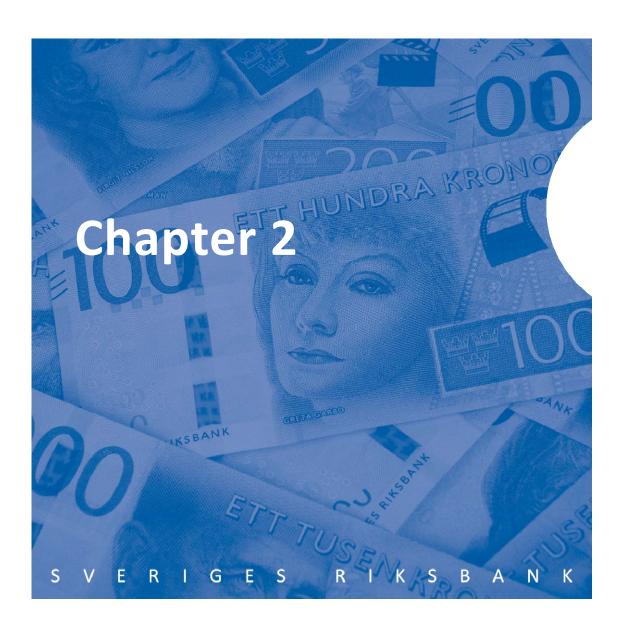
## Figure 1.16. Repo rate, household expectations and lending rate to households

Per cent



Note. Household expectations of the short mortgage rate are according to the Economic Tendency Survey for December.

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



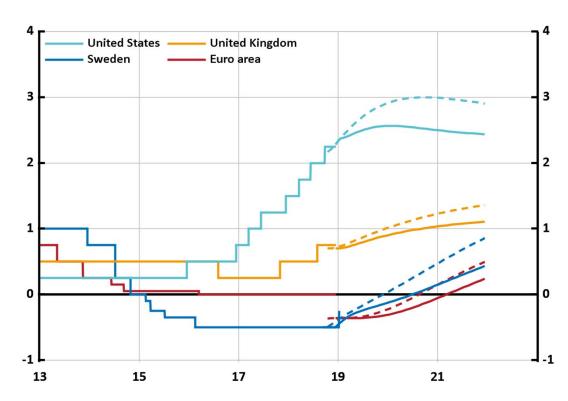








Per cent



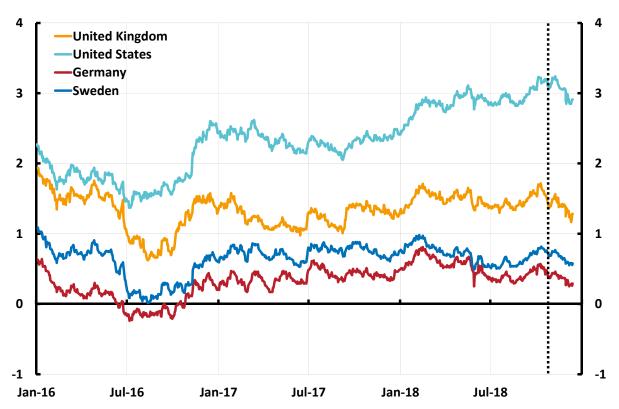
Note. Forward rates describe the expected overnight rate, which does not always correspond to the policy rate (the main refinancing rate for the euro area). Unbroken lines refer to 17 December 2018, broken lines refer to 19 October 2018.

Sources: The national central banks, Macrobond and the Riksbank





Per cent

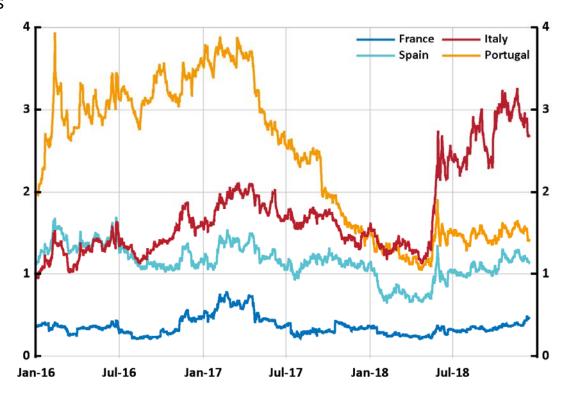


Note. Implied zero-coupon yields from government bonds for Sweden, Germany and the United Kingdom. 10-year benchmark bonds for the United States. The vertical line indicates the Monetary Policy Meeting in October. Sources: The national central banks, Macrobond and the Riksbank



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Percentage points



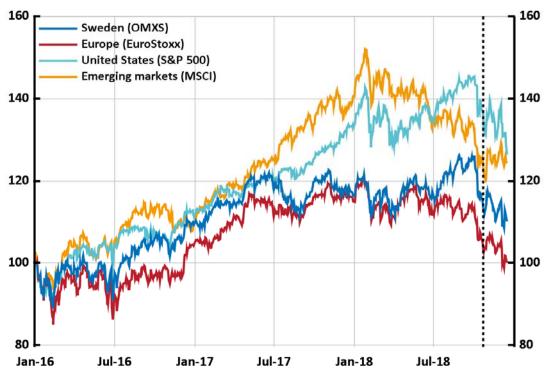
Note. Yield differentials refer to 10-year benchmark bonds.

