

Forecasting and Forecast Evaluation at EU IFIs

A Q&A summary of a survey

Why do EU IFIs engage in preparing or evaluating the official government forecasts for the macroeconomy?

Preparing the official forecast is a key element of the mandate of some of the IFIs. For example, it is central to the operations of the Dutch CPB, the UK OBR or the Slovenian IMAD.

Most EU IFIs have a mandate that stems from EU law to provide a thorough review of the government's official projections on which budgets are based. Should the IFI not endorse the figures put forward by the government, the authorities are expected to revise their forecast.

In the case of some IFIs who neither produce or officially endorse government projections, macroeconomic forecasting is used as a part of a broader analytical toolkit they use to assess and predict the state of public finances in their country.

What is the benchmark modelling approach in the IFI community?

IFIs that have invested considerable resources into forecasting tend to rely on a suite of models centered around a main and usually large macroeconomic model. This class of models divides the economy into blocks such as households, firms and government, and model their behaviour in time using equations estimated (individually) on relevant historical data.

To evaluate events with a significant impact on the domestic economy such that originate in a sector not captured in detail in the main model, supplementary models are used. This could be a model of foreign economies or of sectors such as housing. Predictions from such sub-models are then fed into the main macroeconomic model as external assumptions or shocks.

This already suggests that forecasting or even proper evaluation of forecasts is a costly exercise. Given the diversity of the resource base among EU IFIs, not all institutions can afford to engage in such modelling work. Those institutions tend to rely on other institutions' forecasts when conducting their assessment. The figure below provides an approximate classification of EU IFIs according to their approach to forecasting and forecast evaluation.

How do the EU IFIs interact with governments when preparing their fiscal forecast?

To prepare a fiscal forecast, IFIs need key input from governments about the measures they are planning to implement. On the other hand, government officials need to have a good understanding of how IFIs see the state of the economy and public finances. The result is a close interaction, and it is important to have the rules of that interaction clearly set out.

In the Netherlands, for example, the CPB prepares the projection of the economy and of the budget under unchanged policies which it presents to policy makers. On the basis of that forecast, they formulate policies which the CPB evaluates. The result of an interaction which may have several rounds is a medium-term budgetary plan spanning the entire electoral cycle expressed in terms of expenditure ceilings.

In the UK, government officials use the OBR macroeconomic forecast as a basis for their fiscal forecast. That forecast is subjected to intense scrutiny by OBR staff, and then used to construct projections of fiscal aggregates relevant for the assessment of compliance with fiscal rules.

How do the IFIs evaluate if the official macroeconomic forecast is realistic?

IFIs use a variety of approaches depending on their mandate and resources. Figure 1 provides a rough classification along a continuum.

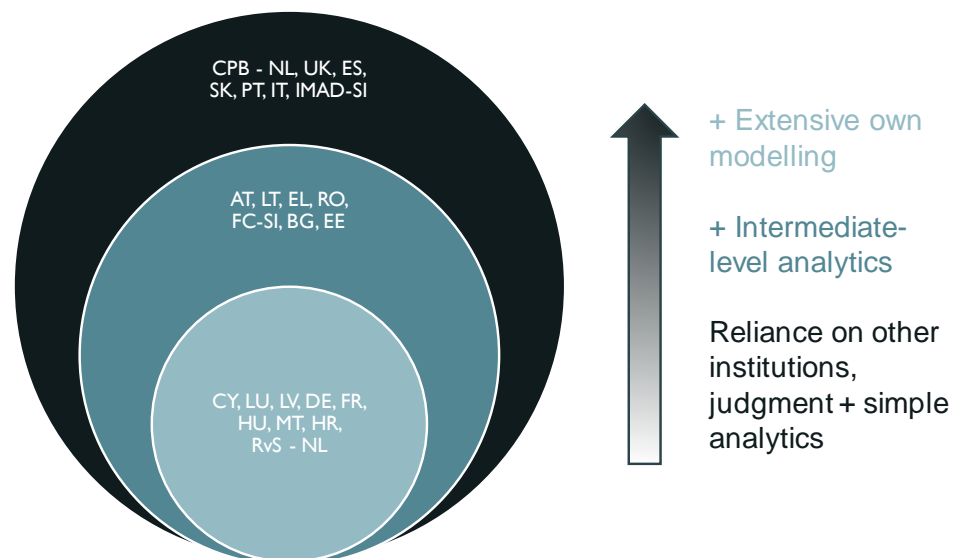


Figure: Forecasting and forecast evaluation practices among EU IFIs

Some institutions apply more or less sophisticated statistical techniques to evaluate the uncertainty surrounding macroeconomic and fiscal developments, and to locate the position of the central estimate of the government relative to range defined by measured uncertainty.

In Portugal, for example, the CFP uses time-weighting of other institutions' forecasts when producing forecast distributions with more recent forecasts receiving a higher weight. They also produce asymmetric fan charts using different vintages of the government's forecasts from the last 22 years.

The Italian UPB and the Greek HIFC use their own forecast as a benchmark and other institutions' forecasts to set upper and lower bounds for the endorsable range.

The Lithuanian IFI defines its endorsable range using the central bank's forecast and standard errors from the period 2011-2017. The endorsable range is constructed for a set of macroeconomic variables most relevant from the perspective of fiscal planning, and the macroeconomic forecast is not endorsed if the government's projection falls outside the endorsable range for one of the variables.

How do IFIs check if the budgetary figures are plausible?

Again, the approaches vary, largely depending on mandate and capacities. Most IFIs conduct aggregate analyses: simple spreadsheet-based forecasting of main tax bases and effective rates, and applying some empirically identified elasticities.

In Italy, the macroeconomic model incorporates a detailed fiscal block which allows an automatic consistency check between the macro and fiscal forecasts.

The Austrian Fiskalrat, the Slovak CBR and the Spanish AIREF monitor the expenditure side of the budget at a high degree of disaggregation, and work with individual-level data to evaluate policy measures, particularly in the area of taxes and benefits.

Is the review process of the official macroeconomic forecast formalized?

The process of formally reviewing macroeconomic forecasts usually lasts from around two weeks to over a month. In most countries, the process is informal or relies on general inter-institutional procedures established for a different purpose (e.g. access to data).

The process is detailed and formalized in Memoranda of Understanding (MoU) in Italy and Portugal. The memoranda set out clear deadlines for the submission of various partial results for all parties involved (such as a no-policy-change scenario, definition of measures). They also specify the meetings that should take place between stakeholders, and when the final forecasts, and the opinion of the IFI are to be sent to the parliament.

There are detailed MoUs in place in Estonia, Latvia and Lithuania as well, and they explicitly consider what happens in the case of non-endorsement by the IFI.

Do such procedures work in practice?

The experience, particularly with non-endorsement of forecasts is limited at this stage. IFIs, particularly those operating without detailed MoUs covering this area, operate under very ambitious timetables that may prevent them from exercising a proper scrutiny of government figures. Also, the process very often implicitly assumes that endorsement of forecasts will happen, and no time is allocated for a follow-up dialogue and revisions. In reality then, the IFIs' suggestions may be incorporated with a year's lag, if at all.

On the other hand, an example of a good functioning of the system is the experience with non-endorsement of the official forecast by the IFI in Italy in the autumn of 2016. The formal endorsement process then culminated in a discussion in the relevant committee of the parliament and a subsequent revision of the official forecast.