

Account of monetary policy 2012

Figure 1.1. Development of inflation 2000-2012



Annual percentage change, monthly data

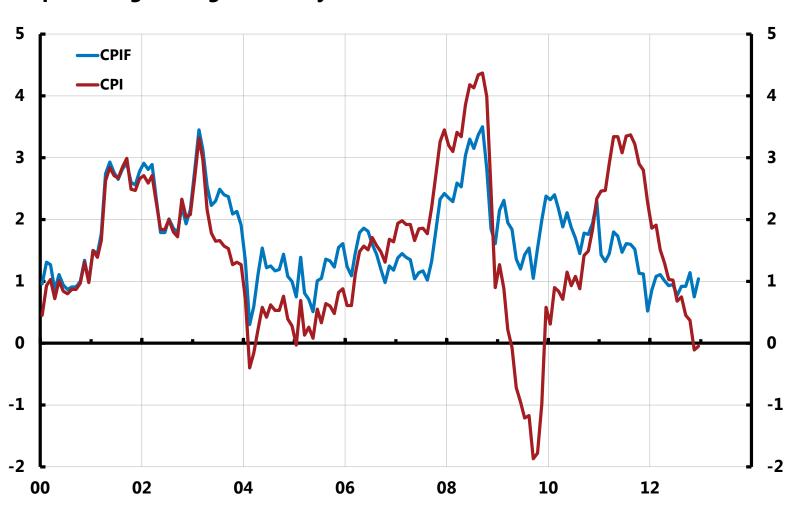


Figure 1.2. GDP growth, outcome and forecasts



Annual percentage change, quarterly data

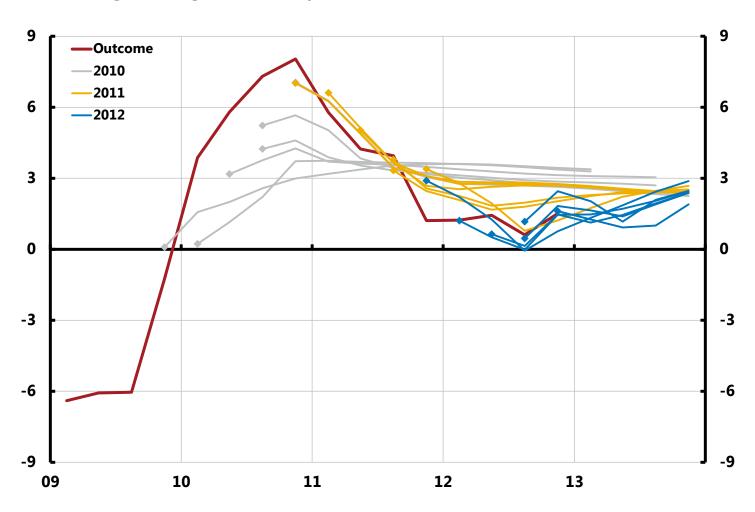


Figure 1.3. CPIF, outcome and forecasts



Annual percentage change, monthly data

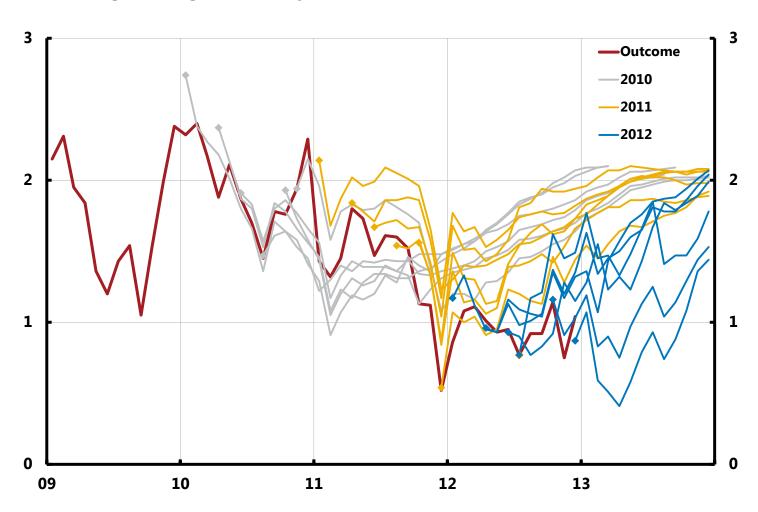


Figure 1.4. Repo rate, outcome and forecasts



Per cent, quarterly averages

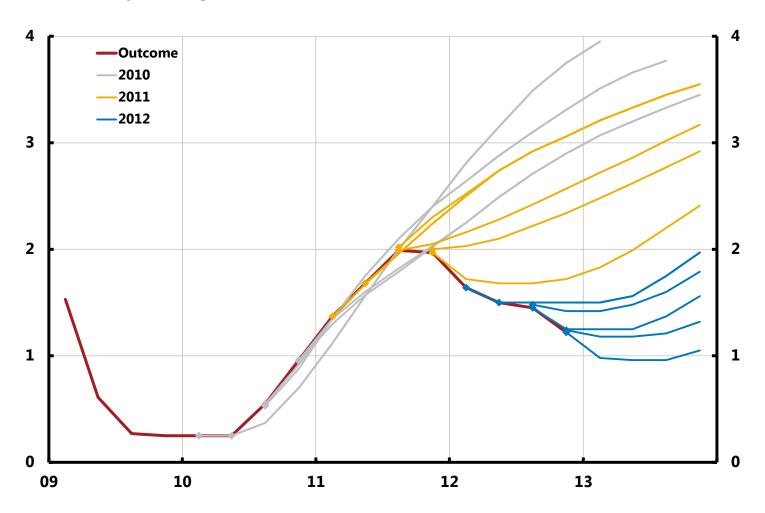


Figure 1.5. Unemployment, outcome and forecasts



Per cent of the labour force, aged 15-74, seasonally-adjusted data, quarterly data