Source: Macrobond





Index, 4 January 2016 = 100



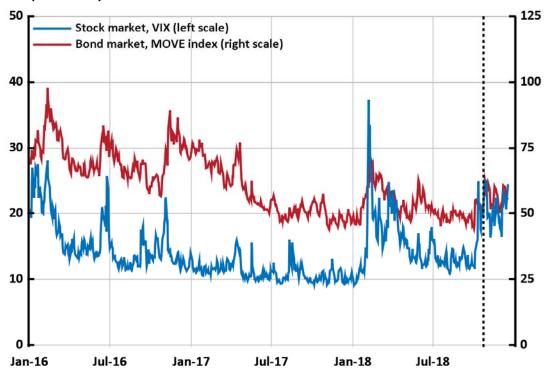
Note. The vertical line indicates the Monetary Policy Meeting in October.

Source: Macrobond





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 October.

Sources: Chicago Board Operations Exchange and Merrill Lynch

# Figure 2.6. Difference between yields on corporate bonds with a good credit rating and on government bonds in the United States



Percentage points



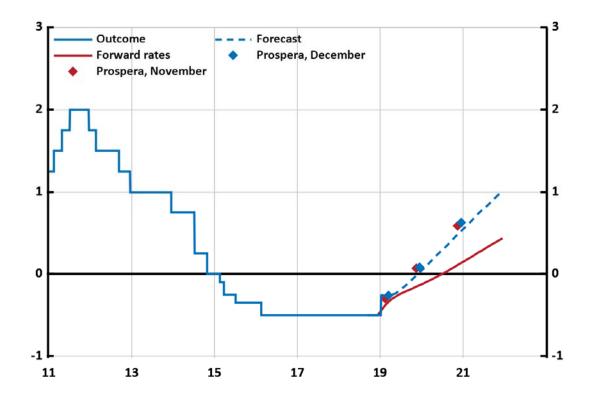
Note. Yield differentials refer to 5-year and 10-year benchmark bonds.

Source: Macrobond



#### Figure 2.7. Repo rate and market expectations

Per cent



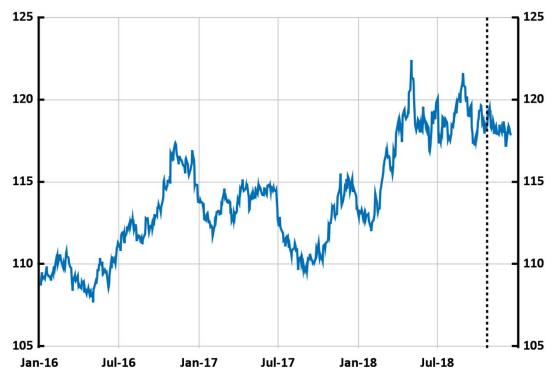
Note. The forward rate refers to 17 December 2018 and is a measure of the expected repo rate. The Prospera survey responses show the average for money market participants 8 November 2018 respectively 13 December 2018.

Sources: Macrobond, Kantar Sifo Prospera and the Riksbank





Index, 18 November 1992 = 100



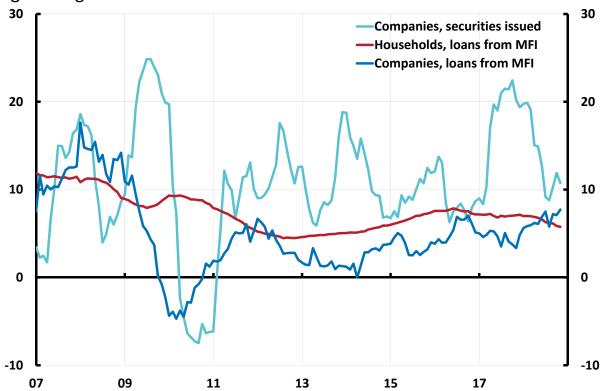
Note. KIX refers to an aggregate of countries that are important for Sweden's international transactions. The vertical line indicates the Monetary Policy Meeting in October. A higher value indicates a weaker exchange rate.

Sources: National sources and the Riksbank





Annual percentage change



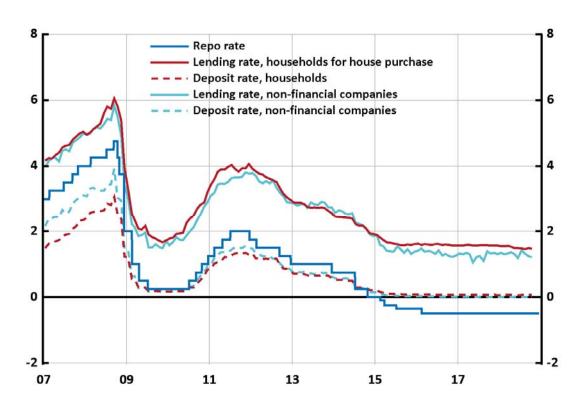
Anm. Lending by Monetary financial institutions (MFI) to households and non-financial corporations adjusted for reclassifications and bought and sold loans, according to financial market statistics. Securities issued by non-financial corporations have been adjusted for currency impact. The data extend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

Source: Statistics Sweden

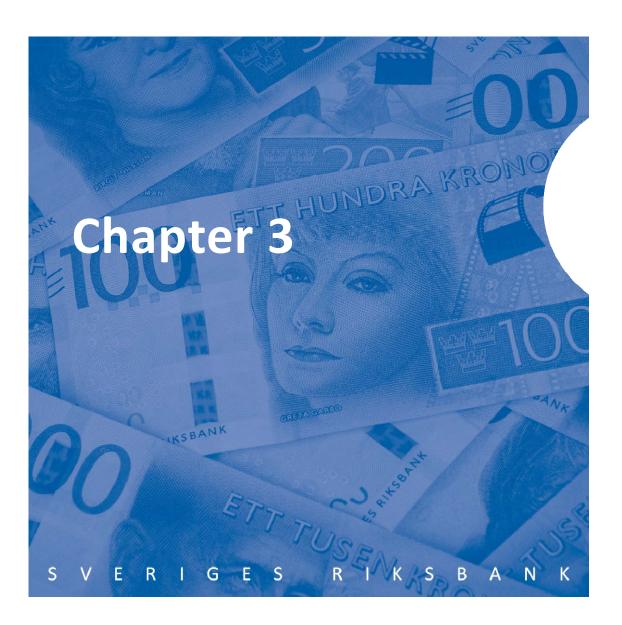
# Figure 2.10. Repo rate together with the average deposit and lending rate to households and companies, new contracts



