Independent Authority for Fiscal Responsibility

Report

7 October 2016

Report on the Macroeconomic Forecasts in the Draft Budgetary Plan Project for 2017

Executive summary:

AIReF endorses the Government's forecasts for the macroeconomic scenario as likely. AIReF considers the Government's overall macroeconomic scenario to be plausible.

The risks deriving from the exterior environment are balanced, but there is great uncertainty surrounding the magnitude of the restrictive effects of the fiscal policy required to consolidate Spain's public finances.

AIReF recommends that the necessary measures are adopted and made public in order to correct the significant biases observed in the forecasts of government consumption over the last four years.

AIReF suggests three good practices for the Government to consider:

1. Integrating key forecasting elements in a simplified national accounting framework.
2. Offering a broader range of information on the relevant methodologies, assumptions and parameters for sustaining forecasts.
3. Ensuring at all times internal consistency among annual and quarterly National Accounting estimates.

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.

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1. Introduction

The macroeconomic forecasts incorporated in the Public Administrations' draft budgets must be accompanied by a report by the Authority indicating their endorsement by the latter as provided for in the Organic Law creating the AIReF. This report fulfils this mandate, within ten days of submission of the information, as set forth in article 9.1 on the AIReF Statutes. The report comprises two main sections, one providing a valuation of the budgetary forecasts from 2013 to 2016 (Section 2) and another giving a detailed analysis of the forecasts for 2017 (Section 3). Section 4 gives an overview of the findings and conclusions drawn from this analysis, and the final Section contains the endorsement of the forecasts together with a specific recommendation and three suggestions for good practices.

The macroeconomic forecasts for preceding years are examined, in order to gauge whether past errors suffered from significant bias[1]. To this end, Government forecasts for the main macroeconomic variables are compared against those of other private and public independent institutions, and also against the observed results. The criteria applied in the comparison between the Government's forecasts and those drafted by others are the same as in previous years[2]. A bias in the forecasts for the range of macroeconomic variables is deemed significant if it is systematic –that is, repeated in consecutive years–,large and not justified by a better approximation to the observed results. No analysis is made, however, of the possible reasons for these biases. The bias in a variable is defined as the difference between two forecasts for that variable. In assessing whether the biases in Government forecasts for the range of variables that define its macroeconomic scenario have been significant in recent years, the Government's initial forecasts (G) are compared against private institutions' most recent forecasts published in the consensus forecast (C) and against the observed results (R), or with the Government's most updated forecast if the results have not yet been drawn. A bias is large when the Government forecast falls without the interquartile range[3] of the distribution among the panel of forecasts. Government forecasts' deviation from the consensus forecast will be deemed unjustified when the absolute forecast error is larger than that of the consensus forecast; that is, if |G-R|>|C-R|.

[1] Article 14.4 of the Organic Law creating the AIReF requires this report to include an assessment of whether the macroeconomic forecasts display any considerable bias over a period of four consecutive years, according to the COUNCIL DIRECTIVE 2011/85/EU, of 8 November 2011, on the requirements applicable to member States' budget frameworks.

[2] These criteria can be viewed in the latest report published: Report on the Macroeconomic Forecasts in the Budget Plan Project for 2016

[3] The interquartile range is a dispersion measure defined as the difference between the first and third quartile, thus encompassing 50% of observations close to the mean.

The aim of the detailed analysis of the Spanish Government's forecasts for 2017 is to assess whether they are realistic and whether they define the most likely macroeconomic scenario or one that is more prudent[4]. First of all, therefore, the forecasts are checked for any bias, by comparing them against those of other institutions, as in previous years. The methods, parameters and assumptions underpinning the forecasts are revised, as far as the available information allows, and a check is made to determine whether the most updated information was used for the forecasts.

An analysis is conducted to establish how realistic the forecasts for each variable are, using models that establish a statistical relationship between the different variables and with behavioural equation models that relate each variable to their fundamental determinants[5]. These partial results for the probability of the forecast made for each variable are subsequently integrated into a macroeconomic scenario that guarantees the internal consistency of the set of related variables in national accounts, as well as the risks that exist in that scenario.

The overall assessment of the results from these comparative checks concludes whether or not the macro economic scenario contained in the Spanish government's Draft Budgetary Plan for 2017 is deemed the most likely or a more prudent scenario. A more prudent scenario would contemplate the materialisation of some of the risks identified in the baseline scenario that are detrimental to economic activity and the correction of existing imbalances.

[4]Article 14.3 of the Organic Law creating the AIReF requires this report to include an assessment of the forecasts' compliance with COUNCIL DIRECTIVE 2011/85/EU, of 8 November 2011, on the requirements applicable to member States' budget frameworks. This directive, in article 4.1, requires that budgetary planning be based on the most likely macro-budgeting scenario or a more cautious scenario.
[5]The models used and their application to the analysis of forecasts are described in the annex on methodology to previous years' reports. A simplified version of these models, set out on spreadsheets, is published on the AIReF website alongside this report, to enable interested readers to become familiar with the models and to perform their own forecasting simulations under alternative assumptions.

2. Macroeconomic forecasts for the period 2013 to 2016

In comparing different forecasts it is essential to take into account the information available at the time of drafting each forecast and the specific assumptions made in each case, given that these two elements may have a considerable effect on the differences observed in the forecasts. Understanding the reasons for these differences is key to assessing the presence of biases in the government's forecasts ex ante, that is, at the time they were made.

The forecasts for the years 2013-2014 were analysed in the report on macroeconomic forecasts in the 2016 General Government Budget. In this section the forecasts for 2015 and 2016 are examined, and an assessment is given of the biases ex post of those forecasts, summarised in table 1. The government's forecasts for 2017 are studied in the following section, in the light of the information available to date.