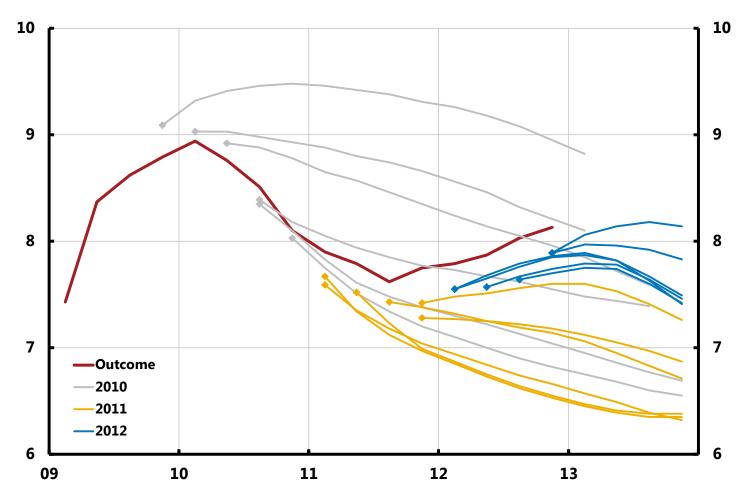


Figure 1.6. TCW-weighted nominal and real exchange rate



Index, 18 November 1992 = 100, monthly data

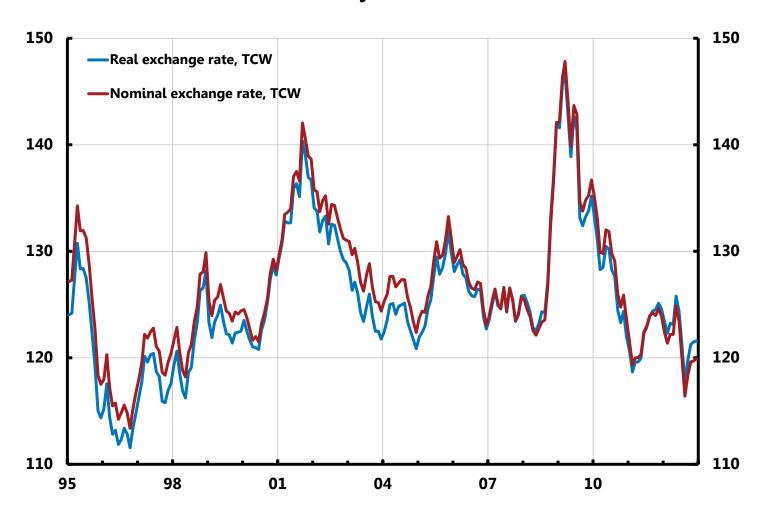


Figure 1.7. Forecasts 2011-2012 for GDP growth in 2012



Annual percentage change, annual averages

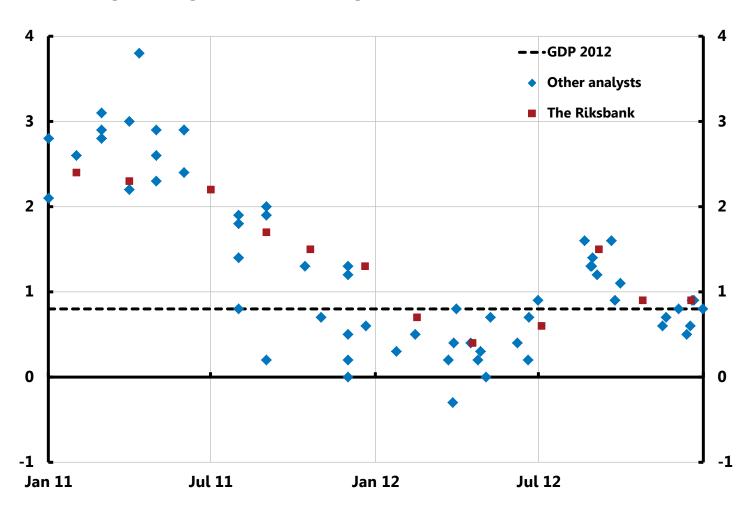


Figure 1.8. Forecasts 2011-2012 for CPIF inflation in 2012



Annual percentage change, annual averages

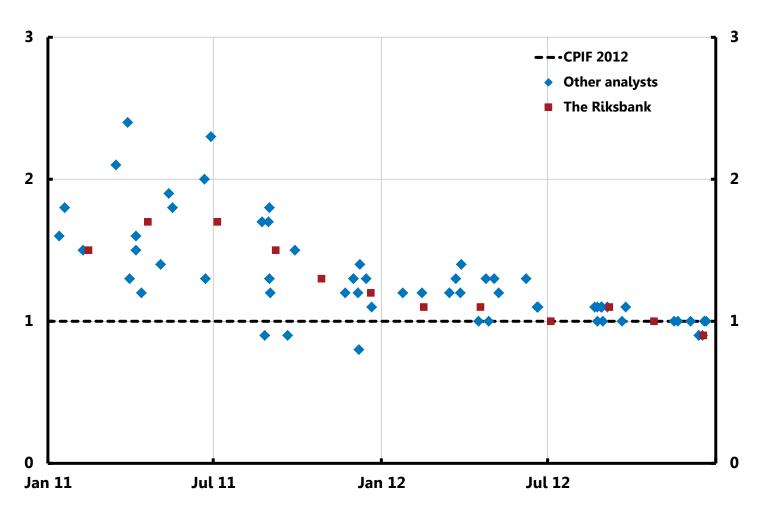




Figure 1.9. CPI since 1970

Annual percentage change, annual data

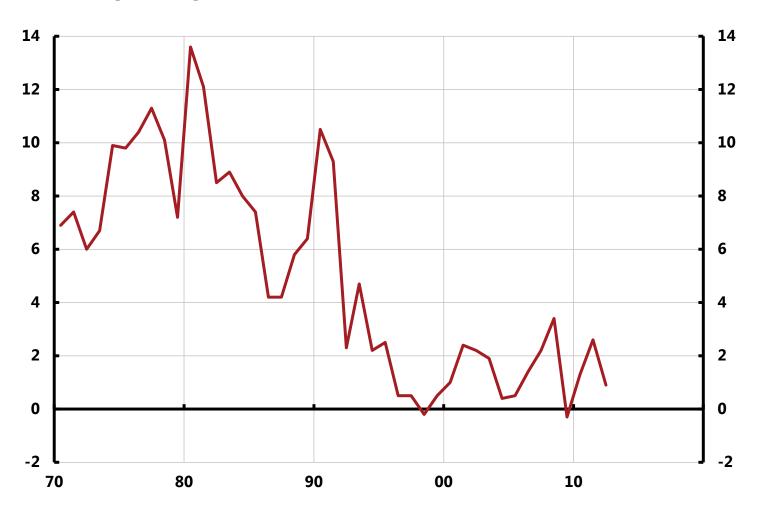


Figure 1.10. Inflation expectations among money market participants



Annual percentage change, monthly data

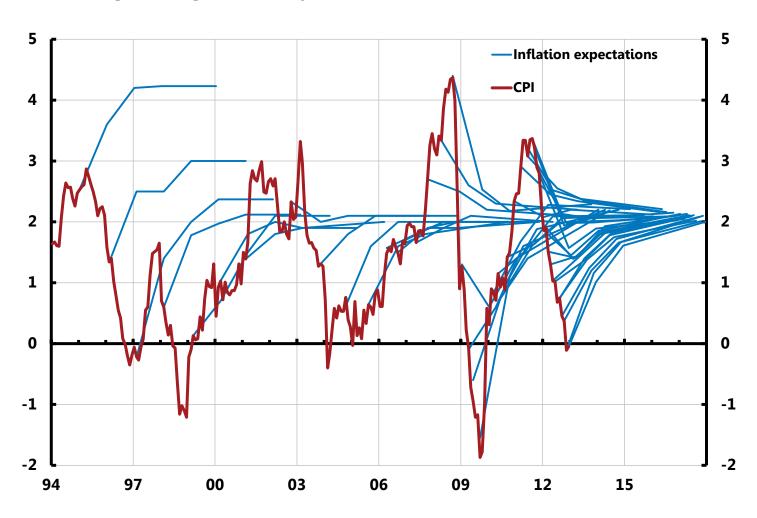




Figure 2.1. Repo rate, forecasts 2012

Per cent, quarterly averages

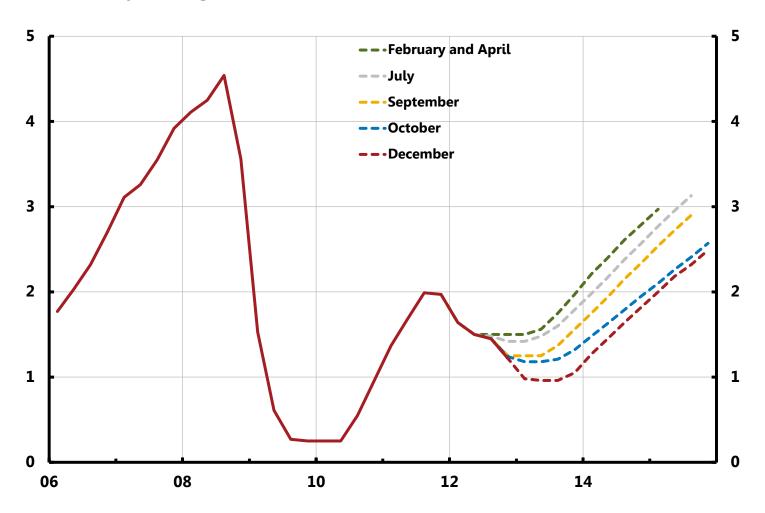


Figure 2.2. Real repo rate, forecasts 2012



Per cent, quarterly averages

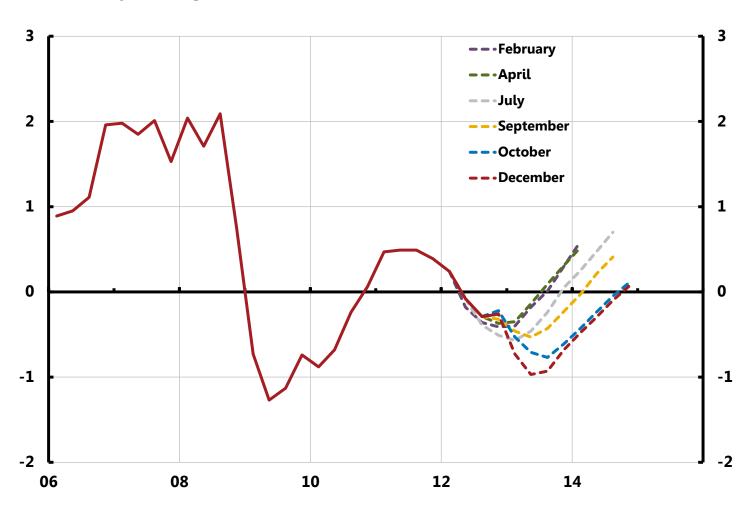




Figure 2.3. Stock market movements

Index, 3 January 2006 = 100, daily data

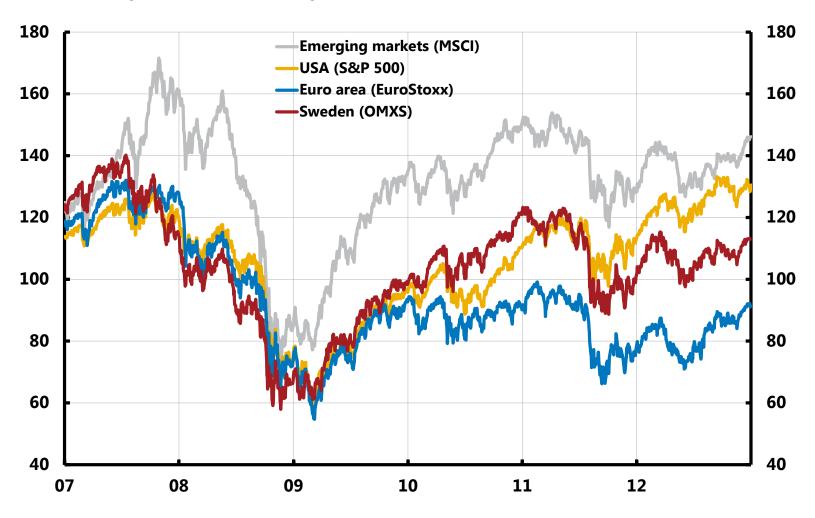


Figure 2.4. GDP forecasts in December 2011 and February 2012



Quarterly changes in per cent calculated in annualised terms, seasonally-adjusted data, quarterly data

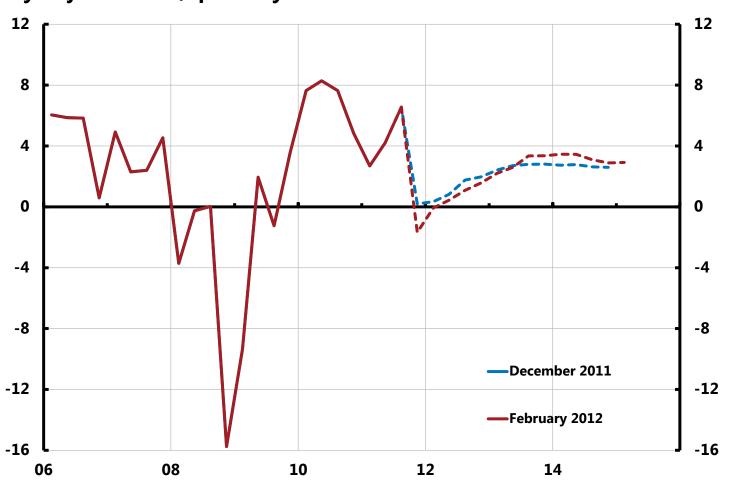


Figure 2.5. Inflation forecasts in February 2012



Annual percentage change, monthly data

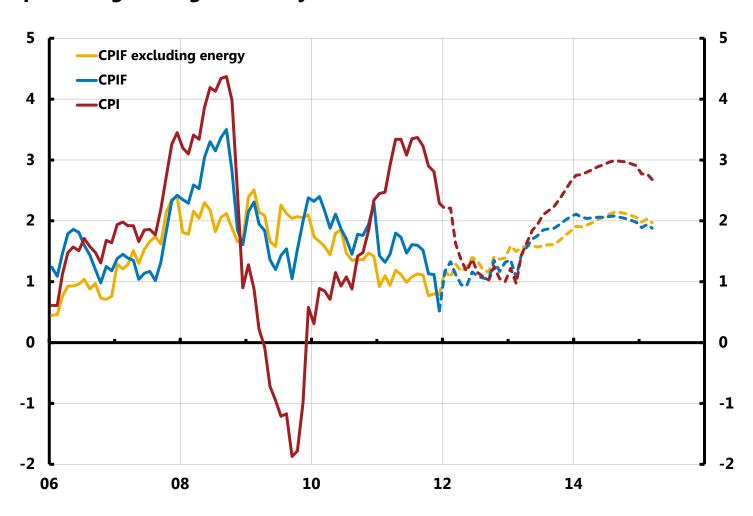


Figure 2.6. GDP forecasts in February and April 2012



Quarterly changes in per cent calculated in annualised terms, seasonally-adjusted data, quarterly data

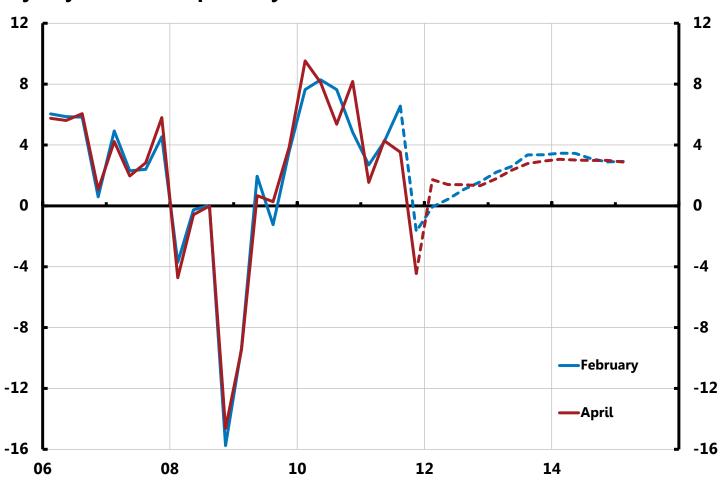


Figure 2.7. The Economic Tendency Indicator



Index, mean = 100, standard deviation = 10, monthly data

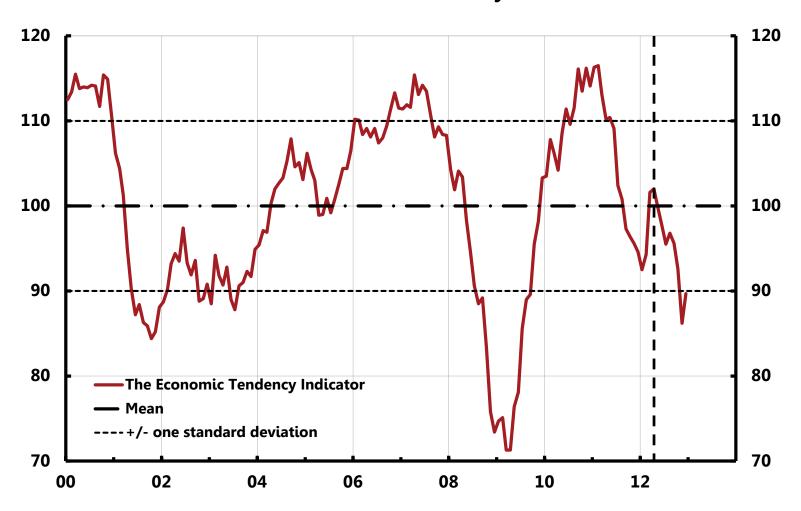


Figure 2.8. Government bond rates with 10 years left to maturity



Per cent, daily data

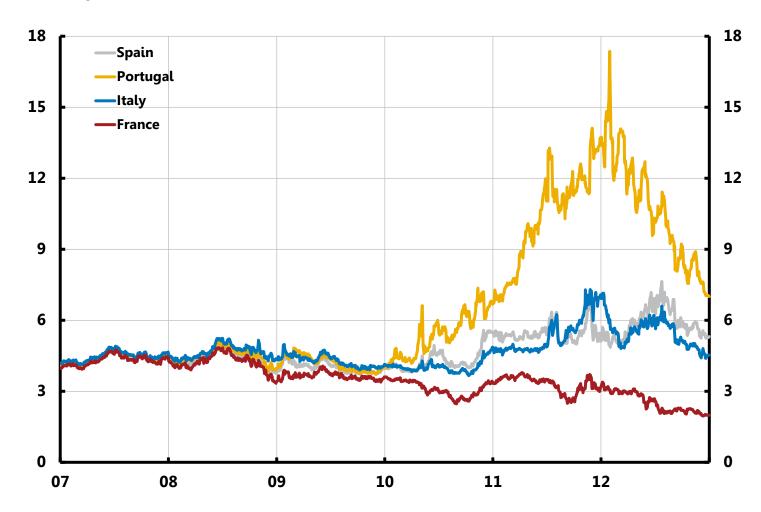


Figure 2.9. GDP forecasts in July 2012



Quarterly changes in per cent calculated in annualised terms, seasonally-adjusted data, quarterly data

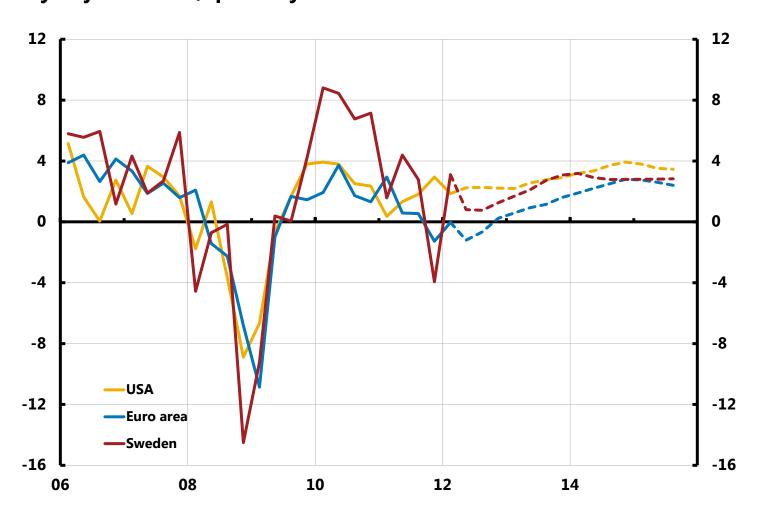




Figure 2.10. Policy rates

Per cent, daily data

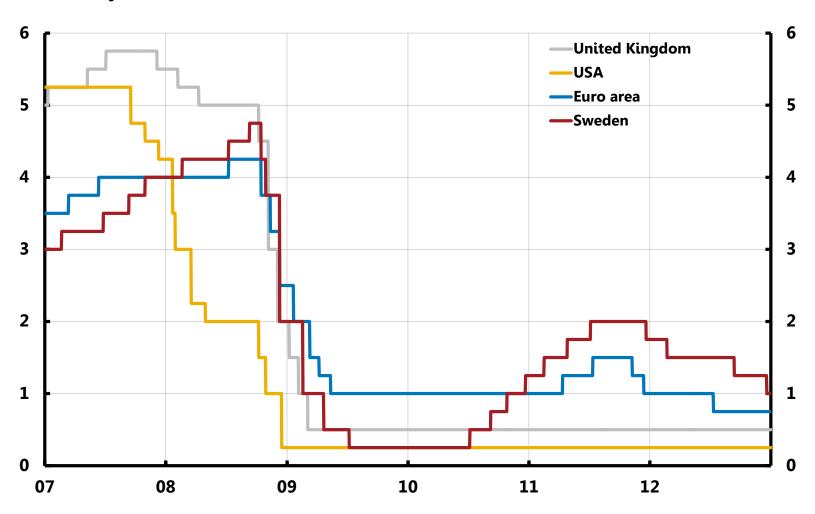


Figure 2.11. GDP forecasts in July, September and October 2012



Quarterly changes in per cent calculated in annualised terms, seasonally-adjusted data, quarterly data

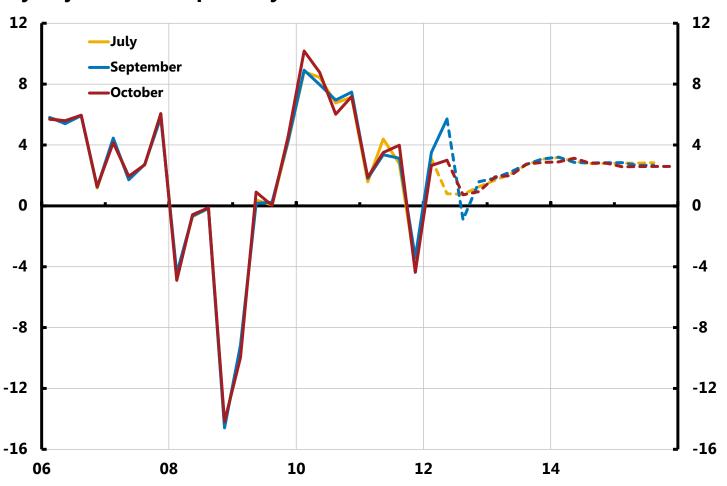


Figure 2.12. TCW-weighted nominal exchange rate



Index, 18 November 1992 = 100, daily data

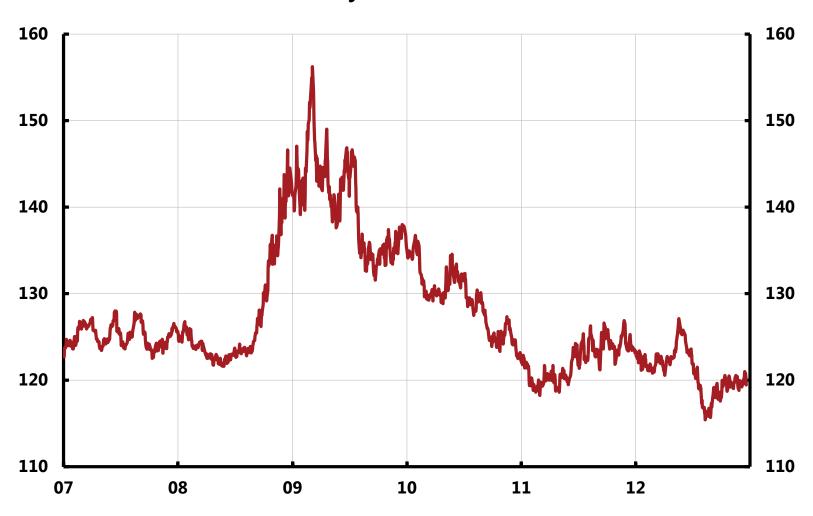


Figure 2.13. CPIF, forecasts in July, September and October 2012



Annual percentage change, monthly data

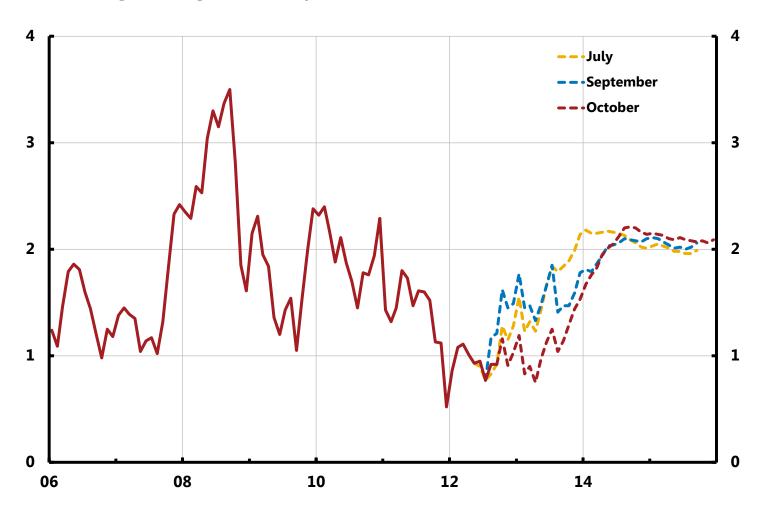


Figure 2.14. Unemployment, forecasts in September, October and December 2012



Per cent of the labour force, aged 15-74, seasonally-adjusted data, quarterly data