Per cent



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









#### Figure 3.1. CPIF and variation band

Annual percentage change

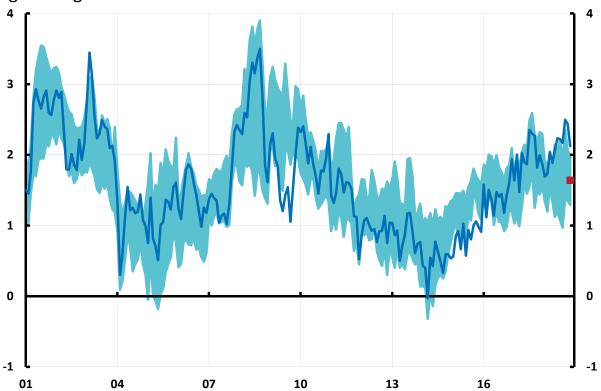


Note. The pink area shows the Riksbank's variation band and covers about three-quarters of the outcomes since January 1995. The variation band is a means of showing whether the deviation from the inflation target is unusually large. The broken line represents the forecast.





Annual percentage change

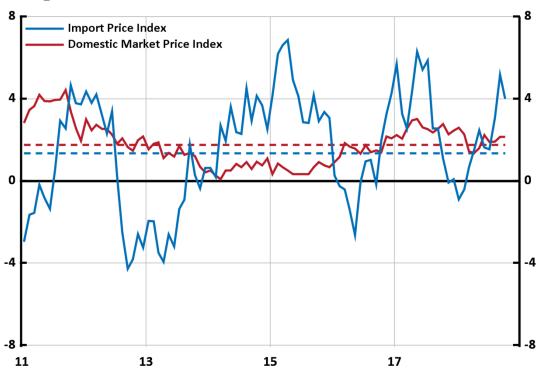


Note. The line represents CPIF. The field shows the highest and lowest outcomes among different measures of underlying inflation. The measures included are CPIF excluding energy, UND24, Trim85, CPIF excluding energy and unprocessed food, persistence-weighed inflation (CPIFPV), factors from principal component analysis (CPIFPC) and weighted mean inflation (Trim1). The red dot represents the median value in November 2018 for all measures of underlying inflation.





Annual percentage change



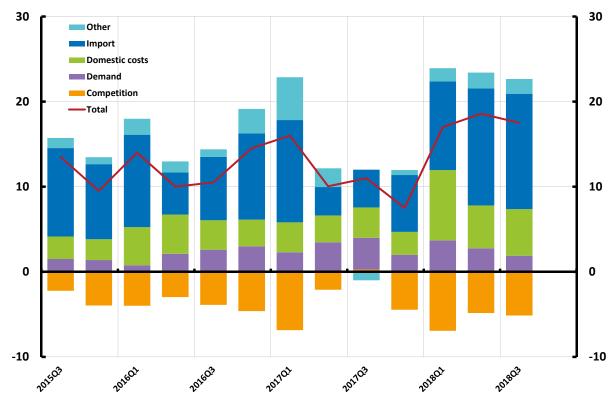
Note. Broken lines represent the averages since 2000.

Source: Statistics Sweden





Net figures



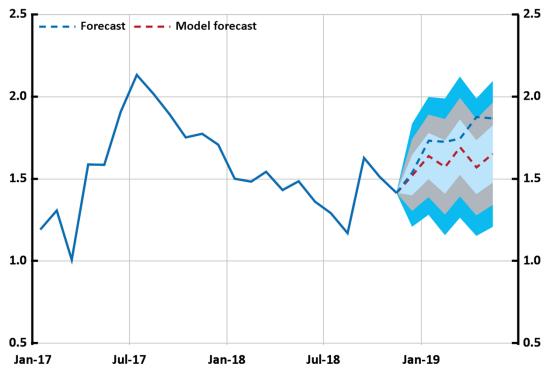
Note. The figure shows how different factors have affected the unweighted net figure for the question of what has happened with prices in the last three months in both the trade and services sectors.

Sources: National Institute of Economic Research and the Riksbank



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Annual percentage change

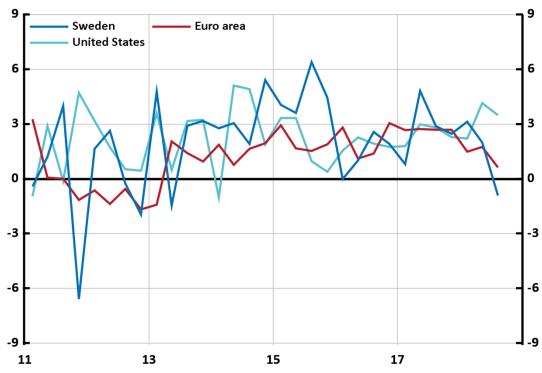


Note. The uncertainty bands 50, 75 and 90 per cent are based on the models' historical forecast errors.



