



# **Methodological scheme of the report on macroeconomic forecasts included in the Draft Stability Programme Update of the Kingdom of Spain 2015 - 2018**

The Organic Law creating AIReF disposes that macroeconomic forecasts included in the draft Stability Programme Update (SPU) should take into account a report issued by the AIReF and will state if such forecasts have been endorsed by it.

The government should previously request to the Independent Authority for Fiscal Responsibility to issue the report, which shall be taken into account in order to draw up the final forecasts to be included in their draft SPU.

The preparation of the report requires prior submission of relevant documents.

As the law does not specify a deadline for the publication of the report, the general provision is that all the relevant information should be provided by the authorities 10 days before the intended date of publication of the report. Nevertheless, the term of 10 days may be reduced for urgency reasons. In any case, the Administration should submit the documentation needed for the preparation of the report within a reasonable term. The closing date for the information contained in this report will be 5 April.

The mission of AIReF, the Independent Authority for Fiscal Responsibility, is to ensure strict compliance with the principles of budgetary stability and financial sustainability contained in article 135 of the Spanish Constitution.

**AIReF:**

José Abascal, 2, 2nd floor. 28003 Madrid. Tel. +34 910 100 742

E-mail: [Info@airef.es](mailto:Info@airef.es).

Website: [www.airef.es](http://www.airef.es)

On 15 April, AIReF will publish the main conclusions of the report on the forecasts included in the draft SPU submitted by the government, stating whether it endorses them, and may also offer recommendations on this draft. The full report shall be submitted to the government on the same day and will be released together with the approved Stability Programme Update on 24 April.

This resolution of the President of AIReF defines and makes public the specific aspects to evaluate in the report, its methodology and the objective criteria used for evaluation, as required by the Statute of AIReF.

## Content of the report

The Stability Programme Update (SPU) is the key document for the medium-term planning of fiscal policy of member states of the European Union and for the coordination of their economic policies. Its content and form should comply with the provisions in the Stability and Growth Pact Code of Conduct.

The report of the AIReF on the draft SPU will consist of two central parts, dealing respectively with the macroeconomic scenario and the sensitivity analysis of the baseline scenario to possible risks and alternative scenarios. An introduction to the report will evaluate the available information and the limitations to the scope of the analysis entailed by its possible gaps. The final part will summarize the assessment following the evaluation criteria specified further below, and will also present its conclusions and recommendations.

The analysis of the macroeconomic scenario will include the examination of the basic assumptions (interest and exchange rates, oil prices, growth of foreign markets of the Spanish economy, etc.) and main policy measures already adopted or contemplated in the SPU. It will focus on two areas: first, GDP projections, together with domestic and external demand and its components, labor market developments and prices; and second, financial imbalances: government deficits and debt, financial imbalances of the private sector, as well as the external balance of the Spanish economy and its net international investment position.

The sensitivity analysis of the baseline scenario will consider not only alternative assumptions for interest and exchange rates, but also the implications of the risks identified in the previous analysis of the macroeconomic environment and the fiscal projections.

## **Methodology**

The methodology of the report will take as given the exogenous assumptions and policies included in the baseline scenario of the draft SPU, using independent models and analytical tools developed by AIReF to produce projections of all the key variables, and integrate them into a globally consistent accounting framework. When using these instruments, the report will also review the available information on the methodologies, assumptions and relevant parameters underpinning the government projections. The values for the endogenous variables projected by AIReF models will be compared, in a probabilistic approach which takes into account the uncertainty associated to the paths of the different variables, with the government projections. The report will also consider alternative assumptions for the exogenous variables and for the impact of policies contemplated in the SPU, deriving conclusions with respect to the likelihood of attaining the budgetary stability and financial sustainability objectives, as well as the main risks associated to the different scenarios.

The methodology used by AIReF combines three types of instruments: macroeconomic models to analyze the interaction of fiscal and macroeconomic variables, satellite models for projecting revenues, expenditures and debt dynamics, and an accounting algorithms to preserve consistency of the figures projected.