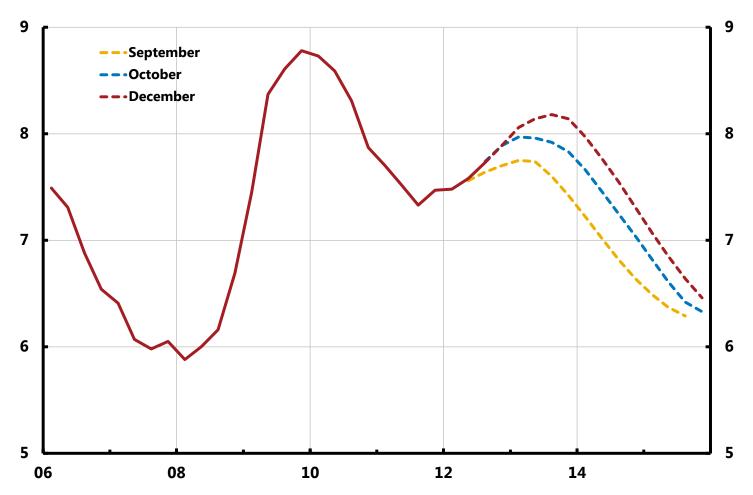


Figure 2.15. CPIF, forecasts in October and December 2012



Annual percentage change, monthly data

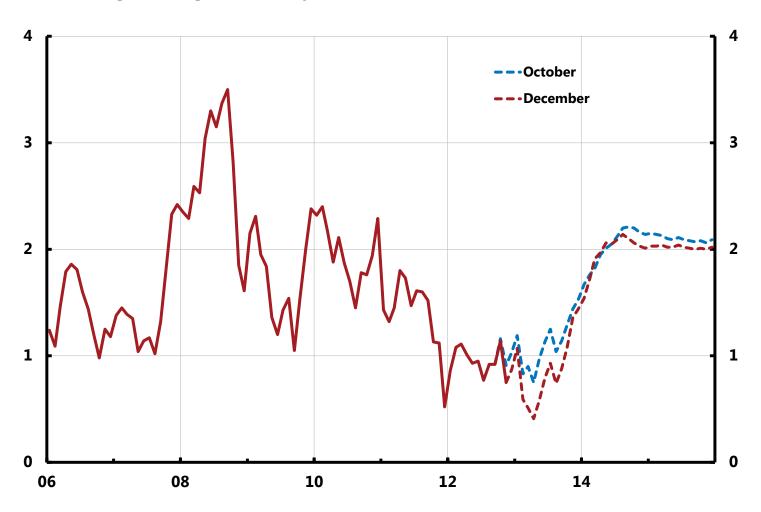




Figure 2.16. Household debt

Total debt as a percentage of disposable income, quarterly data

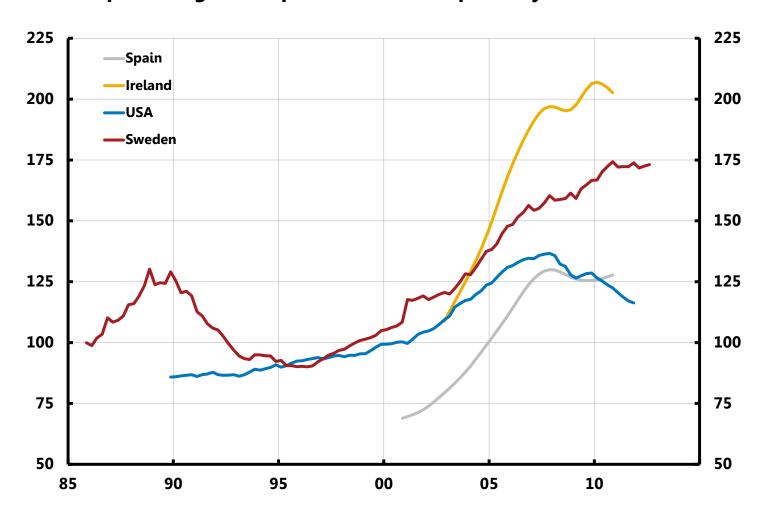


Figure 2.17. Policy-rate forecasts and forward rates abroad, February and September 2012



Per cent, quarterly averages

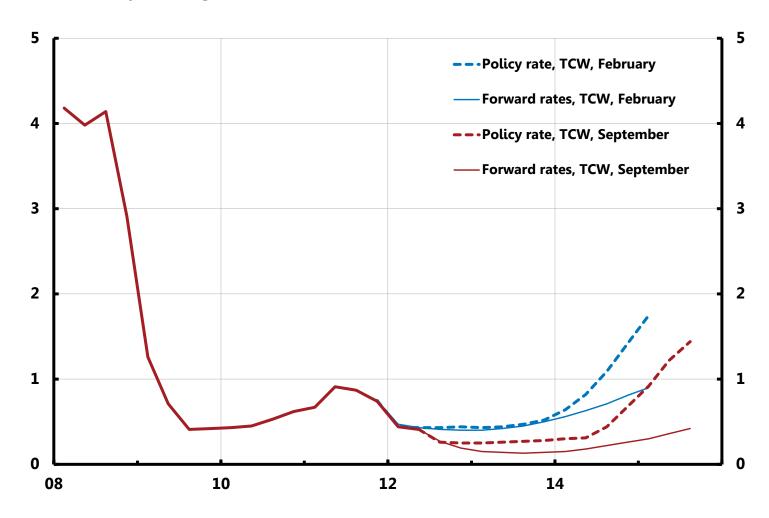


Figure 2.18. Government bond rates with 10 years left to maturity



Per cent, daily data

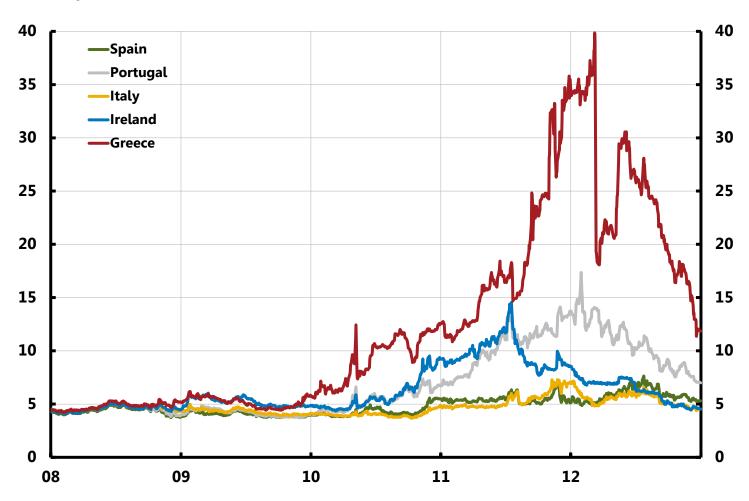
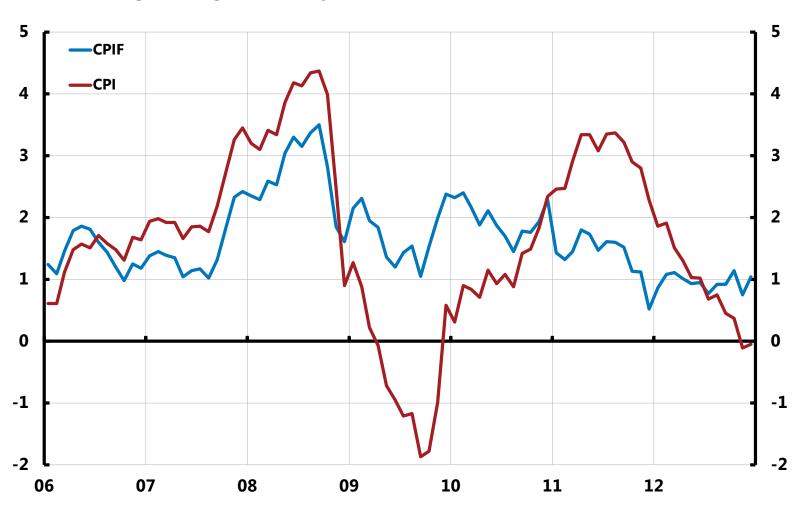




Figure 2.19. CPI and CPIF

Annual percentage change, monthly data



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

Source: Statistics Sweden

Figure 2.20. Different interest-rate assumptions, February 2012



Per cent, quarterly averages

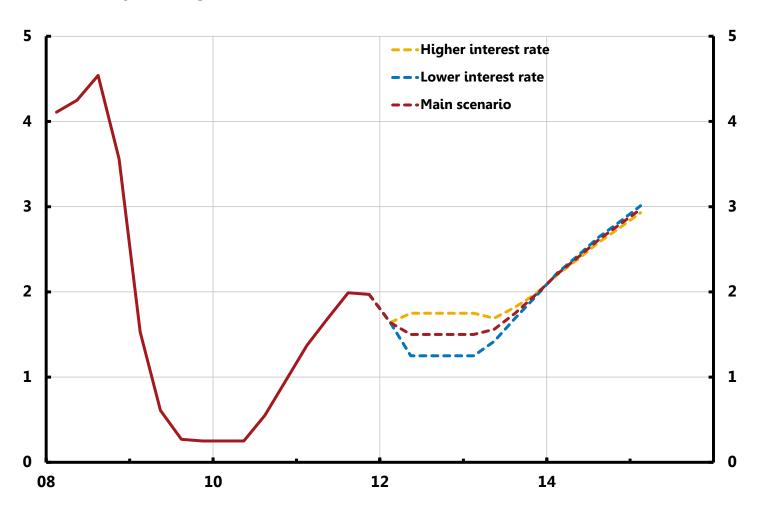


Figure 2.21. CPIF, forecasts in February 2012



Annual percentage change, quarterly averages

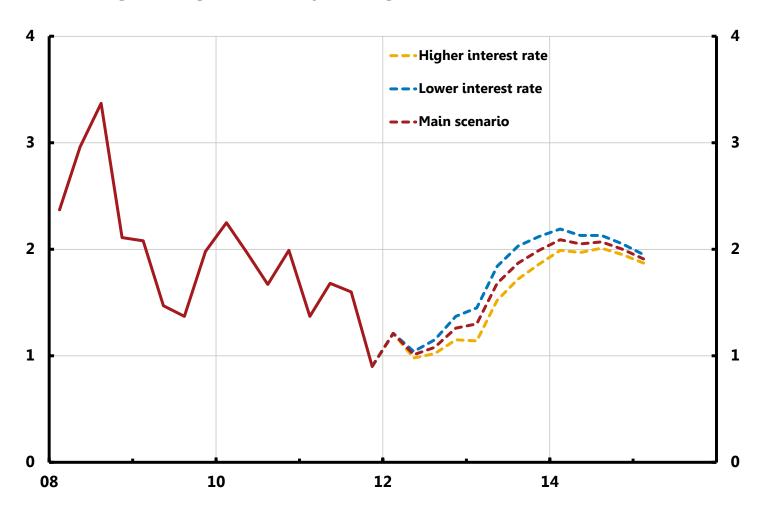


Figure 2.22. CPI, forecasts in February 2012



Annual percentage change, quarterly averages

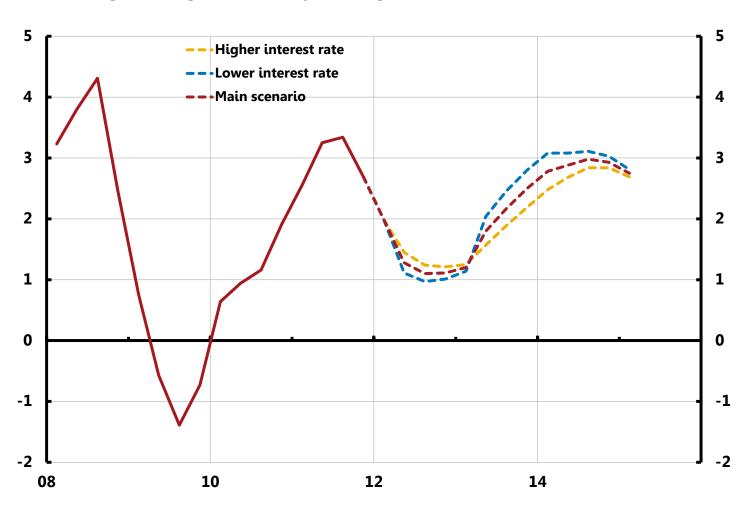


Figure 2.23. GDP gap, forecasts in February 2012



Per cent, quarterly data

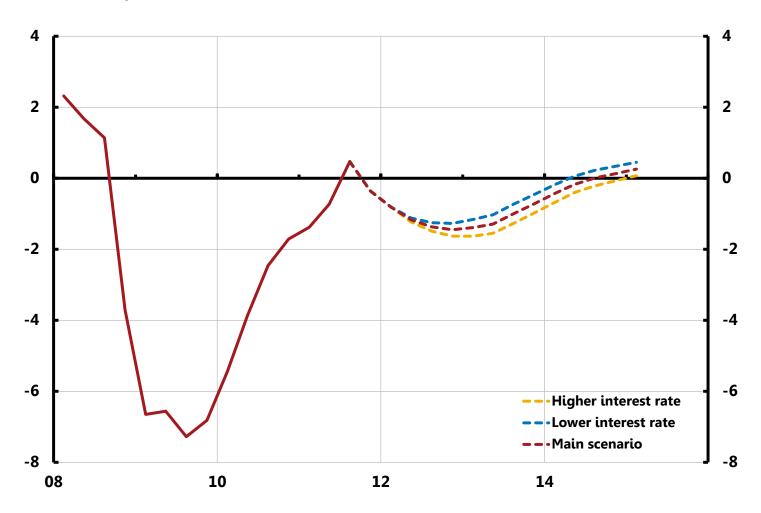


Figure 2.24. Unemployment, forecasts in February 2012



Per cent of the labour force, aged 15-74, seasonally-adjusted data, quarterly data

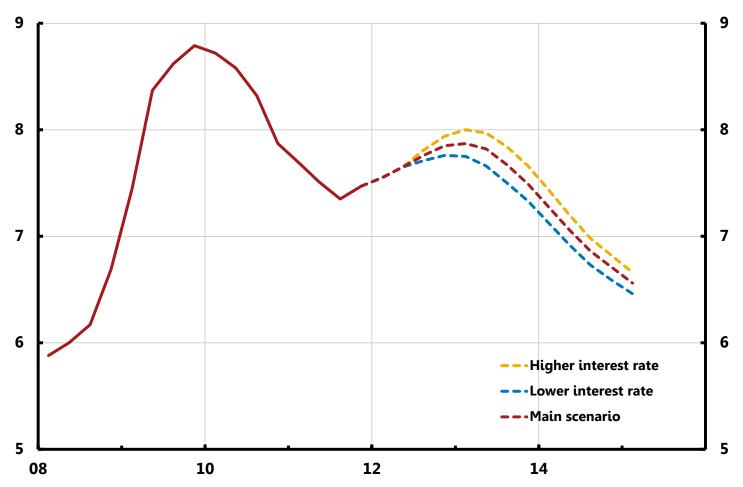


Figure 2.25. Mean squared gap for forecasts of the unemployment gap and CPIF inflation, February 2012