#### Figure 3.6. GDP in Sweden and abroad

Quarterly change in per cent, annualised, seasonally-adjusted data

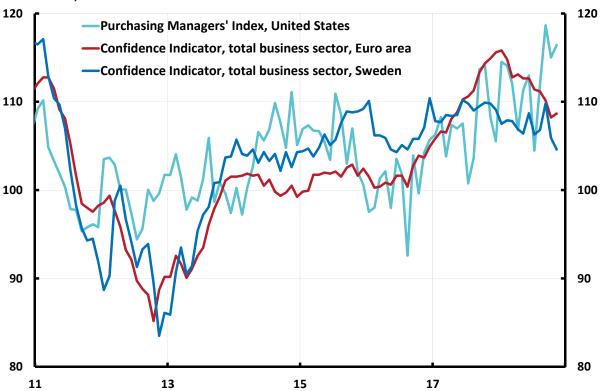


Sources: Bureau of economic analysis, Eurostat and Statistics Sweden





Index, mean value = 100, standard deviation = 10



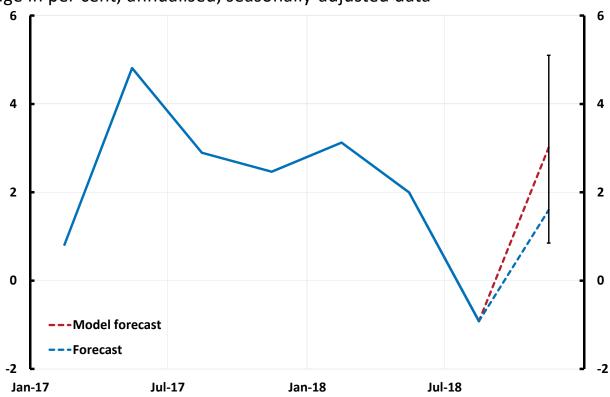
Note. The Purchasing Managers' Index from the United States and the confidence indicator from the euro area are normalised from January 1998. Purchasing Managers' Index, United States refers to the Riksbank's aggregation of the manufacturing and services sectors.

Sources: Institute for Supply Management (ISM), European Commission, National Institute of Economic Research and the Riksbank



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Quarterly change in per cent, annualised, seasonally-adjusted data

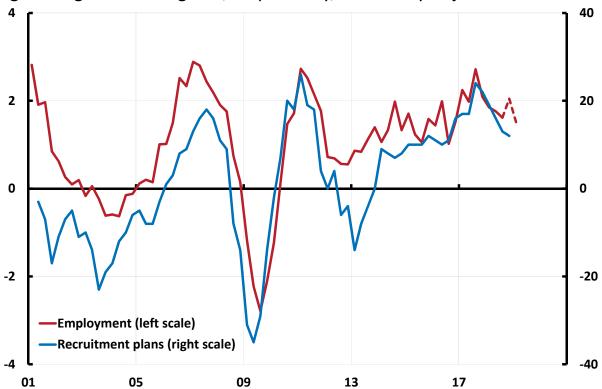


Note. The model forecast is an average of forecasts from different statistical models. The vertical line refers to a 50 per cent uncertainty band based on the models' historical forecast errors.



## Figure 3.9. Employment and recruitment plans

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



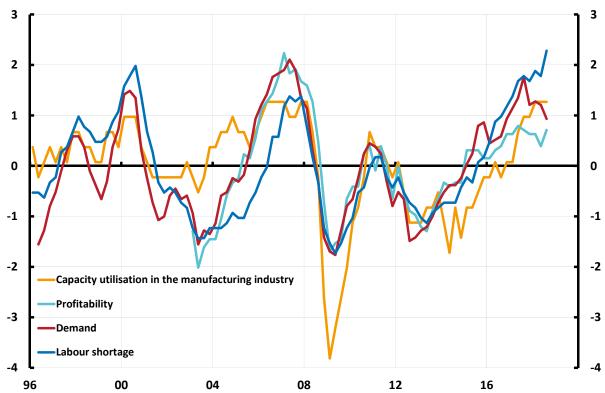
Note. Recruitment plans refer to expectations of the number of employed in the business sector three months ahead, moved forward one quarter.

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



# Figure 3.10. Indicators of resource utilisation

Standard deviation



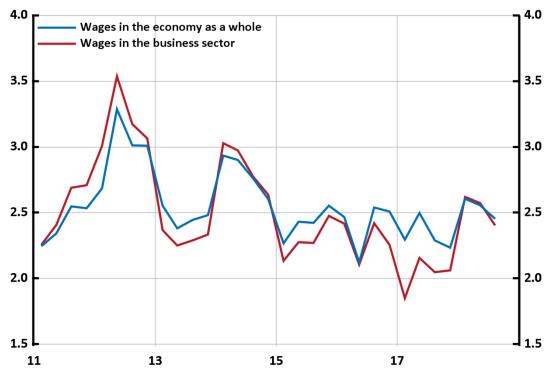
Note. The series are normalised from 1996.

Sources: National Institute of Economic Research and the Riksbank





Annual percentage change



Note. Wages according to short-term wage statistics. The National Mediation Office's forecast of final outcome 2017Q4–2018Q3.

Source: National Mediation Office



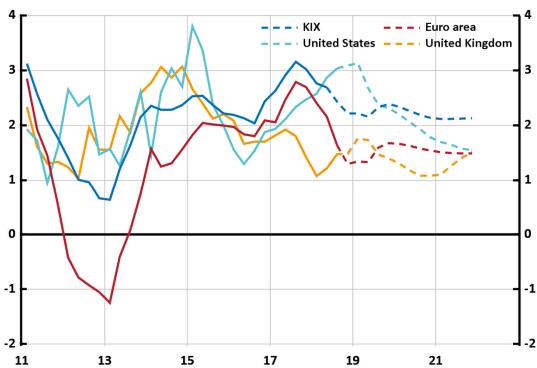






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Annual percentage change



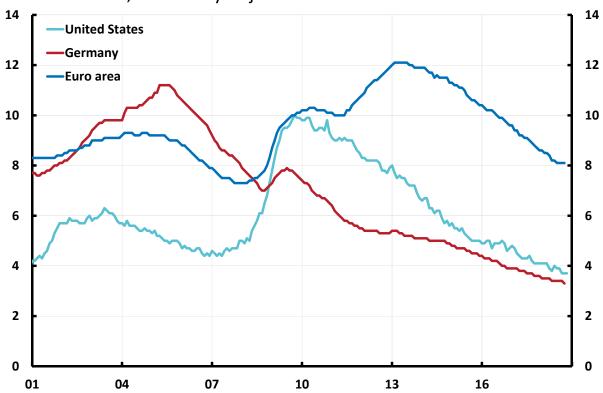
Note. KIX is an aggregate of countries that are important to Sweden's international transactions.

