

Forecasts for the Norwegian economy 2011q4-2016q4

Forecasts are presented for the fourth quarter of 2011 until the end of 2016 of important macroeconomic variables, using The Norwegian Aggregate Model (NAM). Information about the model and a disclaimer are in the box at the back of the document. The forecasts are presented in Figures 1-4 below, each consisting of four graphs. Starting from upper left, going to upper right and then to lower left, and ending at lower right, the four panels of each Figure are referred to as a)-d).

Figure 1 shows NAM forecasts of four headline variables: CPI inflation, the rate of unemployment, the average nominal interest rate on loans in Norwegian banks, and real credit growth. The distance between the dashed (red) lines represents the approximate 70% prediction intervals. Hence, future realizations within the intervals are regarded by the model as more likely events than realizations outside the intervals.

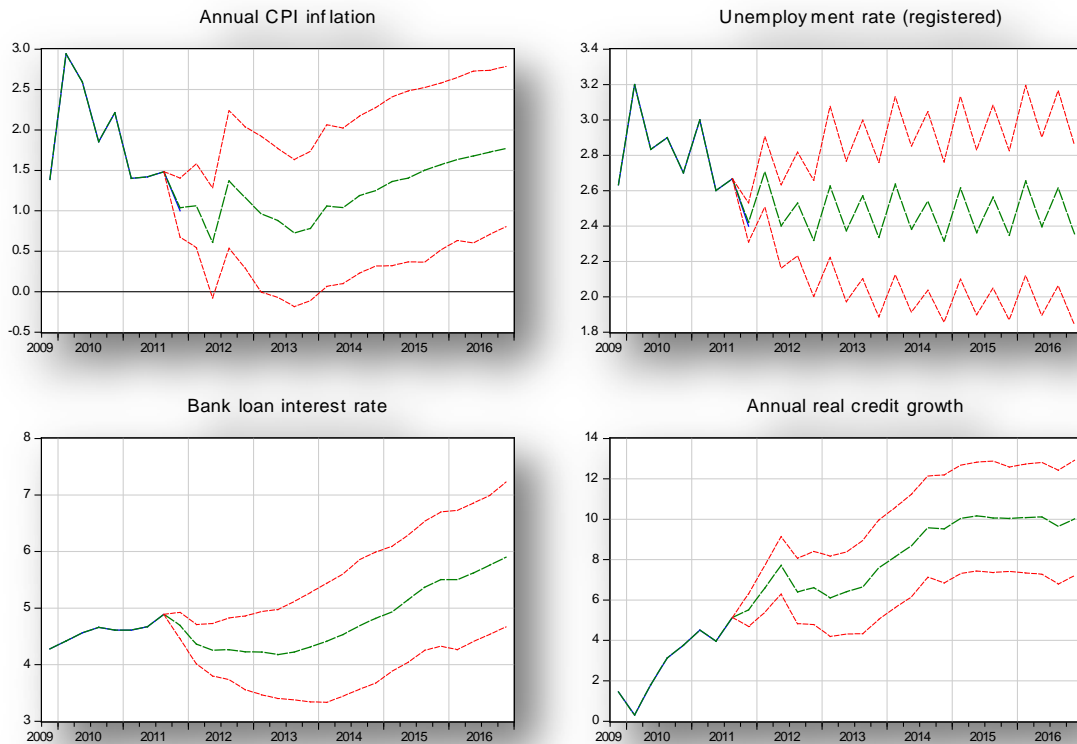


Figure 1: NAM forecasts for the period 2011q4-2016q4 with 68% prediction intervals (represented by the dotted lines). Data for the period 2007q1-2011q3 are included for reference.

CPI inflation, which was 1.5% in the third quarter of 2011, is forecasted fluctuate around 1 % in both 2012 and 2013, and then to increase very gradually. The rate of unemployment (panel b) is forecasted to stabilize with normal seasonal variation around at 2.5%, which is the current level. Panel c) shows the domestic interest rate, represented

by the average bank loan rate. The bank lending rate is forecasted to fall from nearly 5% to 4.2% in 2012. This reflects low interest rates abroad as well as a long forecast period with a low policy interest rate in Norway. According to the model, the interest paid on bank loans stays below 6% for the length of the forecast period. The final panel in Figure 1 displays real credit growth, which is projected to increase to a representative growth rate of roughly 10% towards the end of the period.