Different macroeconomic models are used depending on the time horizon of the analysis. In the very short-term of two or three quarters, projections of GDP, demand components, employment, etc. rely heavily on dynamic factor models that exploit the latest available information. For a time horizon of six to eight quarters, the preferred model is a Bayesian VAR, which incorporates the dynamic interaction of the main macroeconomic and fiscal variables (real GDP, GDP deflator, employment, credit and taxes and social contributions net of social benefits). In the longer horizon, a model of equations with error correction mechanisms is used to project the annual paths of adjustment of the most important variables.

Satellite models are normally single equation, autonomous models, used to project separately tax revenue (personal and corporate income taxes, VAT, excise taxes, etc.), social security contributions, government consumption and investment, pensions, interest payments, and debt dynamics.

Accounting algorithms allow integrating information from different sources, exogenous variables, model projections, and expert assessments, into a consistent set of accounts which presents the synthesis of the macroeconomic and fiscal scenario.

## Evaluation criteria

The evaluation criteria are those laid out in EU regulations, in particular in the provisions of the [COUNCIL DIRECTIVE 2011/85/EU](#) of 8 November 2011 on the requirements for budgetary frameworks of the Member States and in the Stability and Growth Pact Code of Conduct.

First, the report will include an evaluation of whether or not there has been an important bias in the macroeconomic forecasts during a minimum period of four years, in accordance with article 4.6 of this Directive, which stipulates that “macroeconomic and budgetary forecasts for fiscal planning shall be subject to regular, unbiased and comprehensive evaluation based on objective criteria, including ex post evaluation.” Hence, the report has to include an ex post evaluation of the forecasts provided by the government in the SPU for the last four years, at least, in order to identify whether there has been a significant bias. To assess whether there has been a significant bias in previous forecasts, government forecasts for the main macroeconomic variables will be compared, on the one side, with those of other independent institutions private and public –notably with those of the Banco de España and the European Commission--, and on the other, with the observed outcomes. In this way, it will be possible to verify whether government forecasts were biased with respect to those of other institutions and if, ex post, the possible bias produced an underestimation or overestimation of the actual outcome. The bias will be deemed significant if it has been large (i.e., if the government forecast falls outside the interquartile range of available projections), systematic (repeated in consecutive years), and unjustified by a better approximation to the observed outcomes.

Second, the report will evaluate if forecasts are compliant with the above mentioned Directive, and will assess, in particular, the following requirements which forecasts for fiscal planning should satisfy:

- be realistic and use the most up-to-date information
- be based on the most likely macro-fiscal scenario or on a more prudent scenario
- macroeconomic and budgetary forecasts shall be compared with the most up-dated forecasts of the Commission and, if appropriate, those of other independent bodies. Significant differences between the chosen macro-fiscal scenario and the Commission’s forecast shall be described with reasoning, in particular if the level or growth of variables in external assumptions departs significantly from the values contained in the Commission’s forecasts.

- include the methodologies, assumptions and relevant parameters underpinning the forecasts.

More specifically, the evaluation will examine whether the SPU complies, at least, with the following provisions of the Stability and Growth Pact Code of Conduct:

1. On the macroeconomic scenario:

- Use the “common external assumptions” on the main extra-EU variables used by the Commission, or present a sensitivity analysis based on those assumptions.
- The SPU should be based on the most likely macro-fiscal scenario or on a more prudent scenario.
- Define a scenario at unchanged policies<sup>1</sup> and make public the involved assumptions, methodologies and relevant parameters.
- Analyze the cyclical position of the economy and the sources of potential growth
- Analyze balances by sectors and the external balance
- Consider the upside and downside risks to the outlook.

2. On the sensitivity analysis:

- Include comprehensive sensitivity analyses and/or develop alternative scenarios
- Provide an analysis of how changes in the main economic assumptions would affect the budgetary and debt position and indicate the underlying assumptions about how revenues and expenditures are projected to react to variations in economic variables. This should include the impact of different interest rate assumptions.



PRESIDENT  
INDEPENDENT AUTHORITY  
FOR FISCAL RESPONSIBILITY

José Luis Escrivá Belmonte

---

<sup>1</sup> As implied by the Commission services for the purpose of forecasting, the 'no-policy change' assumption involves the extrapolation of revenue and expenditure trends and the inclusion of measures that are known in sufficient detail. In particular, only measures that have been specified and committed to by governments will be taken into account.