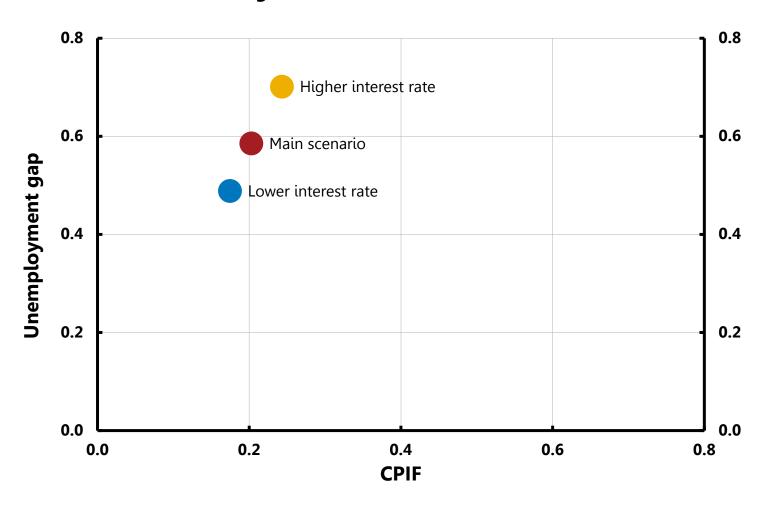


Figure 2.26. Mean squared gap for forecasts of the GDP gap and CPI inflation, February 2012



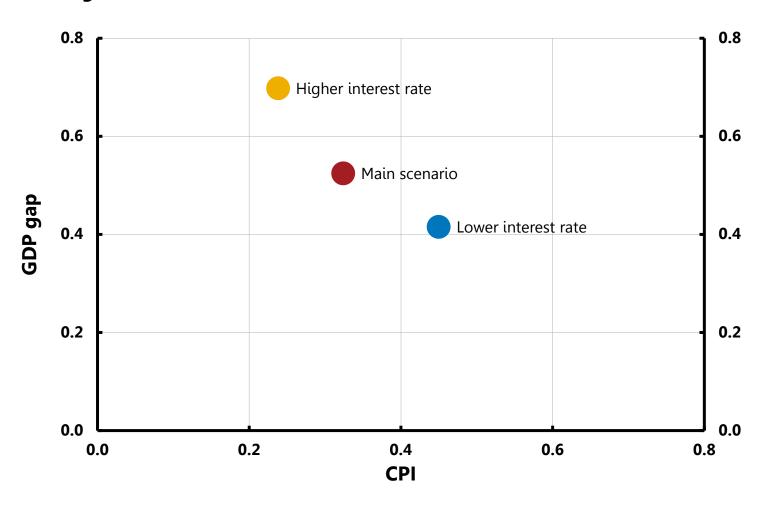


Figure 3.1. Development of inflation 2000-2012



Annual percentage change, monthly data

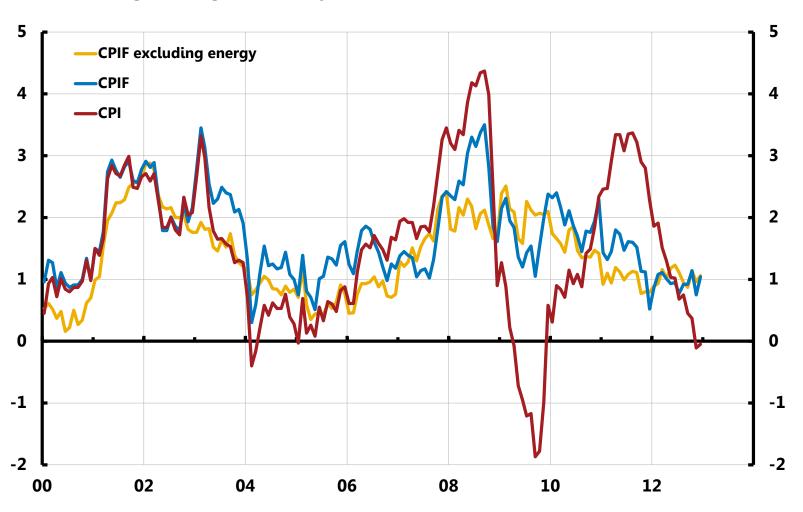


Figure 3.2. GDP growth in Sweden, the euro area and the United States, 2011 and 2012



Annual percentage change, annual average

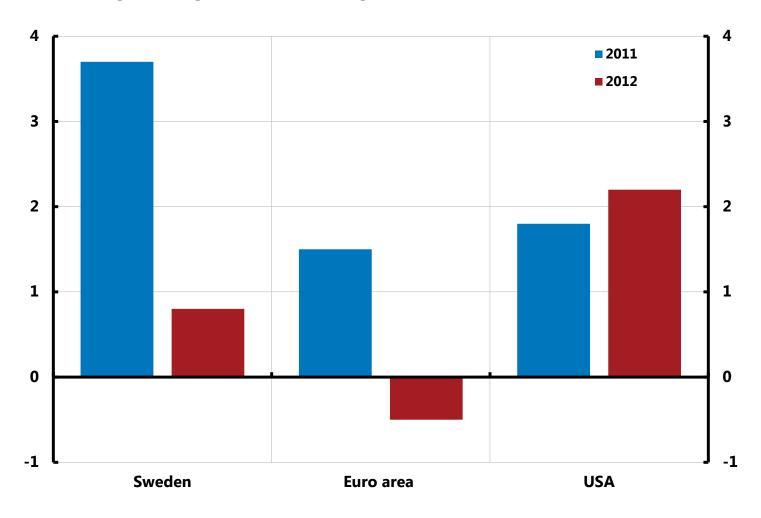


Figure 3.3. GDP gap, hours gap and RU indicator



Per cent and standard deviation, quarterly data

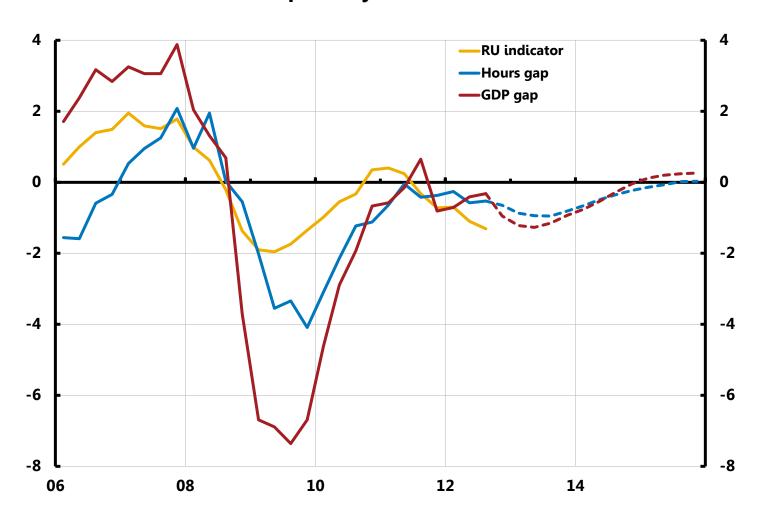




Figure 3.4. CPI, outcome and forecasts

Annual percentage change, monthly data

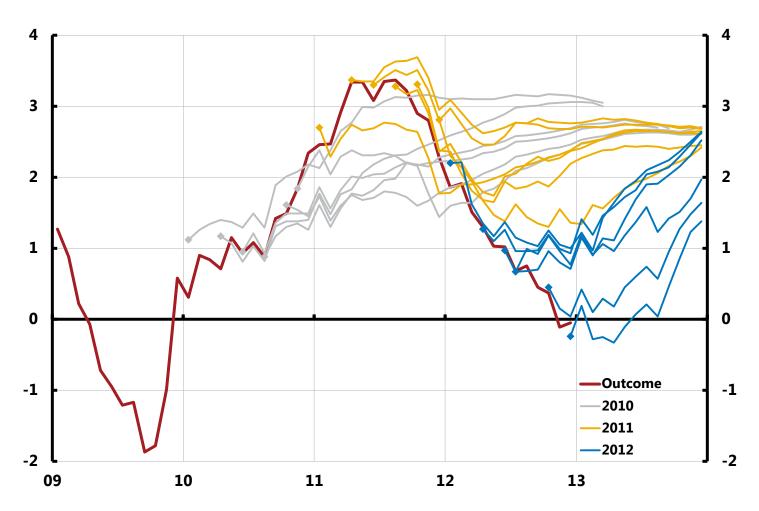


Figure 3.5. CPIF, outcome and forecasts



Annual percentage change, monthly data

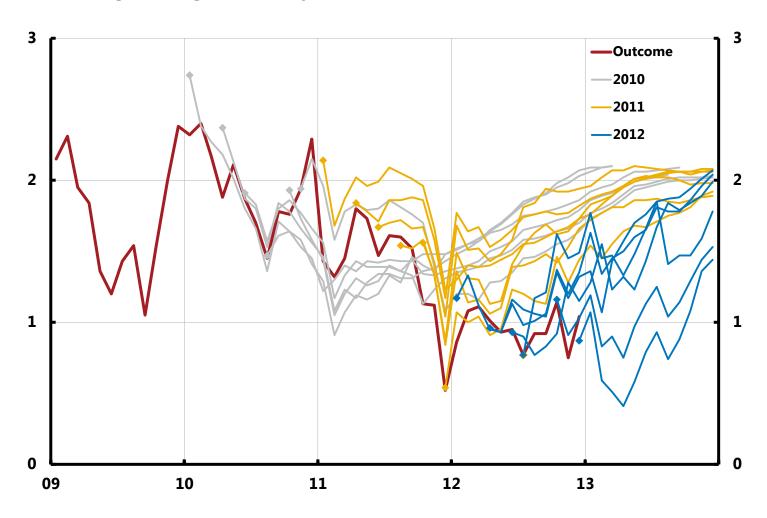


Figure 3.6. GDP growth, outcome and forecasts



Annual percentage change, quarterly data

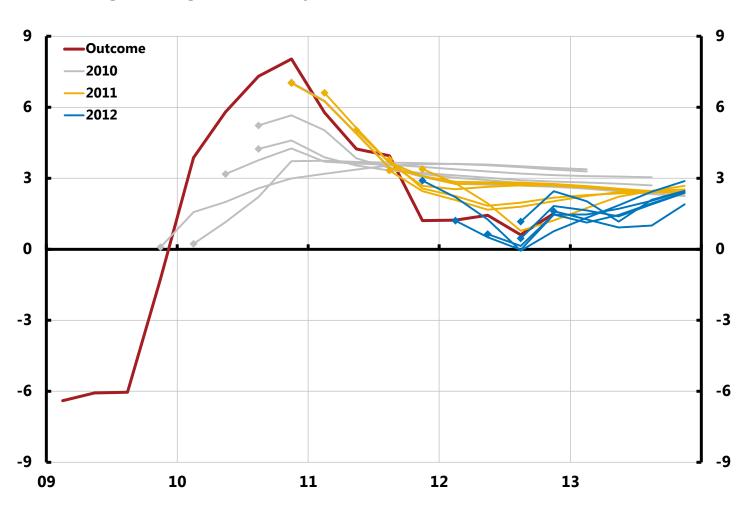


Figure 3.7. Unit labour cost, outcome and forecasts



Annual percentage change, quarterly data

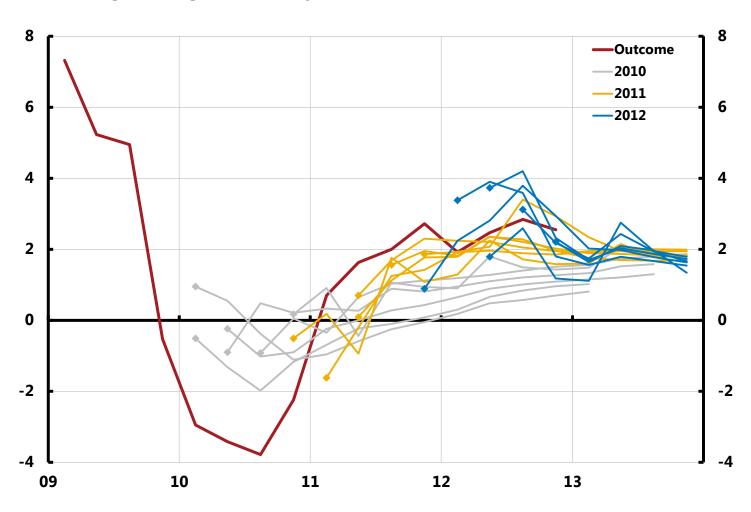


Figure 3.8. TCW-weighted nominal exchange rate, outcome and forecasts



Index, 18 November 1992 = 100, quarterly averages

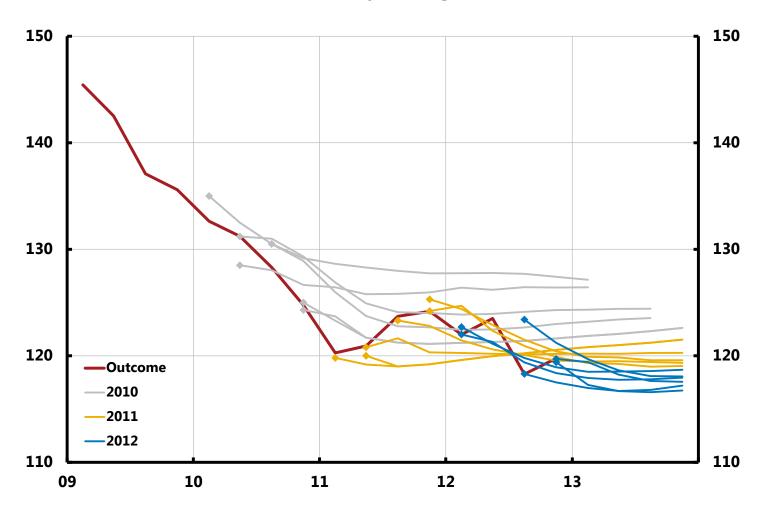


Figure 3.9. Repo rate, outcome and forecasts



Per cent, quarterly averages

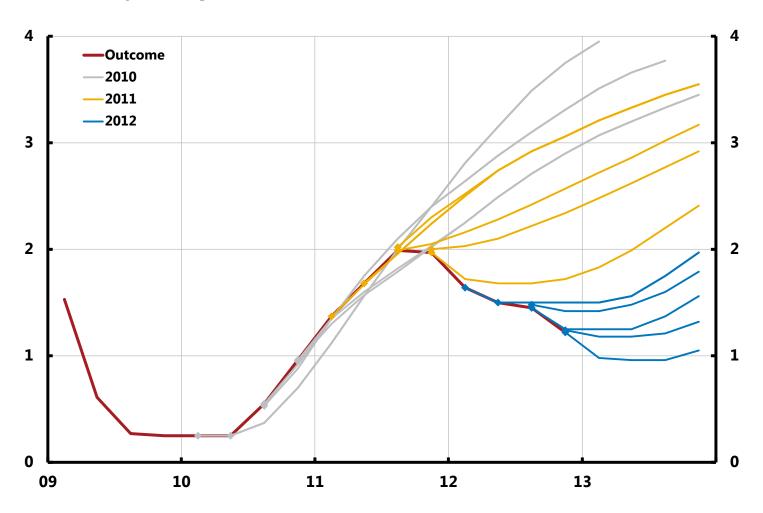


Figure 3.10. Unemployment, outcome and forecasts



Per cent of the labour force, aged 15-74, seasonally-adjusted data, quarterly data

