

What is the track record of OECD Economic Projections ? **by Patrick Lenain¹**

Twice a year, the OECD publishes projections for the world economy in the context of the OECD Economic Outlook. These projections are based on a number of key assumptions regarding economic policy and the international environment. They are used to assess future trends in the world economy, evaluate outstanding risks and make recommendations on appropriate economic policies. To be helpful for the policy discussions, these projections attempt to have a good forecasting performance, although predictions can never be entirely accurate. The track record of these projections is periodically assessed both by the OECD and outside observers. A recent article published in the Sveriges Riksbank's Economic Review suggests that OECD projections have a lower forecasting performance than those published by the private sector. The present note shows that the method used by the authors of the Riksbank's article has several flaws, in particular regarding the Economic Outlook's publication dates. Once corrected, OECD projections appear to be better than average.

The OECD publishes economic projections in the context of the *OECD Economic Outlook* each Spring and Fall. The forecasting performance of these projections is assessed regularly both by the OECD (see Koutsogeorgopoulou, 2000) and by outside observers (see Batchelor, 2000).²

More recently, a study published by the Riksbank's monetary policy department evaluated the forecasting performance of major institutions (Blix et al., 2001). This study used a database covering the period 1991-2000 drawn from the private institute Consensus Forecast Inc. The countries included are the United States, Japan, France, Germany, Italy and Sweden. The study concludes that the OECD and the IMF have a lower forecasting performance than average and suggests that the prominent role often accorded to the projections of the two international organisations in the media may be unwarranted. The method that underpins these results has, however, a number of flaws which, if corrected, leads to significantly different results. In addition, it is based on a conception of the role of economic projections that is not shared by the OECD and its member countries.

1. OECD real GDP projections are better than average

The method used by Blix et al. (2001) to compare OECD forecasts with those of other institutions has several flaws. The most important one is the evaluation period chosen by the authors for the comparison of OECD forecasts with those of other institutions. Typically, the six-monthly *OECD Economic Outlook* involve three key dates: a) the cut-off date for information used in the projections (normally April and October) with respect to new economic data and economic policy announcements; b) the release of a *Preliminary Version* of the *Economic Outlook* (in May and November); and c) the publication of the printed version of the *Economic Outlook* (in June and December). The Riksbank authors have opted for the latter date.

Instead, we believe that the release of the *Preliminary Edition* is the relevant date for comparing with other forecasts. This is when the projections are provided to the press and made available to the public. Hence, OECD projections should be compared with forecasts published in May and November, and not with those published in June and December as done by the Riskbank's authors.

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² A response from the part of the OECD to the study by Professor Batchelor can be found at the following web link www.oecd.org/media/release/nw00-105a.htm.

The OECD Secretariat has obtained from Riksbank the data set used for this exercise, and has compared the performance of its forecasts for real GDP with those published by other institutions in May and November of each year. The results of this reassessment are shown in the attached technical appendix, together with the initial conclusions of Riksbank.³ The table in appendix displays a better performance of OECD projections than estimated by the above-mentioned article. OECD forecasts compare favourably with those of other institutions. On average, the OECD has produced better performing forecasts for real GDP growth than 58 per cent of other forecasters.

These results are based on a method that is as close as possible to the Riskbank's in order to ensure comparability. There are however several flaws in this method that limit the significance of the results. The size of the sample is small for a number of countries because the filters applied to the data set eliminate a large number of institutions that have provided projections only irregularly. In such cases, there are very few degrees of freedom and, therefore, the results may not be statistically significant. Second, the method used for ranking the forecasting performance neglects the actual size of the root mean square errors (RMSE). Some institutions may be ranked as "better" or "worse" than others due to very small differences in the forecasting error. Again, small forecasting errors are not statistically relevant.

Finally, for countries member of the European Union, the authors compare projections made under the previous system of national accounts with outcomes measured under the new system (ESA95). This comparison of projections and outcomes under different national account methodologies is fundamentally flawed.