Figure 2 gives an overview over the development in inflation rates by showing inflation adjusted for energy and taxes (CPI-AET), so-called core inflation, in panel a), CPI inflation and wage cost growth in panels b) and c), and import price growth (panel d). Core inflation is forecasted to be low (sometimes below 1%) in 2012 and 2013. It might be noted that the upper confidence bound does not include the official inflation target of 2.5% in any of the quarters covered by this forecast round. The wage inflation is forecasted at 3.4% in 2012, which is a year with so called “large” (bi-annual) income settlement. The forecasted rate of inflation is even lower in 2013, but further out in the forecast horizon the forecasted wage inflation increases towards 4%. In the last graph in Figure 2 we see that import price inflation is forecasted to fall somewhat in the first part of 2012, which is part of the explanation for the low inflation rate. For the period as whole this factor in the inflation process is stabilizing at around 2%.

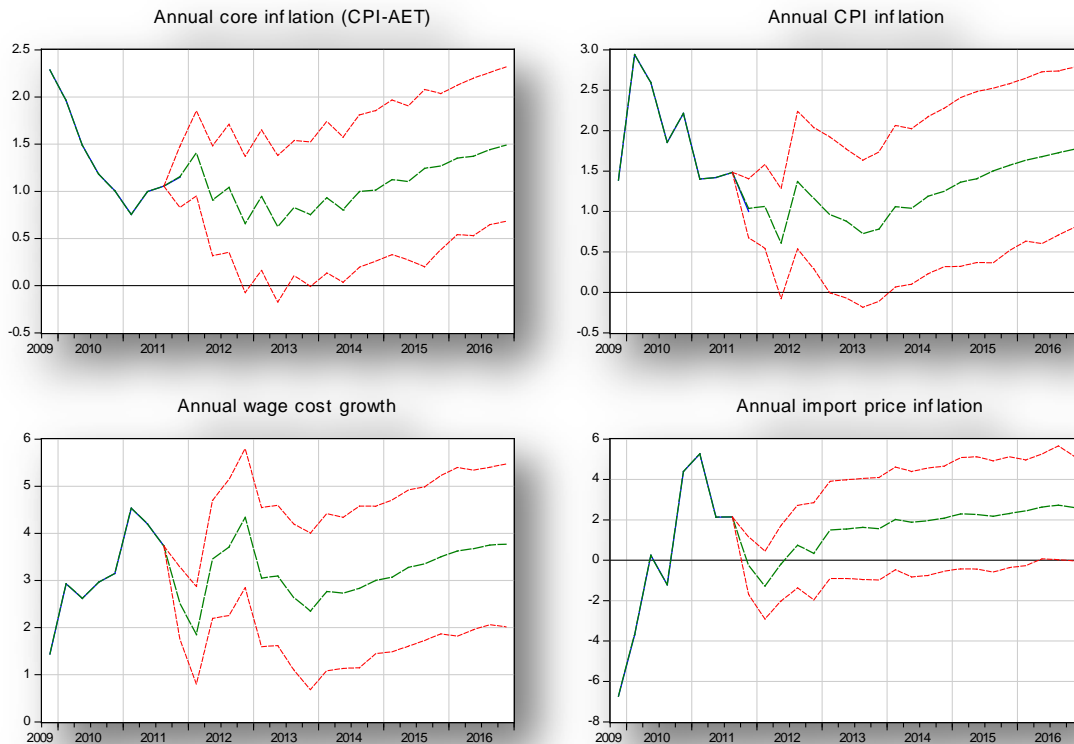


Figure 2. NAM forecasts for the period 2011q4-2016q4 with 68% prediction intervals (represented by the dotted lines).