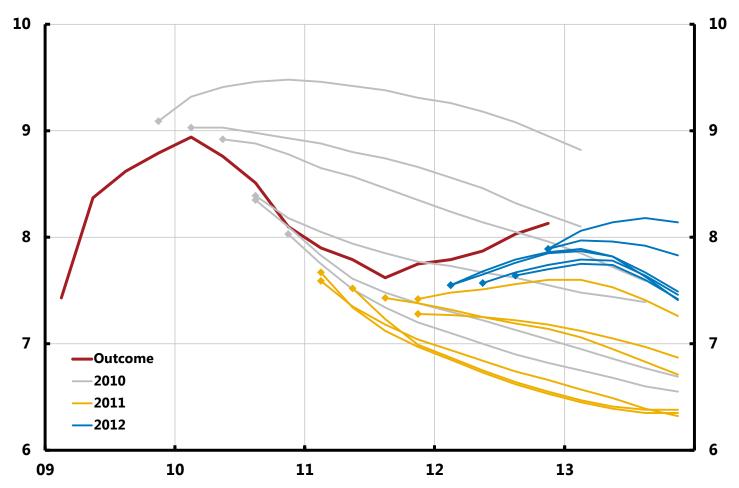


Figure 3.11. TCW-weighted real exchange rate



Index, 18 November 1992 = 100, monthly data

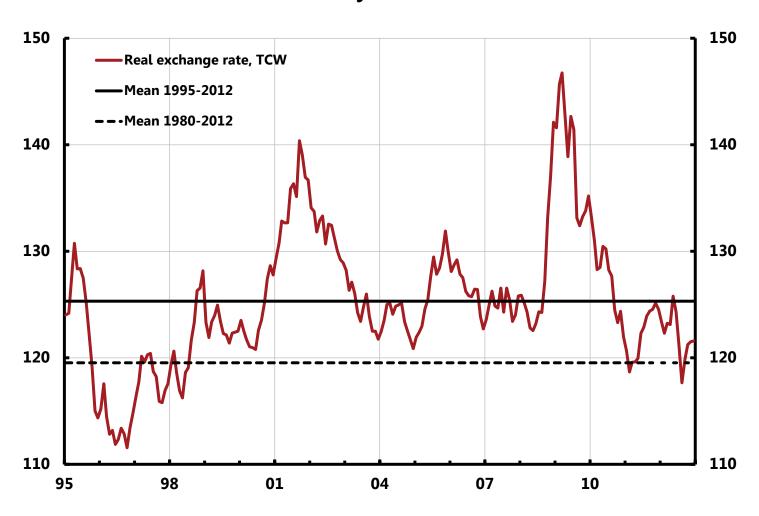


Figure 3.12. Inflation expectations 2012, 1, 2, and 5 years ahead, all participants



Per cent, quarterly data

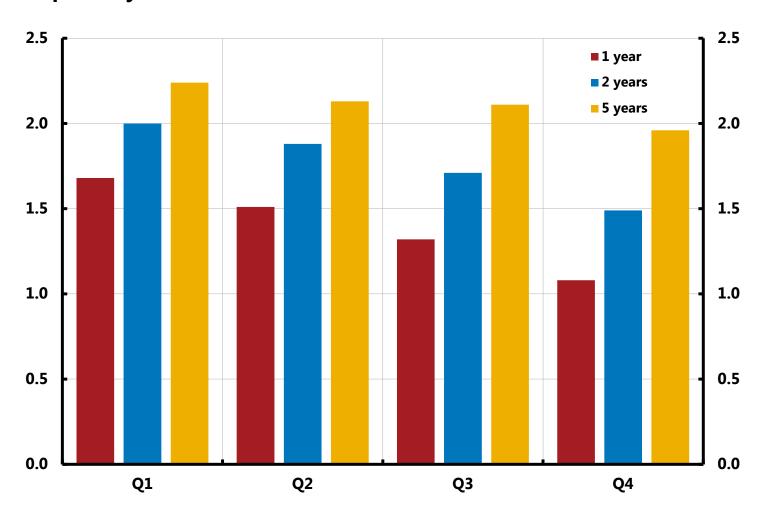


Figure 3.13. Inflation expectations since 1996, all participants



Per cent, quarterly data

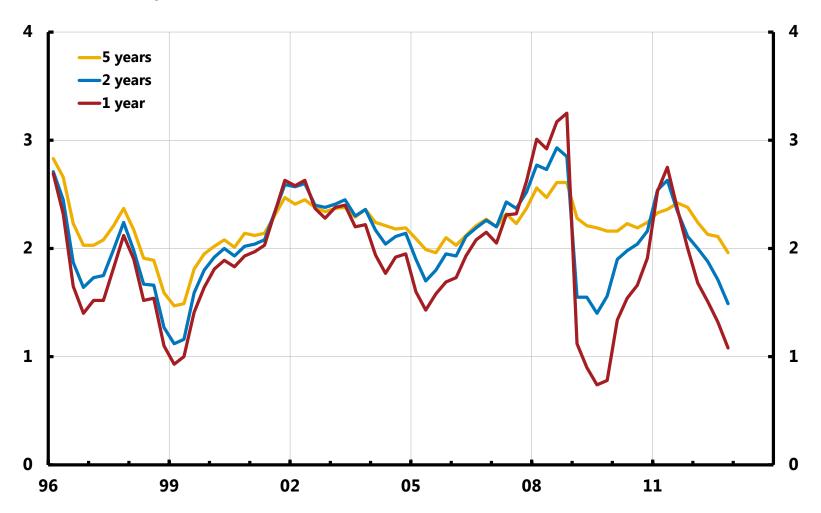


Figure 3.14. Inflation expectations among money market participants 2010-2012



Annual percentage change, monthly data

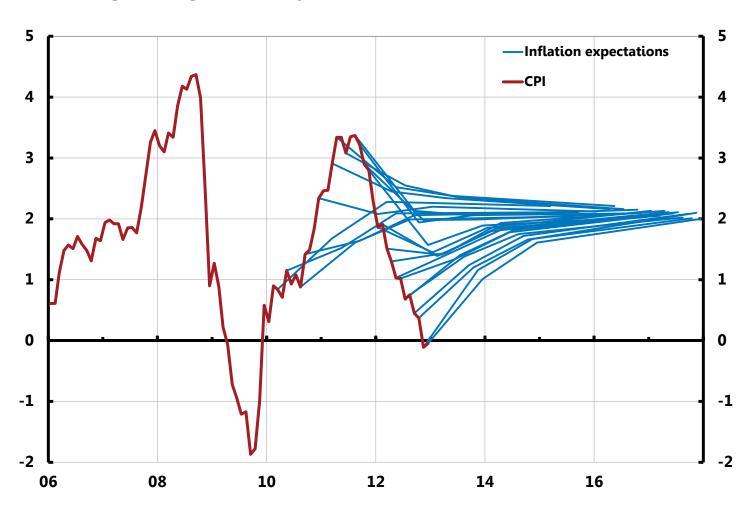


Figure 3.15. The Riksbank's inflation forecasts and inflation expectations (CPI) among money market participants two years ahead, 2012



Annual percentage change

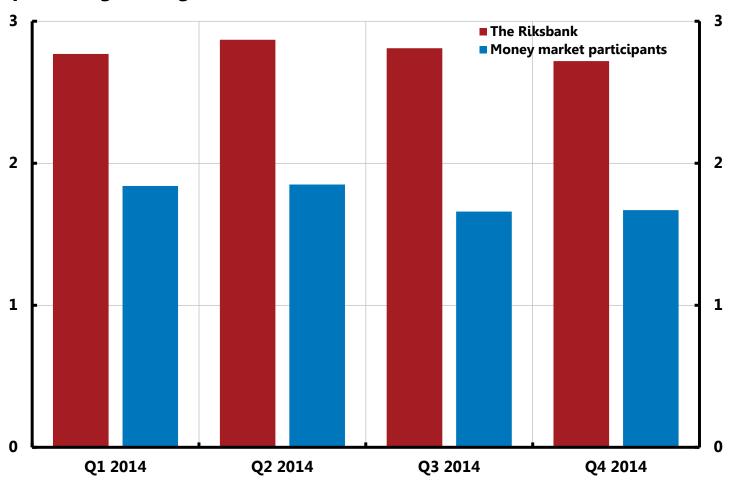




Figure 3.16. CPI since 1970

Annual percentage change, annual data

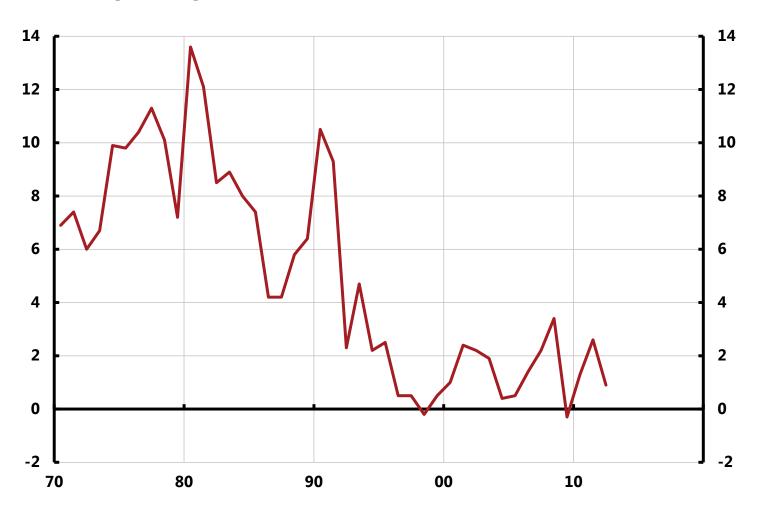


Figure 3.17. CPI, CPIF and CPIX in real time



Annual percentage change, monthly data

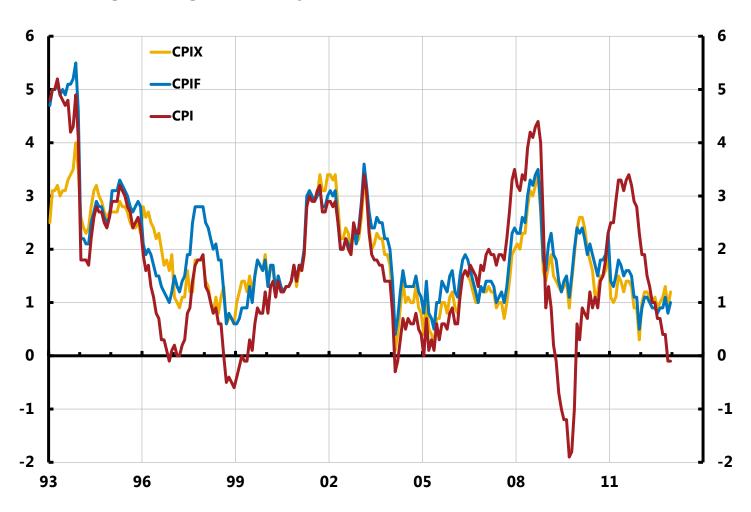


Figure 3.18. CPIF, outcome and forecast in July 2011



Annual percentage change, monthly data

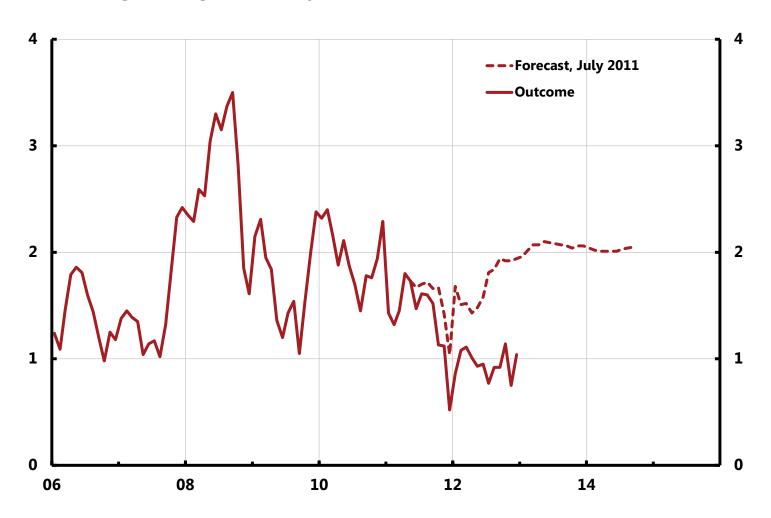


Figure 3.19. CPIF inflation 2012: forecasting error and effects of unforeseen shocks