2. OECD projections are aimed at contributing usefully to policy recommendations

Even though OECD projections have generally performed well, they serve a different purpose from those of the private sector. As the Riksbank's article acknowledges, the objective of the OECD is to discuss risks and deliver policy messages that are deemed to be useful to policymakers in member countries.

For this purpose, the Secretariat draws policy conclusions from its projections, analyses the range of risks involved in the short-term and provides alternative scenarios. These policy-oriented exercises are discussed at length in various OECD Committees and are generally considered to lead to fruitful exchanges of views between officials from member governments.

To the extent that they affect policies, these exchanges may actually affect the eventual economic outcome. In this respect, the role performed by the OECD *projections* differs from that of private *forecasts*. The mandate given to the OECD is to prepare projections based on *announced* economic policies, while private forecasts usually attempt to predict how policymakers will change their stance based on future developments. In addition, the OECD does not attempt to predict exchange rates, while private forecasters make such projections.

³ The method used is exactly the same as used by the Riksbank's authors, except for the change of date mentioned. The data on actual outcomes for real GDP growth were also brought up to date, as the authors used preliminary estimates for recent years.

References

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OECD Economic Projections: Response to a City University Business School Study,
<http://www1.oecd.org/media/release/nw00-105a.htm>

Technical appendix

The table below provides a quantitative assessment of the forecasting performance of the OECD Economic Outlook's projections. Like Blix et al., it is based on a data set consisting of private sector forecasts (drawn from Consensus Forecast Inc.) and projections made by the OECD and the IMF. The data comprises forecasts made between 1991 and 2000. The data set is made of "current year projections" (all forecasts for a particular calendar year that are made less than 12 months left to go for that year) and "next year forecasts" (for the coming 12-24 months). For example, the Preliminary Edition of *Economic Outlook No.70* released in November 2001 had both current year projections (i.e. for 2001) and next year projections (i.e. for 2002). The OECD projections are considered to have been released in May and November of each year, and are compared to those of institutions having released forecasts in the same months. A filter is applied however to eliminate institutions with a very limited track record, as these may distort the results. For each evaluation period (May or November), the filter excludes all institutions that had less than five forecasts in this period.

Once the filter has been applied, the root mean square error (RMSE) is calculated as follows :

$$RMSE = \left[\sum_{t=1}^T (A_t - F_t)^2 / T \right]^{1/2}$$

where A is the actual outcome, F is the forecast or projection, T is the number of periods. After having calculated the RMSE, the ranking of the OECD is obtained based on the average relative rank over all evaluation periods. The best projection is ranked 1, the next 2 and so on. The average ranking of the OECD is then obtained over all periods. The average RMSE of the OECD is also calculated, and finally the percentage of institutions that have a stronger performance than the OECD is determined. The results are summarised in the table below.

Performance of OECD real GDP growth forecasts

	Riksbank Study (Economic Outlook in June & Dec.)				OECD calculations (Economic Outlook in May & Nov.)			
	Average ranking	No. of Institutions	OECD RMSE	Percent better *	Average ranking	No. of Institutions	OECD RMSE	Percent better *
United States	23.3	38	1.21	74%	17.3	34	1.15	52%
Japan	10.0	38	1.70	50%	5.8	21	1.30	27%
France	11.8	26	0.93	54%	6.0	22	0.90	27%
Germany	15.0	34	1.11	56%	15.0	31	1.08	47%
Italy	9.8	19	0.87	63%	7.3	17	0.88	40%
Sweden	11.0	16	1.22	88%	4.5	8	1.25	58%
Mean				64%				42%

Source: Riksbank and OECD.

* Numbers in this column provide the share of institutions that perform on average better than the OECD. A figure of 100% would mean that all other forecasters perform better than the OECD, while a figure of 0% would imply that the OECD has better forecasts than all other institutions.