NORTH-HOLLAND

Accuracy of OECD and IMF Projection

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This paper tests the accuracy of annual forecasts made by the OECD and the IMF of: real GDP growth rate, the GDP deflator, unemployment, and the trade balance. These projections are made for each OECD country, and cover a period of about 25 years. Neither the OECD nor the IMF succeed in forecasting cyclical turning points. But other than that, their projections appear fairly robust and certainly superior to those of a "naive" model.

Key Words: Unbiased forecast; Real GDP; DGP deflator.

1. INTRODUCTION

Every year and half-year the OECD provides projections of several economic variables, published in the OECD *Economic Outlook*, while the IMF provides similar projections published in the IMF *World Economic Outlook.* Because these forecasts are used extensively by governmental and nongovernmental organizations, it is useful to examine their accuracy. The assessment provided here differs in approach from earlier assessments,[1] but their purpose is similar. Because much previous work concentrated on the IMF projections (see footnote 1), the present effort is devoted mainly to those of the OECD. Whenever possible, a comparison is made between the two. But because of differences in years and countries of coverage (as contained in the IMF *publicly published*

[1] See: Smyth, D.J. and Ash, J.C.K. "Forecasting GDP, The Rate of Inflation and the Balance of Trade: The OECD Performance", *Economic Journal*, June 1975, pp. 361–364; Artis, M.J. "How Accurate Is the World Economic Outlook? A Post Mortem On Short-Term Forecasting at the IMF," IMF, *Staff Studies* for the World Economic Outlook, July 1988, pp. 1–48. Barrionuevo, J.M. "How Accurate Are the World Economic Outlook Projections?", *Staff Studies* for the World Economic Outlook, December 1993, pp. 28–45; and *Ibid*, May 1992; and DeMasi, P. "The Difficult Art of Economic Forecasting" *Finance and Development*, December 1996. See also the literature cited therein.

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version), the comparison is rather imperfect. Finally, the accuracy of projections will be compared with that of a "Naive" forecast. Of the several possible "Naive" forecasts, I have chosen to follow the book of Ecclesiastes (Chapter 1, verse 9):

> "That which has been is that which shall be
> And that which hath been done is that which shall be done
> And there is nothing new under the sun."

In other words, the Naive forecasts assumes that last year's development (e.g., growth rate or inflation) will be the forecast for the next year.

OECD forecasts are generated by "country desks," and are based on: models, the desk-official judgment, accounting checks, anticipated shocks, and the like. Each "forecasting round" lasts 3 months, and contains two to three iterations; it begins with exogenous assumptions about exchange rates and other variables. The OECD is restricted to using *governmental* projections of each respective public sector. Estimates are made of each country's domestic demand and import demand, and a global model is used to check the consistency of a country's imports with other countries' exports. That adds to the accuracy of the trade balances projections, as shown in Section 5 below. Consistency of interest rates between countries (and that of other variables) are also checked. Reliance is made on none-OECD sources such as the IMF and the World Bank. In particular, the OECD reads the IMF projections that appear earlier.

2. REAL GDP GROWTH RATES

For each year (t) the OECD *Economic Outlook* makes growth rate projections for every OECD member in the preceding year ($t - 1$), where the "forecasting round" is done during September–November; and in the middle of the year itself ($t - 1/2$), where the "forecasting round" is done during March–May. The actual growth rate is published in the following year ($t + 1$). For example, the projections for 1990 appear in 1989 and then in mid-1990, while the actual 1990 growth rates are published in 1991.

To estimate the accuracy of the projections, the actual growth rate (G_a) is regressed on the "year earlier" ($t - 1$) projection and separately on the midyear ($t - 1/2$) projection:

$$G_a = a + b\,P_{t-1} + \epsilon \qquad G_a = a + b\,P_{t-1/2} + \epsilon \tag{1}$$

A coefficient $b = 1$ and $a = 0$ would indicate an unbiased