Percentage points, quarterly data

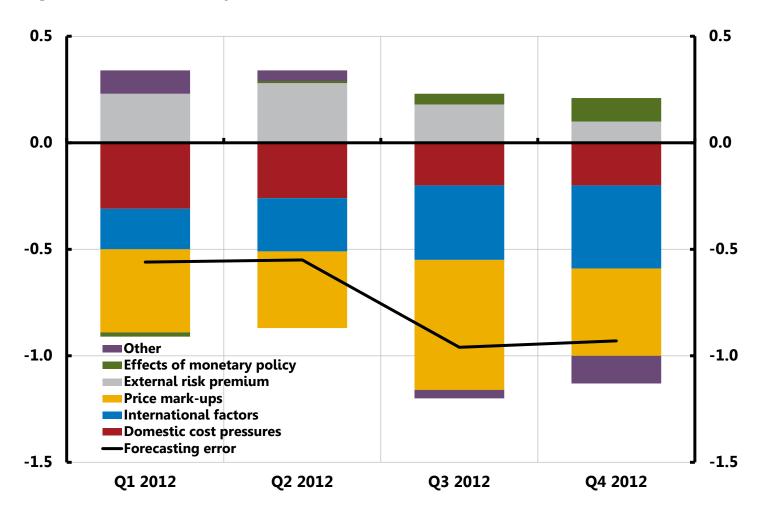


Figure 4.1. Forecasts 2011-2012 for CPI inflation in 2012



Annual percentage change, annual averages

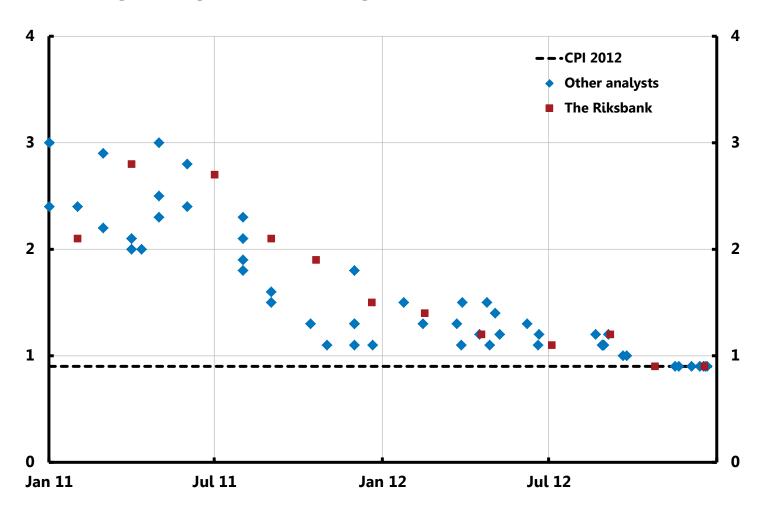


Figure 4.2. Forecasts 2011-2012 for CPIF inflation in 2012



Annual percentage change, annual averages

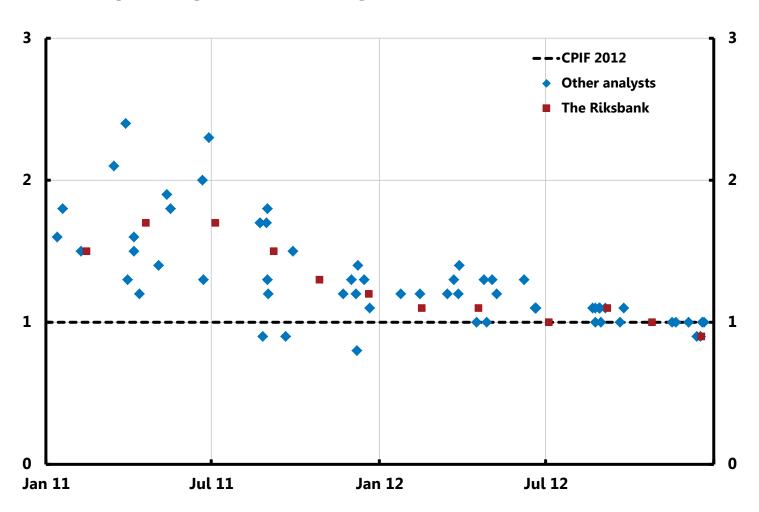


Figure 4.3. Forecasts 2011-2012 for GDP growth in 2012



Annual percentage change, annual averages

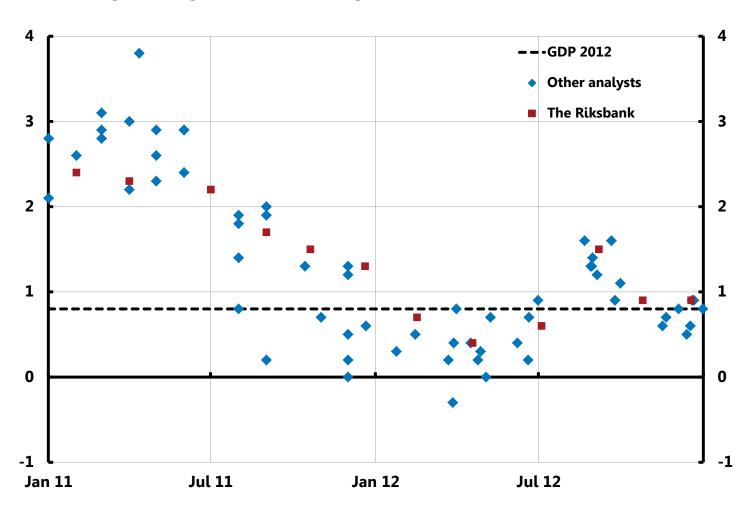


Figure 4.4. Forecasts 2011-2012 for the repo rate at the end of 2012



Per cent

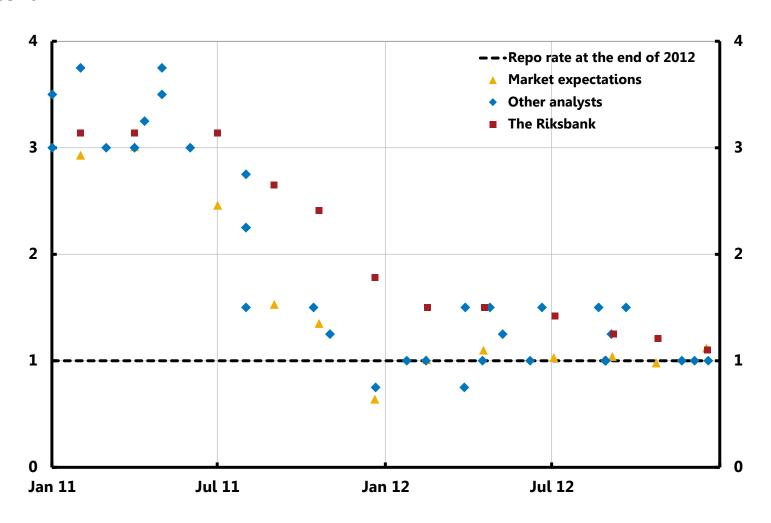


Figure 4.5. Forecasts 2011-2012 for unemployment in 2012



Per cent of the labour force, aged 15-74, annual averages

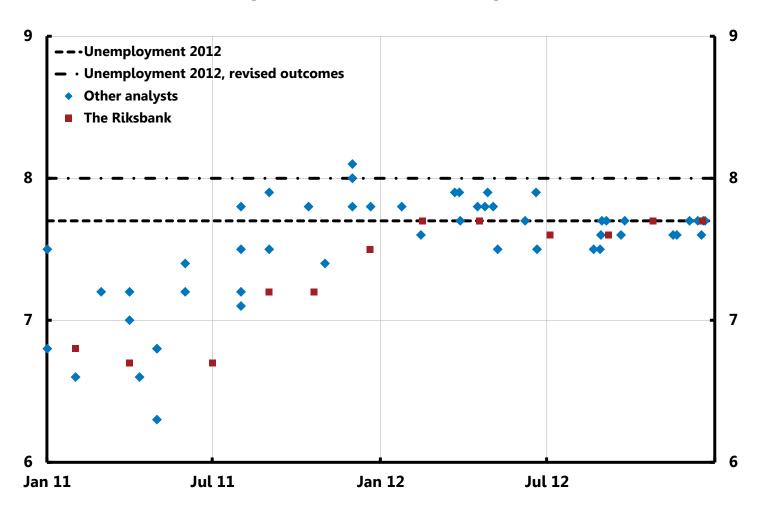


Figure 4.6. Accuracy of the forecasts of various forecasters for CPI inflation 1999-2012



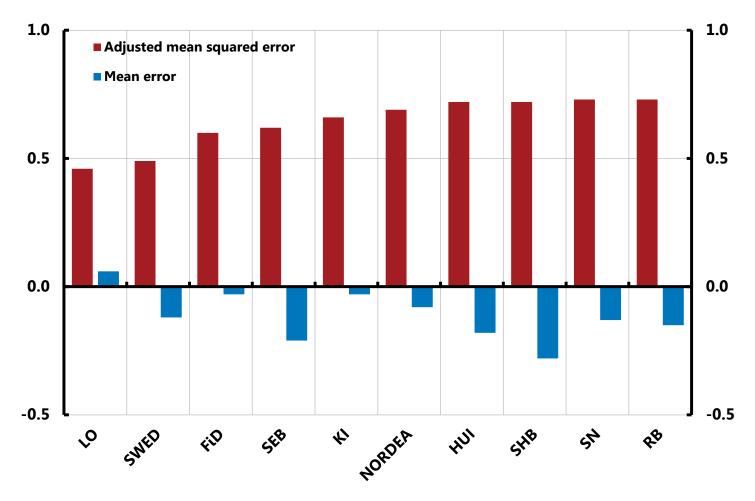


Figure 4.7. Accuracy of the forecasts of various forecasters for CPIF inflation 2008-2012



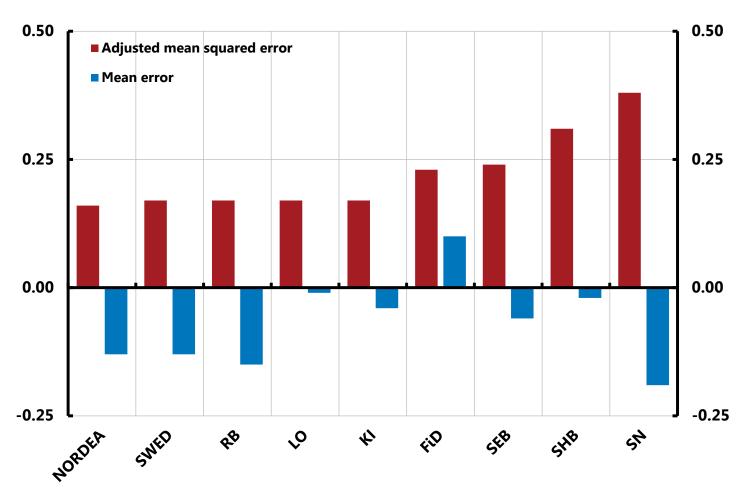


Figure 4.8. Accuracy of the forecasts of various forecasters for GDP growth 1999-2012



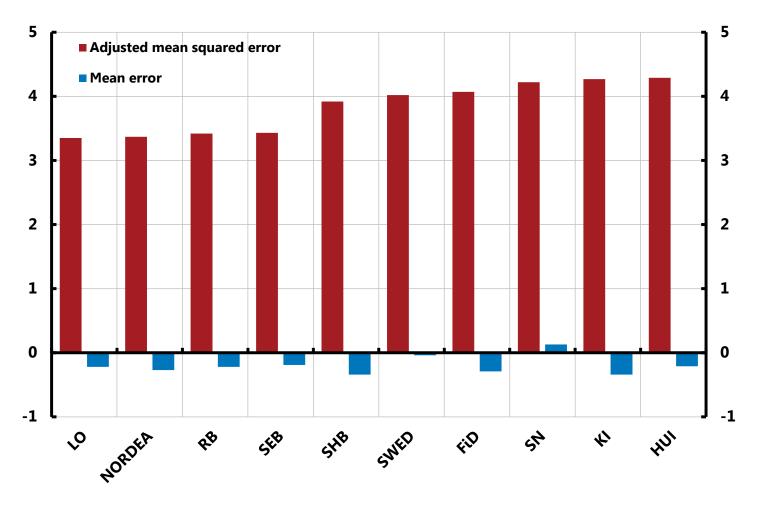


Figure 4.9. Accuracy of the forecasts of various forecasters for unemployment 1999-2012



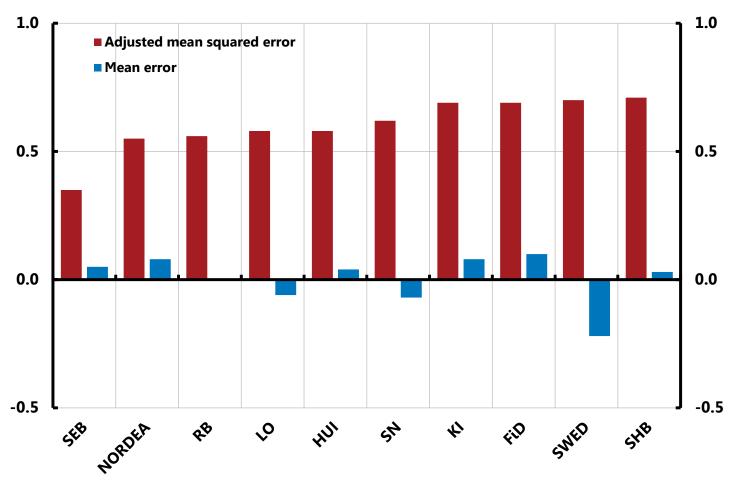
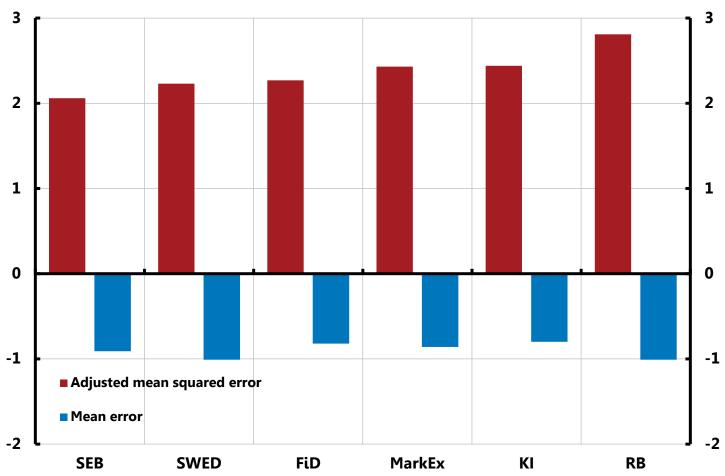


Figure 4.10. Accuracy of the forecasts of various forecasters for the year-end repo rate 2007-2012





Note. See Figure 4:6 for an explanation of the abbreviations. MarkEx = Market expectations calculated on the basis of market pricing. Forward rates are adjusted for average risk premiums corresponding to one basis point per month of the maturity period. Prior to 2007, the Riksbank did not publish forecasts for the repo rate. The Riksbank's quarterly forecasts have been interpolated to daily values to produce a value at the end of the year.

Figure 4.11. Forecasting errors, one year



Percentage points

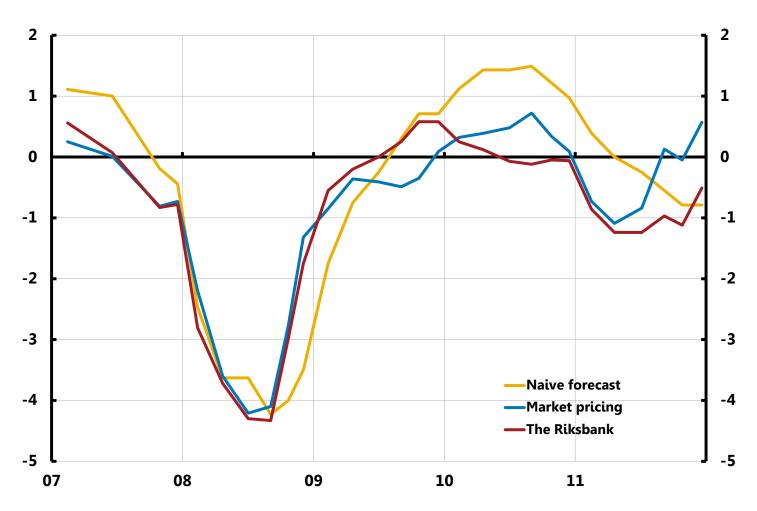


Figure 5.1. Change in the repo rate and expected change according to the market



Percentage points

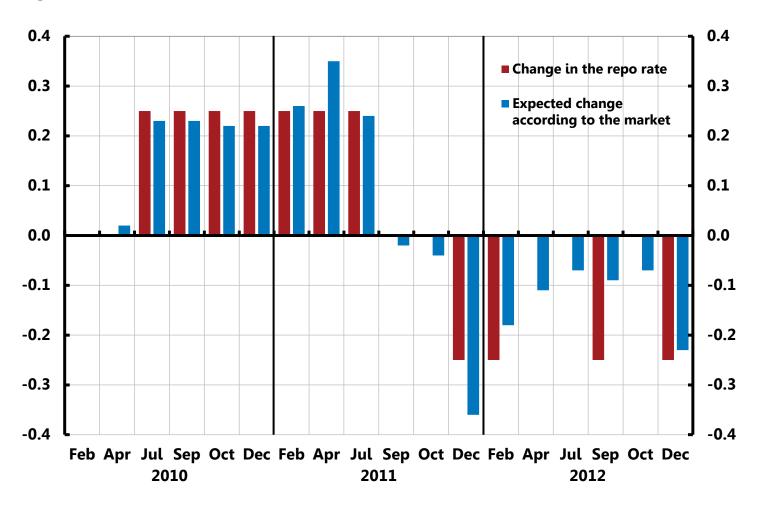




Figure 5.2. Market surprise

Percentage points

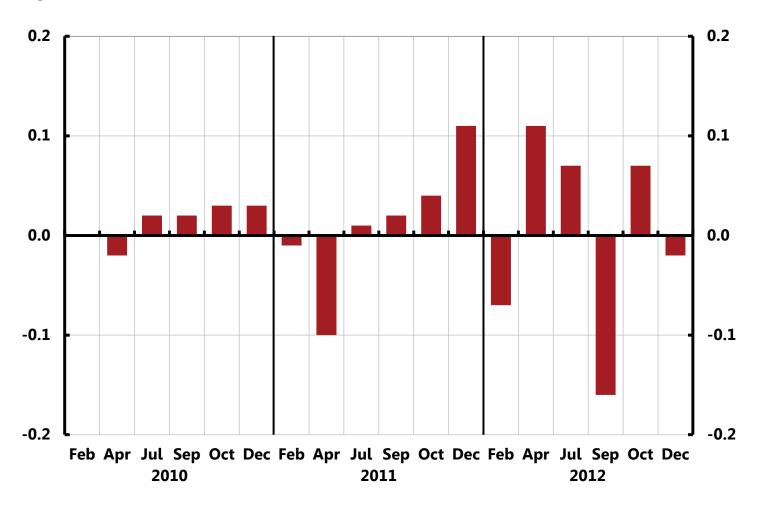
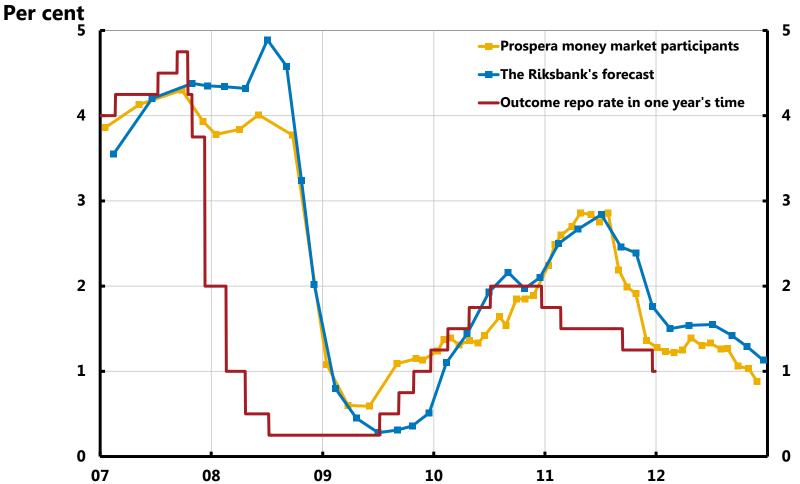


Figure 5.3. Outcome and the Riksbank's forecast for the repo rate and repo-rate expectations according to surveys, one year ahead



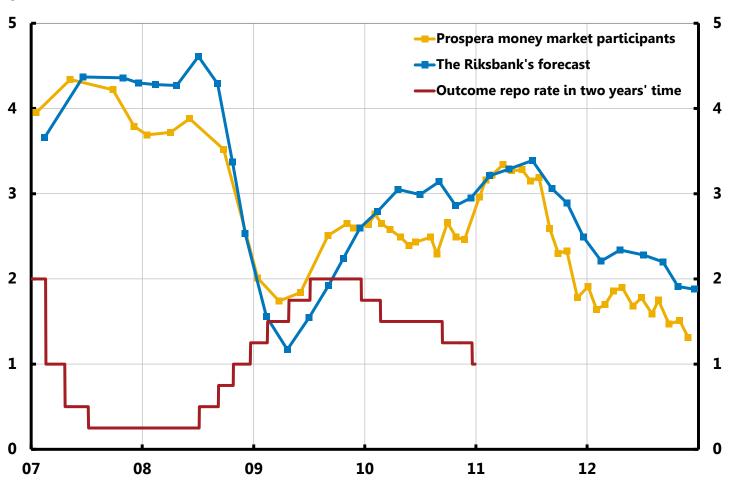


Note. The blue dots in the Figure represent the forecast of the repo rate one year ahead made by the Riksbank in conjunction with its monetary policy meetings. The yellow dots represent the money market participants' forecast of the repo rate one year ahead according to surveys. The outcome of the repo rate has been moved back one year to allow comparison with forecasts and expectations of the repo rate.