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





Percentage of the labour force, seasonally-adjusted data

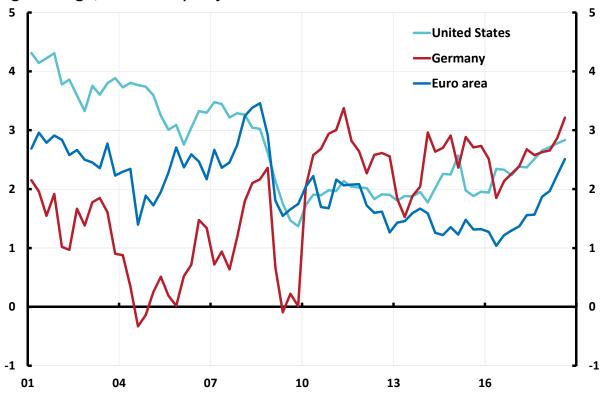


Source: OECD



# Figure 4.3. Compensation per employee

Annual percentage change, seasonally-adjusted data

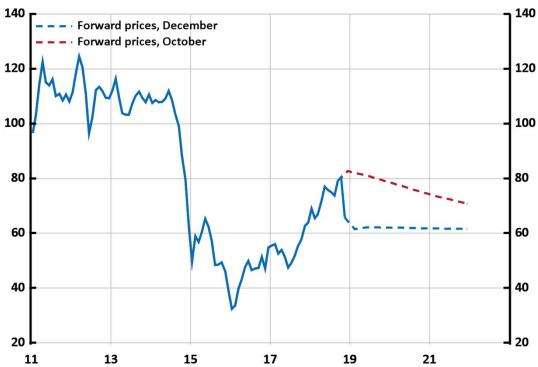


Sources: Bureau of Labor Statistics and ECB



# Figure 4.4. Price of crude oil

USD per barrel, Brent oil



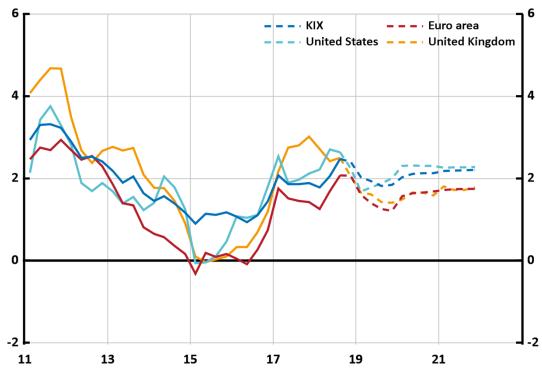
Note. Forward prices are calculated as a 15-day average. The outcomes refer to monthly averages of spot prices.

Sources: Macrobond and the Riksbank



## Figure 4.5. CPI in various countries and regions

Annual percentage change



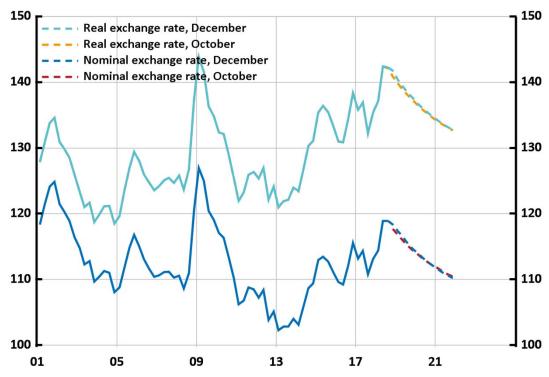
Note. KIX is an aggregate of the countries that are important to Sweden's international transactions.

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





Index, 18 November 1992 = 100



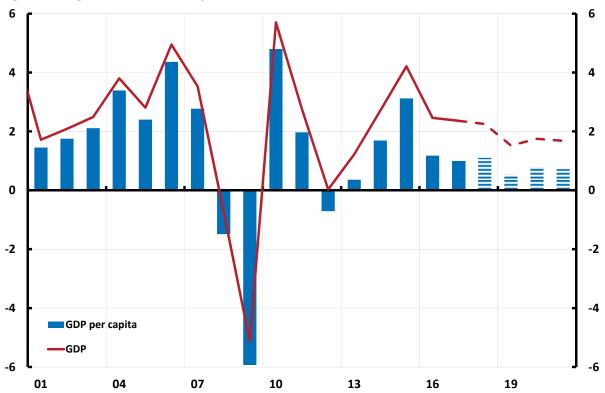
Note. The real exchange rate is calculated using the CPIF for Sweden and the CPI for the rest of the world. The KIX is an aggregate of 32 countries that are important for Sweden's international transactions.

