Forecasts of the Norwegian economy, 2007-2011.

- No wage explosion despite low unemployment in 2007.
- Sharp rise in interest rates ahead.
- Low unemployment not to last.

The econometric forecasting model NAM, see box at the back, is used to forecast central macroeconomic variables over the time period 2007-2011. The forecasts are quarterly and the first forecast period is 2007(1), while 2011(4) is the last period in this forecasting round.

The four panels of Figure 1 show NAM forecasts of four headline variables: CPI inflation, wage growth, the rate of unemployment and the average nominal interest rate on loans in Norwegian banks. 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 2007(1)-2011(4) with 68% prediction intervals (represented by the dotted lines). Data for the period 2005(1)-2006(4) are included for reference.
Panel a) of Figure 1 shows that the annual rate CPI inflation is predicted to drop markedly in 2007, a development which is mainly due to reduced electricity prices and falling import prices (see Figure 2).

The annual rate of wage growth, shown in panel b) of Figure 1, is jointly determined with inflation. Therefore, the rates of wage growth are predicted to be lower than the year before, both in the third and fourth quarter of 2007. The forecasted average for 2007 is 4.5%, which may seem to be low given that the rate of unemployment (panel c) of Figure 1) is forecasted to remain at around 2% for the whole of 2007. However, according to the model, the reduction in unemployment has already played a part in the sharp upturn in wage growth that took place during the second half of 2006. Notably, in these forecasts, the projected rate of unemployment shows an increase already in 2008, and it is back at the 2005 level in the last year of the forecast period. To a large extent, the forecasted increase in unemployment is associated with a gradual but substantial increase in domestic interest rates, represented by the average bank loan rate in panel d) of Figure 1.

Figure 2 puts gives a more complete view of the “nominal picture” by showing CPI inflation and wage growth together with inflation adjusted for energy and taxes (CPI-AET) and import price growth. Core inflation is forecasted to increase gradually, and to reach 1.5% in the first quarter of 2008. Panel d) of Figure 2 shows the marked fall in the rate of imported inflation in 2007, which to a large extent is due to a nominal exchange rate appreciation, see Figure 4 below.
Four important real variables are shown in Figure 3. Panel a) shows real GDP growth (for Mainland-Norway) which is 3% on average in 2007, and then remains just below 2% for the rest of the forecast horizon. In the NAM model, this development to a large extent accounts for the rise in unemployment, shown here by the Labour Force Survey (“AKU”) unemployment rate in panel d). The two remaining panels of Figure 3 show two important explanatory variables for mainland GDP: the real exchange rate and the domestic real interest rate. The forecasted real appreciation of the krone, and the increase in the real interest rate are both significant for the “cooling off” of both product and labour markets in the forecast period.

Figure 4 takes a closer look at the interest rate and (the market for) foreign exchange. Panel a) shows the rate of currency depreciation (the four quarter rate of change in the trade weighted nominal exchange rate). The international value of the krone is increasing in the period 2007-2009. The appreciation is caused by a rise in short-term interest rate (which is directly determined by interest rate decided by Norges Bank), and the resulting increase in the difference between domestic and foreign interest rates, see panel b) and c). In 2009, the interest rate difference is of the same sign and magnitude as in 2003. Panel d) shows one definition of the risk premium associated with kroner assets: the interest rate differential plus the expected rate of currency depreciation.
About NAM

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


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).

Specific versions of the model are currently operative for a) econometric forecasts of the Norwegian macroeconomy (NAM-EF, used here) and b) model based analysis of financial stability in Norway (NAM-FS).

Earlier forecasts and their evaluation are at http://folk.uio.no/rnymoen/NAM/Forecasts.html
References


Dynamics in Modelling Wages and Prices in the United Kingdom." *Empirical 

Bårdsen, Gunnar and Ragnar Nymoen. 2001. "Rente og Inflasjon (Interest Rate and 

Facts or Fallacies?" *Econometrics and Economic Theory in the 20th Century: The Ragnar 