Figure 5.4. Outcome and the Riksbank's forecast for the repo rate and repo-rate expectations according to surveys, two years ahead



Per cent

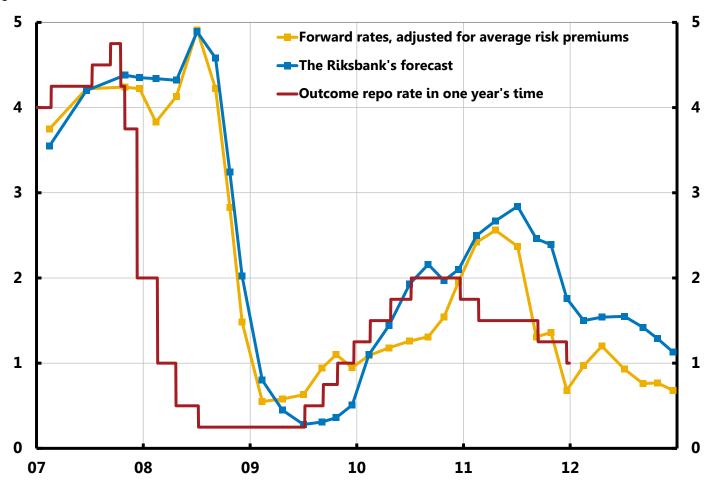


Note. The blue dots in the Figure represent the forecast of the repo rate two years ahead made by the Riksbank in conjunction with its monetary policy meetings. The yellow dots represent the money market participants' forecast of the repo rate two years ahead according to surveys. The outcome of the repo rate has been moved back two years to allow comparison with forecasts and expectations of the repo rate.

Figure 5.5. Outcome and the Riksbank's forecast for the repo rate and repo-rate expectations according to market prices, one year ahead



Per cent

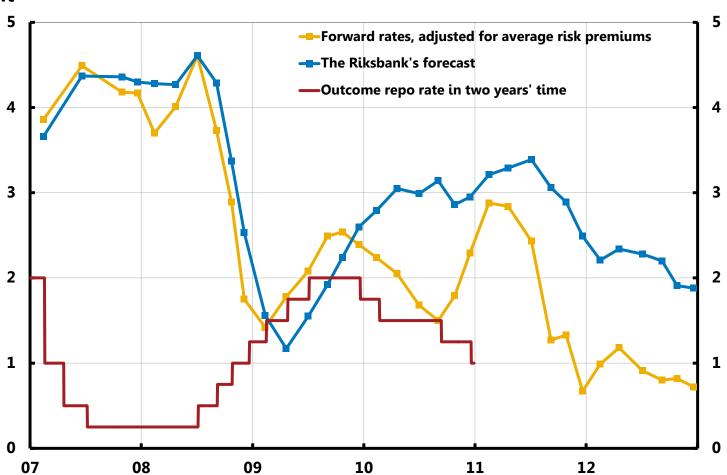


Note. The blue dots in the Figure represent the forecast of the repo rate one year ahead made by the Riksbank in conjunction with its monetary policy meetings. The yellow dots represent market expectations of the repo rate one year ahead calculated on the basis of market pricing. The outcome for the repo rate has been moved back one year to allow comparison with forecasts of the repo rate and market expectations. Forward rates are adjusted for average risk premiums corresponding to one basis point per month of the maturity period.

Figure 5.6. Outcome and the Riksbank's forecast for the repo rate and repo-rate expectations according to market prices, two years ahead



Per cent



Note. The blue dots in the Figure represent the forecast of the repo rate two years ahead made by the Riksbank in conjunction with its monetary policy meetings. The yellow dots represent market expectations of the repo rate two years ahead calculated on the basis of market pricing. The outcome for the repo rate has been moved back two years to allow comparison with forecasts of the repo rate and market expectations. Forward rates are adjusted for average risk premiums corresponding to one basis point per month of the maturity period.

Figure 5.7. The Riksbank's GDP forecasts and average GDP expectations among money market participants two years ahead, 2012



Annual percentage change

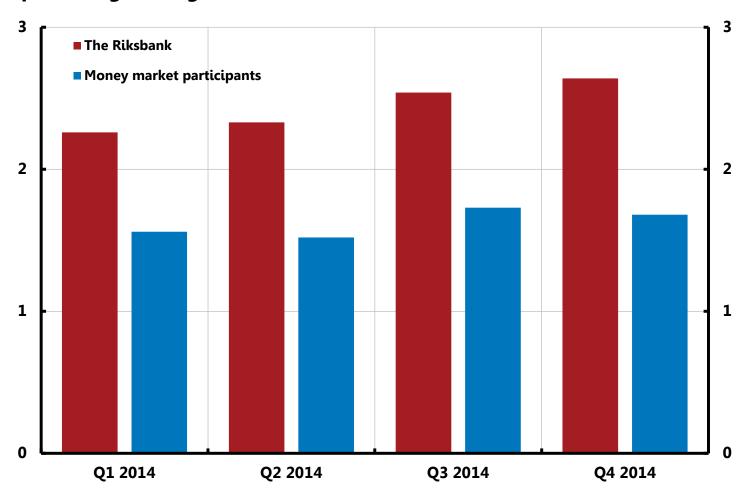
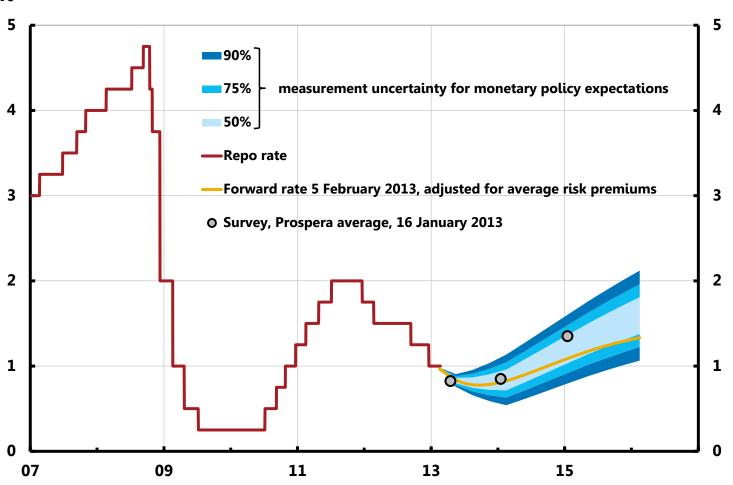


Figure 5.8. Interval that reflects the measurements uncertainty about monetary policy expectations



Per cent



Note. The width of the interval is calculated from the spread between different measures of monetary policy expectations for the respective horizons, plus an assumption of normally-distributed spreads. The interval is centred around the mean value of the Riksbank's ordinary measure of monetary policy expectations (Prospera surveys and forward rates adjusted for risk premiums).

Figure A1. Different interest-rate assumptions, July 2012



Per cent, quarterly averages

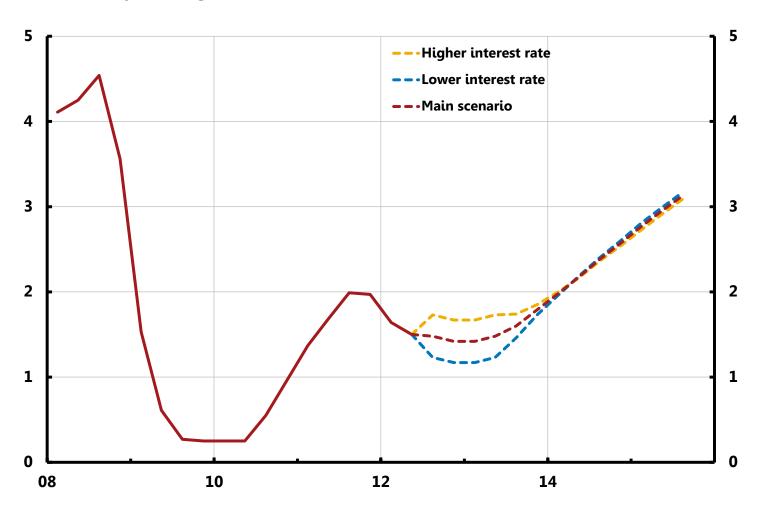




Figure A2. CPIF, forecasts in July 2012

Annual percentage change, quarterly averages

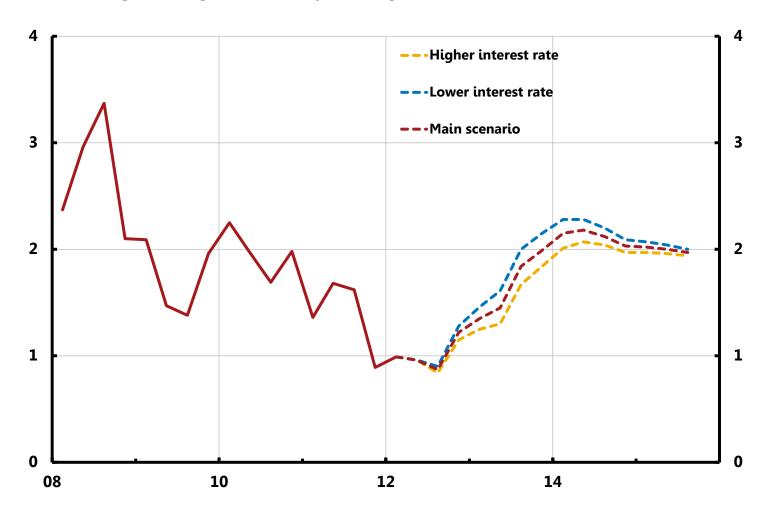




Figure A3. CPI, forecasts in July 2012

Annual percentage change, quarterly averages

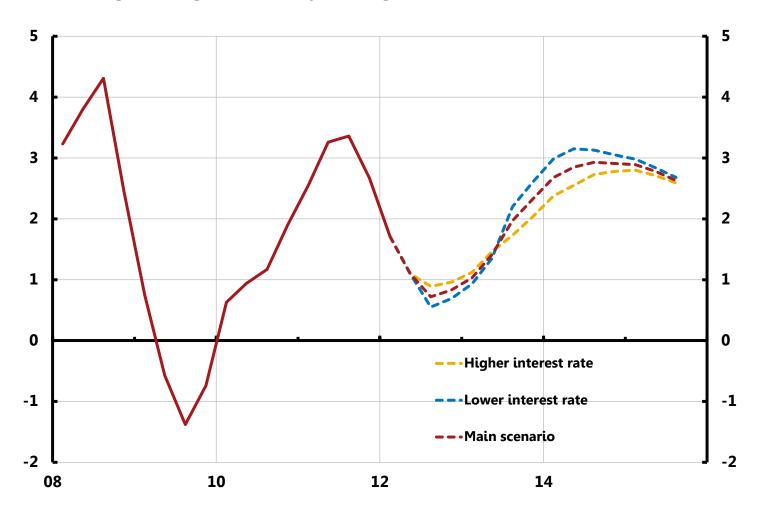


Figure A4. Hours gap, forecasts in July 2012



Per cent, quarterly data

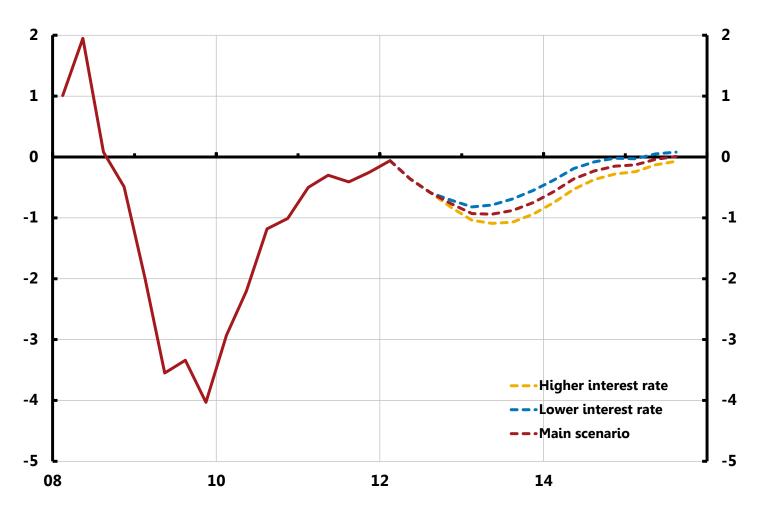


Figure A5. Unemployment, forecasts in July 2012



Per cent of the labour force, aged 15-74, seasonally-adjusted data, quarterly data