Sources: National sources, Statistics Sweden and the Riksbank



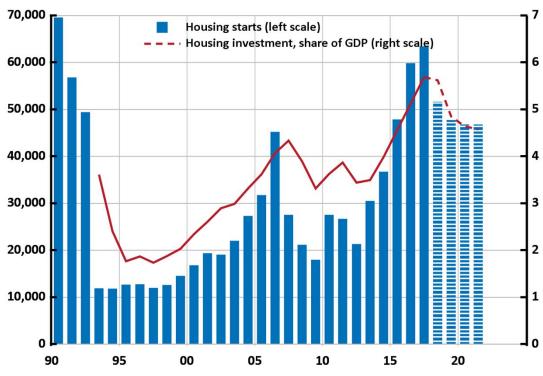
# Figure 4.7. GDP and GDP per capita

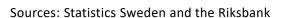
Annual percentage change, calendar-adjusted data





Number and per cent, respectively



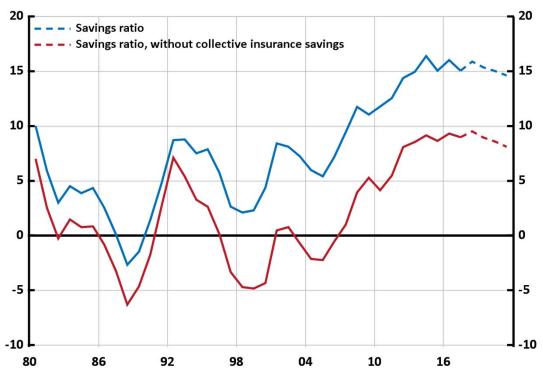






#### Figure 4.9. Household savings

Per cent of disposable income

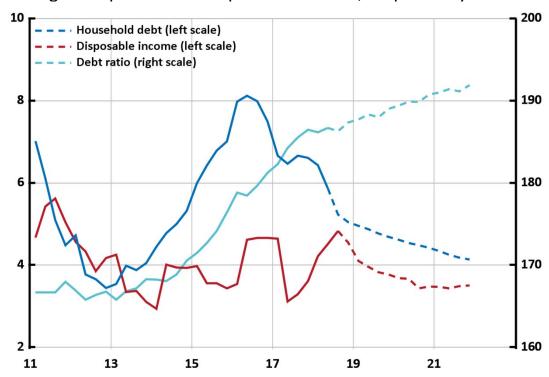


Note. Collective insurance savings consist of savings households do not control themselves, e.g. premium pension and collective agreements insurances.





Annual percentage change and per cent of disposable income, respectively

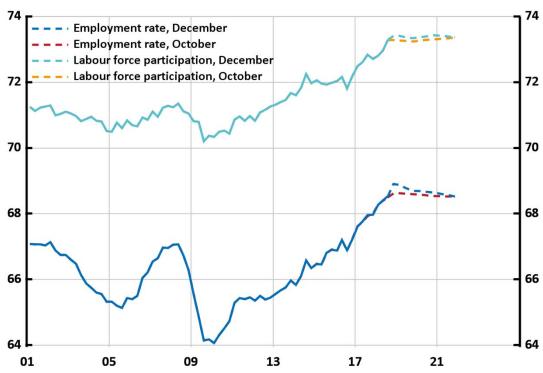


Note. Households' total debts as a share of their disposable incomes summed over the past four quarters.





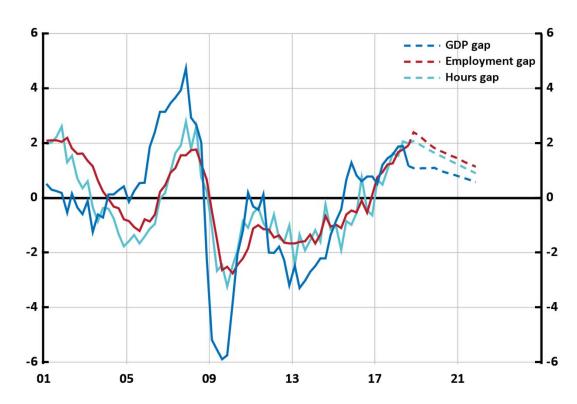
Percentage of the population, aged 15–74, seasonally-adjusted data







Per cent

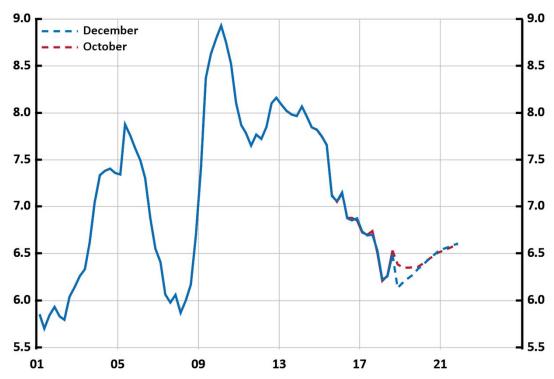


Note. The gaps refer to the deviation of GDP, the number of those employed and the number of hours worked from the Riksbank's assessed trends.



## Figure 4.13. Unemployment

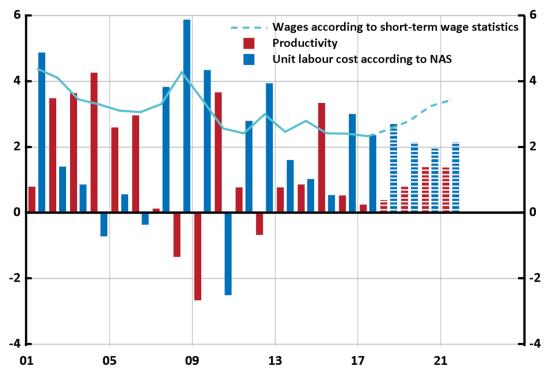
Per cent of the labour force, 15–74 years, seasonally-adjusted data