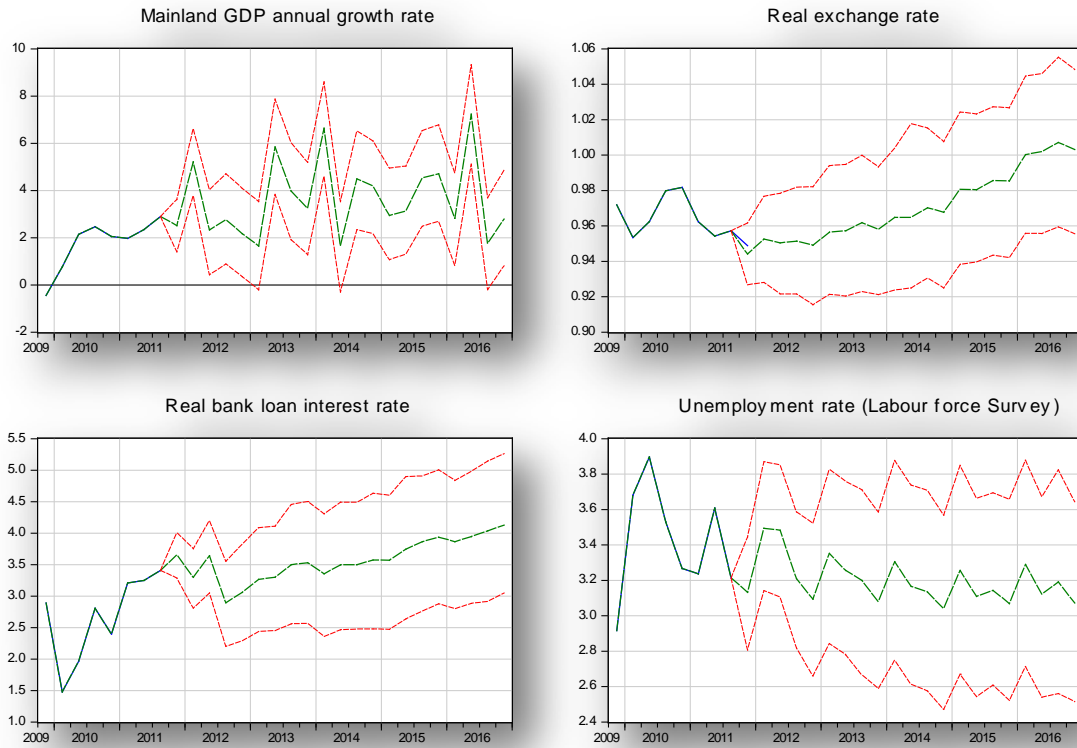


Figure 3. NAM forecasts for the period 2011q4-2016q4 with 68% prediction intervals (represented by the dotted lines).

Four important real variables are shown in Figure 3. Panel a) shows real GDP growth for the mainland economy. The forecast for 2012 is 3.1%, which, if it should occur, will be the highest growth rate since 2007. This forecast is based on no growth in 2013 in the indicator for demand for Norwegian exports. After the financial crisis in 2008 this indicator fell by 12 % and if a similar income crisis internationally should take place in 2012, the model's GDP forecast will turn out to be too optimistic. Panels b) and c) of Figure 3 show two important explanatory variables for mainland GDP: the real exchange rate and the domestic real interest rate. According to the evidence contained in NAM, the real currency appreciation after 2009 has pushed the real exchange rate below its equilibrium level. Therefore, the forecast is showing moderate real depreciation over the period (graph b). The forecasted real interest rate on bank loans stays below 4% for most of the period. GDP growth is a main factor behind the stabilization of the unemployment rate shown in Figure 1 above, and in graph d) in Figure 3 which contains the Labour Force Survey measure of the rate of unemployment.

Figure 4 takes a closer look at some financial variables: the depreciation of the nominal exchange rate, key interest rates, and domestic real credit growth. Panel a) shows the rate of nominal currency depreciation (the four quarter rate of change in the trade weighted nominal exchange rate). The international value of the krone is projected to appreciate

during the first part of 2012, but the strengthening of the currency is replaced by a period of depreciation later in the forecast period, reflecting an estimated “overvaluation”.

The money market interest rate (panel b) is forecasted to fall slightly early in 2012 and to stabilize at a level just below 3 % until 2014 when it starts to rise. This is due to the projected evolution of the sight deposit rate (Norges Bank’s monetary policy instrument) shown in panel c) over the same period, and increased liquidity. According to the model, the low interest rate level induces credit growth to continue to increase for most of the period (panel d). Note that GDP growth is also related to credit growth, which is captured by NAM in two important ways. First, the easing of credit supply affects the GDP growth rate positively. Second, higher GDP growth increases the demand for loans.