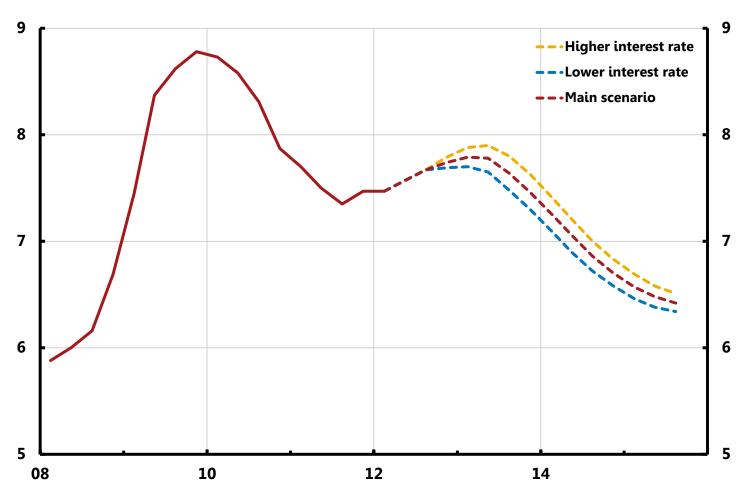


Figure A6. Different interest-rate assumptions, October 2012



Per cent, quarterly averages

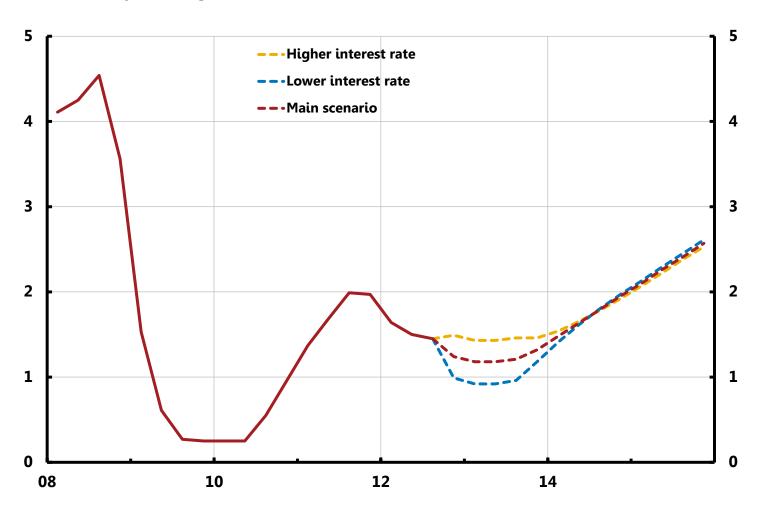


Figure A7. CPIF, forecasts in October 2012



Annual percentage change, quarterly averages

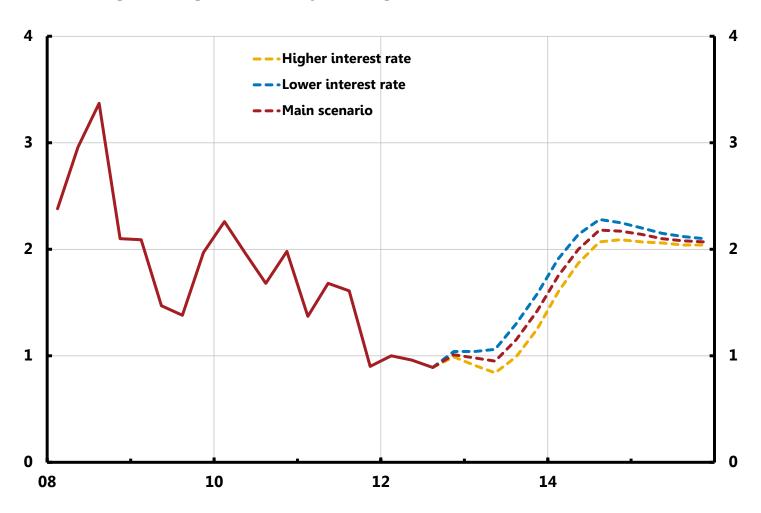


Figure A8. CPI, forecasts in October 2012



Annual percentage change, quarterly averages

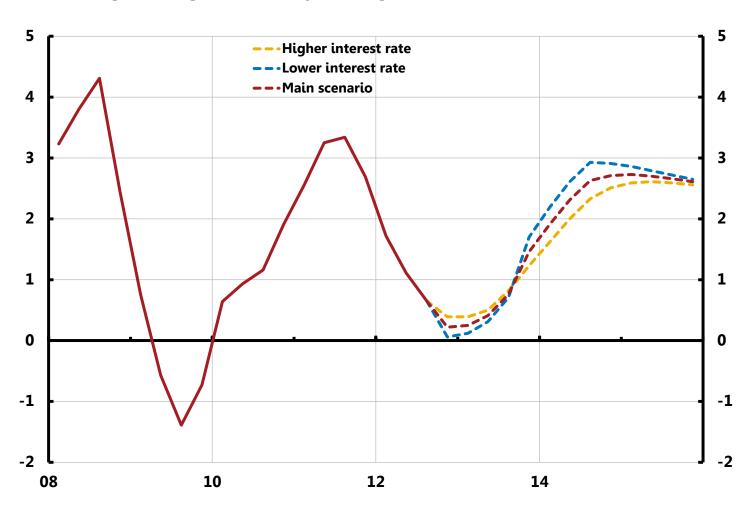


Figure A9. Hours gap, forecasts in October 2012



Per cent, quarterly data

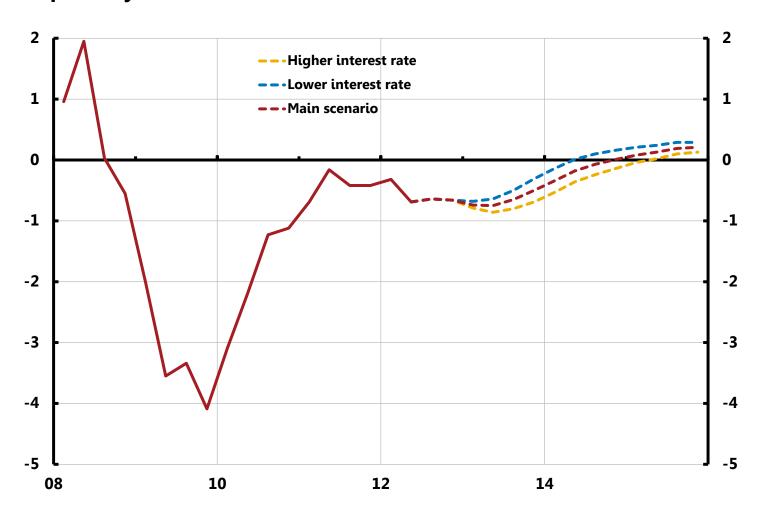


Figure A10. Unemployment, forecasts in October 2012



Per cent of the labour force, aged 15-74, seasonally-adjusted data, quarterly data

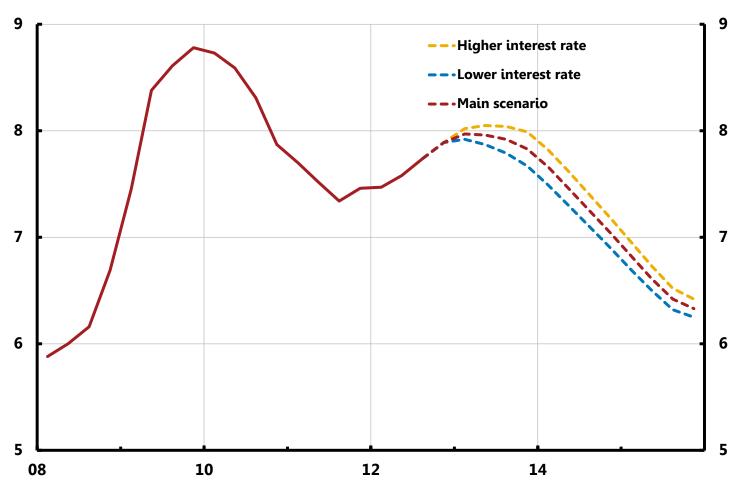


Figure A11. Forecasting errors of various forecasters for CPI inflation 2012



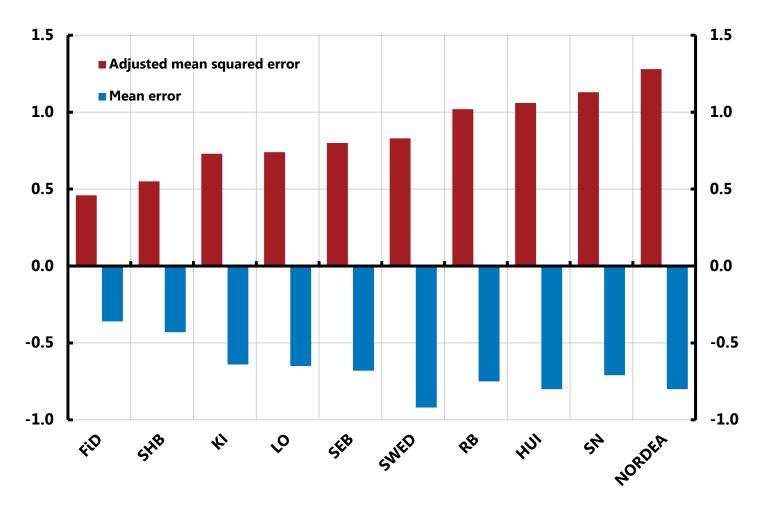


Figure A12. Forecasting errors of various forecasters for CPIF inflation 2012



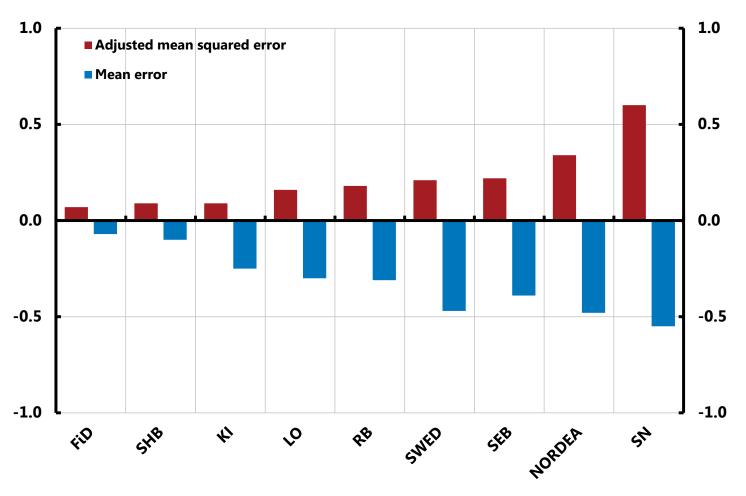


Figure A13. Forecasting errors of various forecasters for GDP growth 2012



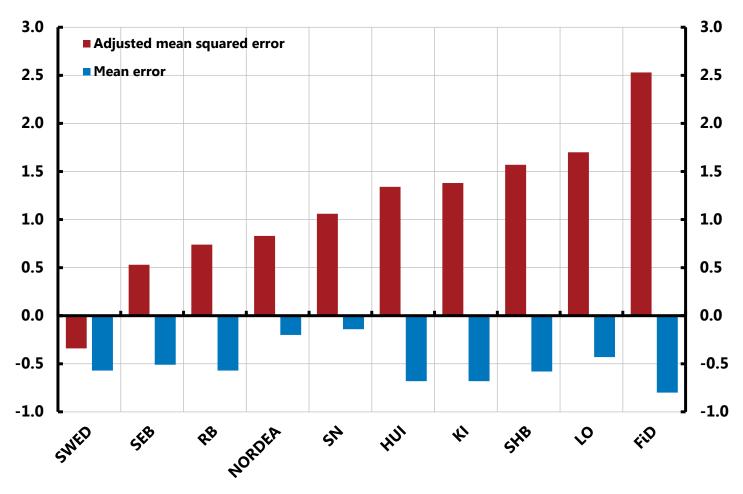


Figure A14. Forecasting errors of various forecasters for unemployment 2012



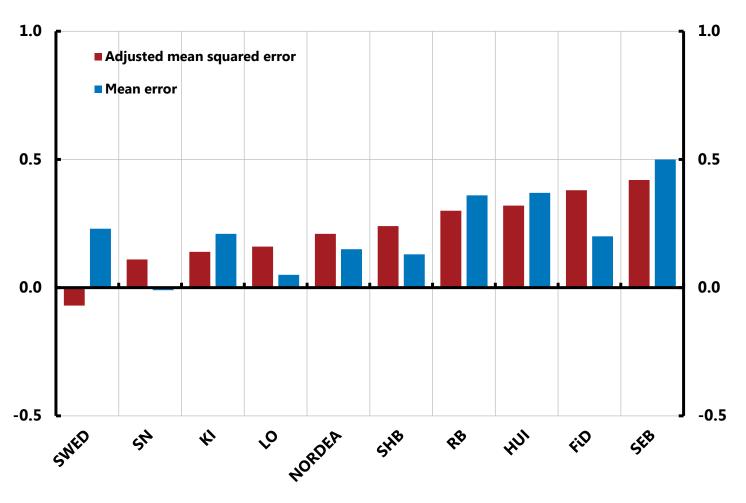


Figure A15. Forecasting errors of various forecasters for the repo rate at year-end 2012





Note. See Figure A11 for an explanation of the abbreviations. MarkEx = Market expectations calculated on the basis of market pricing. Forward rates are adjusted for average risk premiums corresponding to one basis point per month of the maturity period. The Riksbank's quarterly forecasts have been interpolated to daily values to produce a value at the end of the year.

Table 3.1. Comparison of different inflation measures, annual average



Annual percentage change

	2010	2011	2012
CPI	1.2	3.0	0.9
CPIF	2.0	1.4	1.0
CPIF excluding energy	1.5	1.0	1.0

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

Source: Statistics Sweden

Table 3.2. Production and measures of employment 2010-2012, annual average



	2010	2011	2012
GDP	6.6	3.7	0.8
Employed, aged 15-74	0.5	2.3	0.6
Hours worked	2.6	2.4	-0.2
Unemployment, aged 15-74*	8.6	7.8	8.0

^{*} Per cent of the labour force

Annual percentage change





	СРІ	CPI, real time	СРІХ	CPIX, real time	CPIF	CPIF, real time
1993-2012	1.5	1.7	1.7	1.8	1.9	2.0
1995-2012	1.3	1.4	1.5	1.7	1.7	1.8
1997-2012	1.3	1.4	1.5	1.6	1.6	1.7
1995-1999	0.8	1.1	1.5	1.7	1.6	1.9
2000-2008	1.7	1.8	1.6	1.7	1.8	1.9
2009-2012	1.1	1.1	1.4	1.4	1.5	1.5

Note. The mean values of monthly inflation outcomes. "Real time" indicates that inflation outcomes before January 2005 have been calculated according to an older method. The CPIF was introduced in June 2008, so the real-time analysis for the CPIF therefore shows how the CPIF should have developed had the measure been available before that date.

Table A1. Test of all individually-specific effects being the same (H0) or of there being differences (HA) P-value less than significance level rejects the null hypothesis



GDP	Unemployment	CPI CPIF		Repo rate	
0.89	0.09*	0.86	0.35	0.85	

Note. The periods studied are 1999-2012 for GDP, unemployment and the CPI, 2007-2012 for the repo rate and 2008-2012 for the CPIF. Some of the forecasts in the period 2008-2009 are for the CPIX rather than the CPIF. * denotes that the result is significant at the 10-per cent level.

Source: The Riksbank

Table A2. Test of whether the Riksbank is as good as another forecaster (H0) or significantly better or worse than another forecaster (HA)



P-value less than significance level rejects the null hypothesis

	GDP	Unemployment	СРІ	CPIF	Repo rate
FiD	0.47	0.42	0.57	0.48	0.41
HUI	0.24	0.87	0.96		
KI	0.29	0.36	0.73	0.95	0.52
LO	0.94	0.95	0.17	0.98	
Nordea	0.94	0.85	0.78	0.86	
SEB	0.99	0.04**	0.56	0.26	0.17
SHB	0.52	0.35	0.95	0.14	
SN	0.31	0.70	1.00	0.03**	
SWED	0.53	0.51	0.26	0.97	0.29
MarkEx					0.47

Note. The periods studied are 1999-2012 for GDP, unemployment and the CPI, 2007-2012 for the repo rate and 2008-2012 for the CPIF. Some of the forecasts in the period 2008-2009 are for the CPIX rather than the CPIF. ** denotes that the result is significant at the 5-per cent level. SEB makes significantly better forecasts of unemployment and SN significantly poorer forecasts of CPIF inflation. FiD = The Swedish Ministry of Finance, HUI = The Swedish Retail Institute, KI = The National Institute of Economic Research, LO = Swedish Trade Union Confederation, SHB = Svenska Handelsbanken, SN = The Confederation of Swedish Enterprise, SWED = Swedbank and MarkEx = Market expectations calculated on the basis of market pricing.

Source: The Riksbank