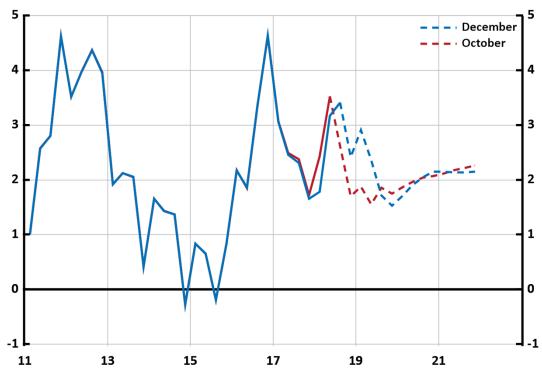
Annual percentage change



Sources: National Mediation Office, Statistics Sweden and the Riksbank



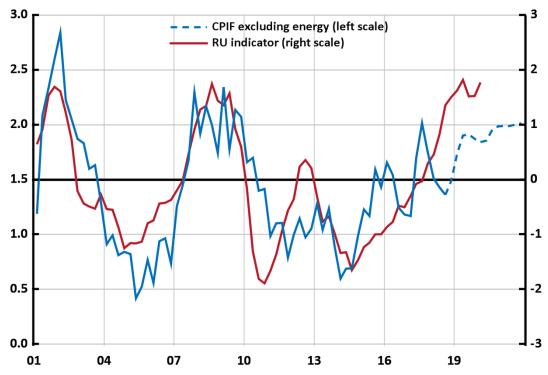
# Figure 4.15. Unit labour cost Annual percentage change







Annual percentage change and standard deviation, respectively

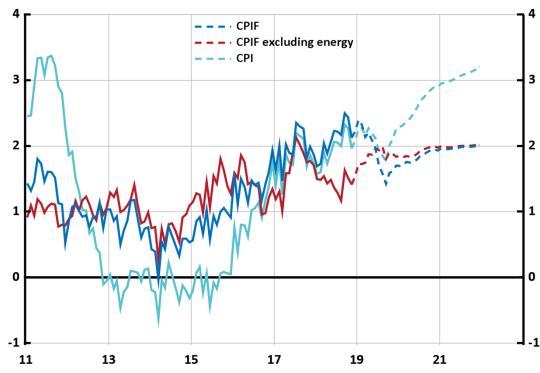


Note. The RU indicator is lagged 6 quarters and is a measure of resource utilisation. It is normalised so that the mean value is 0 and the standard deviation is 1.





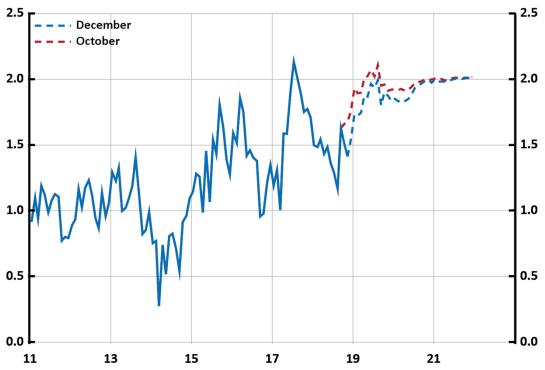
Annual percentage change





# Figure 4.18. CPIF excluding energy

Annual percentage change









#### **Tables**

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

Table 1. Repo rate forecast

Per cent, quarterly averages

	Q3 2018	Q4 2018	Q1 2019	Q4 2019	Q4 2020	Q4 2021
Repo rate	-0.50	-0.50 (-0.50)	-0.27 (-0.33)	-0.02 (0.09)	0.48 (0.66)	0.98 (1.23)

Source: The Riksbank

#### Table 2. Inflation

Annual percentage change, annual average

	2017	2018	2019	2020	2021
CPIF	2.0 (2.0)	2.1 (2.2)	1.9 (2.1)	1.8 (1.9)	2.0 (2.0)
CPIF excl. energy	1.7 (1.7)	1.4 (1.5)	1.9 (2.0)	1.9 (2.0)	2.0 (2.0)
CPI	1.8 (1.8)	2.0 (2.0)	2.1 (2.6)	2.6 (2.9)	3.1 (3.2)
HICP	1.9 (1.9)	2.0 (2.1)	1.8 (2.1)	1.8 (1.8)	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

	2017	2018	2019	2020	2021
Repo rate	-0.5 (-0.5)	-0.5 (-0.5)	-0.2 (-0.1)	0.3 (0.4)	0.8 (1.0)
10-year rate	0.7 (0.7)	0.7 (0.7)	1.1 (1.4)	1.9 (2.1)	2.5 (2.7)
Exchange rate, KIX, 18 November 1992 = 100	112.9 (112.9)	117.6 (117.5)	116.0 (115.6)	113.0 (112.9)	110.9 (111.1)
General government net lending*	1.5 (1.6)	0.9 (0.9)	0.7 (0.9)	0.6 (0.7)	0.5 (0.7)

<sup>\*</sup> 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	2017	2018	2019	2020	2021
Euro area	0.11	0.48	2.5 (2.5)	1.9 (1.9)	1.5 (1.6)	1.6 (1.6)	1.5 (1.5)
USA	0.15	0.09	2.2 (2.2)	2.9 (2.8)	2.6 (2.6)	2.0 (2.0)	1.6 (1.6)
Japan	0.04	0.02	1.9 (1.7)	0.7 (1.1)	0.8 (1.1)	0.5 (0.4)	0.9 (0.9)
China	0.19	0.09	6.9 (6.9)	6.6 (6.6)	6.0 (6.0)	6.0 (6.1)	6.0 (6.0)
KIX-weighted	0.75	1.00	2.9 (2.9)	2.5 (2.6)	2.3 (2.3)	2.2 (2.2)	2.1 (2.1)
World (PPP-weighted)	1.00	_	3.7 (3.7)	3.7 (3.8)	3.6 (3.6)	3.7 (3.7)	3.6 (3.6)

