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The Treasury forecasting record: an evaluation, by Chris Melliss (August 1997)

This paper examines the Treasury's forecast record from 1971 to 1992. For each year, four forecasts, published or unpublished, are included, and for each forecast there is a one-, two-, three-, four- and eight-step-ahead forecast. Nineteen key variables are considered. Summary statistics (mean error, mean absolute error, root mean square error and Theil's inequality coefficient) are presented for the whole period and for various subperiods. Tests of bias and inefficiency are based on realization-forecast regressions, augmented with various candidate variables to see whether forecasters used optimally the information set available to them at the time of the forecast. A further question is whether there are systematic relationships between forecast errors across variables, or between forecast errors on one variable and realizations of another, which might be exploited to improve forecast performance.

This summary focuses on the GDP and RPI forecasts, which are subject to more exhaustive examination than those of other variables. In the first subperiod (1971Q1-1979Q2) GDP forecasts were less accurate than in later periods, with an RMSE of four-quarter-ahead growth of 2.50 percentage points. This declined to 1.34 in the period 1979Q4-1985Q2, the high point in accuracy for GDP, then increased to 1.67 over 1985Q3-1992Q4. There is evidence that forecast errors might have been reduced had more account been taken of whether growth was accelerating or decelerating prior to the forecast, an effect which is most significant at longer horizons. GDP was more accurately forecast than any of its components, and the main reason for its deterioration after 1985 was the deterioration in the forecasts of consumers' expenditure.

RPI forecast performance has changed remarkably little according to the Theil statistic, whereas the MAE and RMSE at the various horizons show reductions over the three subperiods: this apparent conflict is explained by the declining level and variability of inflation over these three periods. There is a general tendency for the RPI forecasts to overpredict when inflation is falling and underpredict when it is rising. There is some evidence that small reductions in forecast errors might be obtained at short horizons by taking better account of the CBI capacity utilization measure and the errors in GDP forecasts, and at longer horizons by new house prices and the errors in consumers' expenditure forecasts, although these relationships are not stable.