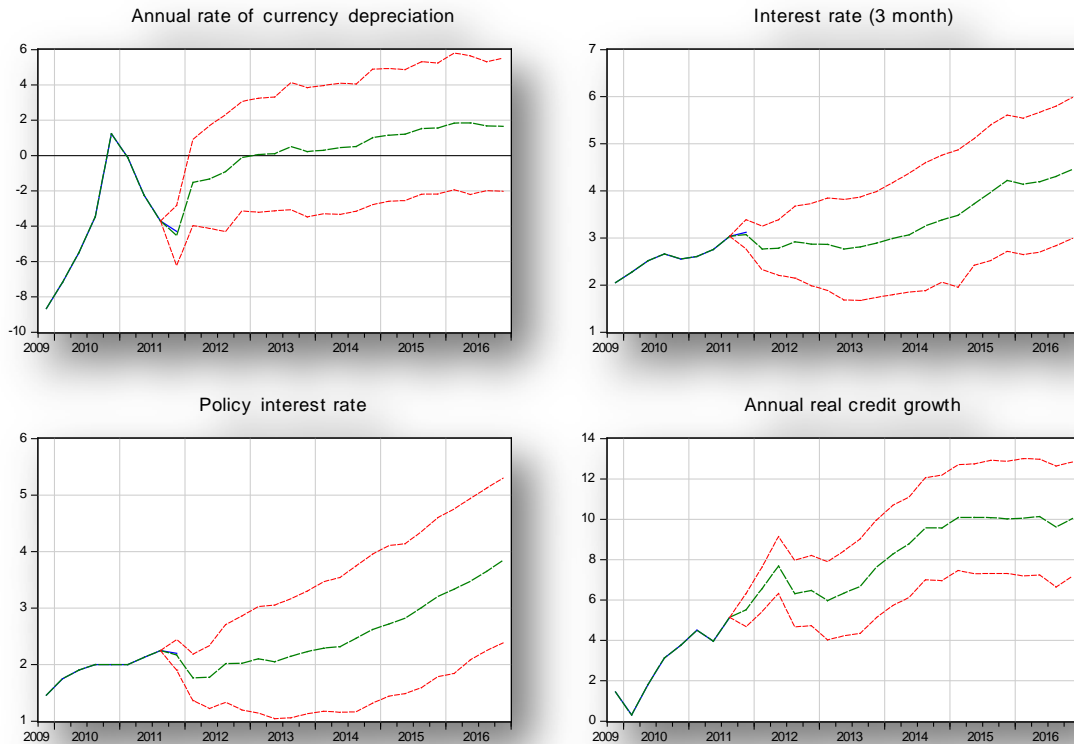


Figure 4. NAM forecasts for the period 2011q4-2016q4 with 68% prediction intervals (represented by the dotted lines).

References

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About NAM and disclaimer

Model developers are Gunnar Bårdsen (<http://www.svt.ntnu.no/iso/gunnar.bardsen>) and Ragnar Nymoen (<http://folk.uio.no/rnymoen/>).

Norwegian Aggregate Model (NAM) is an econometric model project which extends from the early econometric assessment of wage- and price-inflation in Nymoen (1991), further developed in Bårdsen, Fisher, and Nymoen (1998), Bårdsen and Fisher (1999), and the monetary transmission model of Bårdsen and Klovland (2000).

Earlier versions of the model are documented in Bårdsen and Nymoen (2001), Bårdsen, Jansen, and Nymoen (2003) Bårdsen, Eitrheim, Jansen, and Nymoen (2005) and Bårdsen and Nymoen(2009). NAM is used for both research purposes and for teaching. The macroeconomic data is from the model databases of Statistics Norway (KVARTS model) and Norges Bank (FPAS database).

Earlier forecasts can be found at

<http://www.svt.ntnu.no/iso/gunnar.bardsen/nam/forecasts/index.html>
<http://folk.uio.no/rnymoen/NAM/Forecasts.html>

Evaluations of past forecast performance can be found at

<http://www.svt.ntnu.no/iso/gunnar.bardsen/nam/evaluation/index.html>

NAM relies on data provided by the macroeconometric research unit in Statistics Norway, and on data from the macroeconomic database of The Norwegian Central Bank.

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