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	2017	2018	2019	2020	2021
Euro area (HICP)	1.5 (1.5)	1.8 (1.8)	1.4 (1.9)	1.6 (1.6)	1.7 (1.7)
USA	2.1 (2.1)	2.5 (2.5)	1.8 (2.3)	2.3 (2.2)	2.3 (2.2)
Japan	0.5 (0.5)	1.0 (1.1)	1.2 (1.4)	1.9 (1.8)	1.5 (1.5)
KIX-weighted	1.9 (1.9)	2.2 (2.2)	1.9 (2.2)	2.1 (2.0)	2.2 (2.1)
	2017	2018	2019	2020	2021
Policy rates in the rest of the world, per cent	-0.1 (-0.1)	0.1 (0.1)	0.2 (0.2)	0.4 (0.5)	0.7 (0.8)
Crude oil price, USD/barrel Brent	54.8 (54.8)	72.1 (74.9)	62.1 (80.7)	61.9 (76.4)	61.7 (72.4)
Swedish export market	4.9 (5.0)	4.2 (4.2)	4.0 (4.0)	3.6 (3.6)	3.5 (3.5)

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

	2017	2018	2019	2020	2021
Private consumption	2.2 (2.2)	1.4 (2.1)	2.0 (2.2)	2.1 (2.3)	2.0 (2.1)
Public consumption	0.0 (0.0)	0.6 (0.9)	0.5 (1.0)	0.8 (1.1)	0.8 (1.0)
Gross fixed capital formation	6.0 (6.1)	4.3 (2.8)	0.0 (0.1)	2.8 (2.8)	2.8 (2.8)
Inventory investment*	0.1 (0.1)	0.2 (0.4)	-0.1 (0.1)	-0.2 (-0.2)	0.0 (0.0)
Exports	3.2 (3.2)	2.4 (3.2)	3.3 (3.6)	3.7 (3.7)	3.5 (3.5)
Imports	4.8 (4.8)	2.4 (3.4)	2.2 (2.7)	3.3 (3.5)	3.8 (3.8)
GDP	2.1 (2.1)	2.2 (2.3)	1.5 (1.9)	2.0 (2.0)	1.8 (1.8)
GDP, calendar-adjusted	2.4 (2.4)	2.3 (2.4)	1.5 (1.9)	1.8 (1.8)	1.7 (1.7)
Final domestic demand*	2.4 (2.4)	1.8 (1.9)	1.0 (1.2)	1.8 (2.0)	1.8 (1.9)
Net exports*	-0.5 (-0.5)	0.1 (0.1)	0.6 (0.5)	0.3 (0.2)	0.0 (0.0)
Current account (NA), per cent of GDP	3.7 (3.6)	3.2 (3.0)	3.5 (3.2)	3.6 (3.3)	3.5 (3.1)

<sup>\*</sup>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

	2017	2018	2019	2020	2021
Population, aged 15–74	1.1 (1.1)	0.8 (0.8)	0.6 (0.6)	0.5 (0.5)	0.5 (0.5)
Potential hours worked	0.9 (0.9)	0.9 (0.9)	0.8 (0.8)	0.8 (0.8)	0.7 (0.7)
Potential GDP	1.9 (2.0)	1.9 (2.1)	2.0 (2.1)	1.9 (2.0)	1.9 (2.0)
GDP, calendar-adjusted	2.4 (2.4)	2.3 (2.4)	1.5 (1.9)	1.8 (1.8)	1.7 (1.7)
Number of hours worked, calendar-adjusted	2.1 (2.1)	1.8 (1.8)	0.7 (0.6)	0.4 (0.4)	0.3 (0.4)
Employed, aged 15–74	2.3 (2.3)	1.8 (1.7)	1.0 (0.8)	0.4 (0.5)	0.4 (0.5)
Labour force, aged 15–74	2.0 (2.0)	1.4 (1.4)	1.0 (0.8)	0.6 (0.6)	0.5 (0.6)
Unemployment, aged 15–74 *	6.7 (6.7)	6.3 (6.3)	6.3 (6.4)	6.5 (6.5)	6.6 (6.6)
GDP gap **	1.2 (1.2)	1.5 (1.5)	1.1 (1.3)	0.9 (1.1)	0.7 (0.8)
Hours gap **	1.0 (1.0)	1.9 (1.8)	1.8 (1.6)	1.4 (1.3)	1.0 (1.0)

<sup>\*</sup> Per cent of labour force \*\*Deviation from the Riksbank's assessed potential level, per cent

Note. Potential hours worked and potential GDP refer to the long-term sustainable level 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

	2017	2018	2019	2020	2021
Hourly wage, NMO	2.3 (2.3)	2.5 (2.6)	2.8 (2.9)	3.2 (3.3)	3.4 (3.4)
Hourly wage, NA	2.5 (2.5)	2.7 (2.8)	2.8 (2.9)	3.3 (3.3)	3.5 (3.5)
Employers' contribution*	0.0 (0.0)	0.2 (0.3)	0.1 (0.1)	0.1 (0.1)	0.1 (0.1)
Hourly labour cost, NA	2.5 (2.5)	2.9 (3.1)	2.9 (3.0)	3.4 (3.4)	3.5 (0.0)
Productivity	0.2 (0.2)	0.4 (0.6)	0.8 (1.2)	1.4 (1.4)	1.4 (1.3)
Unit labour cost	2.4 (2.4)	2.7 (2.6)	2.1 (1.8)	2.0 (2.0)	2.1 (2.2)

<sup>\*</sup> 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