Table 1. ASSESSMENT OF FORECAST BIAS

VARIABLE	BIAS	Previous year forecasts			
		2013	2014	2015	2016
GDP	Large	SÍ	NO	NO	SÍ
	Unjustified	SÍ	-	-	NO
Private consumption	Large bias	SÍ	NO	SÍ	NO
	Unjustified	SÍ	-	NO	-
Public consumption	Large bias	SÍ	SÍ	SÍ	SÍ
	Unjustified	SÍ	SÍ	SÍ	SÍ
GFCF	Large bias	SÍ	SÍ	SÍ	NO
	Unjustified	NO	NO	NO	-
Exports	Large bias	SÍ	NO	NO	NO
	Unjustified	SÍ	-	-	-
Imports	Large bias	SÍ	NO	NO	NO
	Unjustified	NO	-	-	-
Unemployment	Large bias	SÍ	NO	SÍ	SÍ
	Unjustified	SÍ	-	NO	NO
Deficit-to-PIB	Large bias	SÍ	NO	SÍ	SÍ
	Unjustified	SÍ	-	SÍ	SÍ

The government's macroeconomic scenario forecasts for 2015 were regarded as realistic overall, bearing in mind the methodological peculiarity that the forecast contraction in government consumption is of a normative nature. The initial upside bias in the government's forecast for real growth in gross fixed capital formation was also large and was linked to uncertainty over the strength of cyclical upturn in the construction sector and slowdown in investment in capital equipment. Biases in other variables were smaller and their impact on GDP growth was approximately neutral. In domestic demand, risks were slightly downward in private consumption and gross fixed capital formation, but upward in public consumption. External demand showed upward risks, in both exports and imports, with a net effect that was approximately neutral. The risks to real GDP growth and employment were judged to be balanced.

AIReF endorsed as probable the Government's macroeconomic scenario forecasts for 2015, finding the Government's macroeconomic scenario to be likely overall, although the composition of growth may differ from that expected. Furthermore, considerable risks of deviation were observed in the expansionary assumptions adopted and in the implementation of the expenditure restraint policies designed. The above mentioned risks to the macroeconomic scenario would materialise as upward growth in real GDP and job creation in the short term, but downward in the longer term.

Economic growth and employment in 2015 developed in line with the Government's forecasts and risks of downward deviation in the expansionary assumptions adopted failed materialise at all. The risk of less restraint on public expenditure, however, did materialise, which is why the large bias in the forecast for this variable was found to be unjustified. In contrast, gross fixed capital formation increased below expectations, but the upward bias in budget forecasts was not found to be unjustified. The unemployment rate, as well as inflation and external balance, have performed as per Government forecasts, although both exports and imports showed less dynamism than expected. Corrections to the imbalance in Government accounts continued, though the public deficit ratio with respect to GDP exceeded by eight tenths of a percentage point the Government target for 2015, whereas the Government debt to GDP ratio dropped slightly for the first time since the onset of the crisis in 2007, reaching very close to 100%. The overall national net lending balance surpassed Government forecasts, both thanks to lower oil prices and lower financial costs for the deficit in the income balance, allowing the private sector to further its financial restructuring process.

The Government brought forward to July 2015 the presentation of the State General Budget for 2016, whose economic forecasts were endorsed by AIReF. Nevertheless, it was again pointed out that those forecasts were subject to risks from insufficient public consumption restraint and, as a consequence, the public deficit targets were regarded as difficult to achieve.

The public consumption forecasts, therefore, had large downward biases that have turned out ex post to be unjustified, now that the Government foresees an upturn for this variable of 1% in 2016, as opposed to the initially envisaged 0.3%.

Real GDP growth forecasts for 2016 were 3%, at the upper end of the range of private forecasts on the FUNCAS panel and of public institutions, with an upward bias of three tenths of a percentage point above the consensus, outside of the interquartile range that was, consequently, according to AIReF's methodology, qualified as a large bias. However, this forecast fell within the confidence interval of one standard deviation from the central forecasts in the models employed by AIReF, and was therefore not regarded as unlikely and was duly endorsed. Although the Government has subsequently made downward adjustments to its forecasts (to 2.7% in the Stability Programme Update and to 2.9% more recently), it is highly probable that GDP growth in 2016 will be greater than 3%, rendering this initial bias justified ex post.

Economic growth has been supported mainly by private consumption. For 2016, the Government envisaged a minor slowdown in private consumption (to 3%), smaller than the figure given in private institutions' consensus (2.8%) and than the forecasts by the Bank of Spain (2.3%), the European Commission (2.8%) and the OECD (2.6%). As in the case of GDP, the comparison with the models used by AIReF situated the Government's forecast close to the middle of the confidence interval, for which reason it was validated, and all subsequent forecasts have been upwardly adjusted to over 3.3%.

The Government's public consumption forecast for 2016 incorporated a normative element that, as in the preceding years, could not be regarded as the "most likely hypothesis". Throughout the three preceding years, initial forecasts for public consumption contained in the draft General Government budget were characterised by a restrictive bias that was maintained –albeit to a lesser degree– in the draft budget for 2016, in which the Government limited the increase to 0.3% rather than the consensus 0.7%. The Government's updated forecasts situate this growth at 1%, hence the initial bias cannot be justified ex post. Biases may be regarded as significant in the case of real growth rates in public consumption (2013-2016), given that the Government's initial forecasts in the budgets for those four years fell without their respective interquartile ranges, and those deviations were not justified ex post by better approximation to the final results. As provided for in article 4.6 of COUNCIL DIRECTIVE 2011/85/EU of 8 November 2011 on the requirements applicable to member States' budget frameworks, "If the evaluation detects a significant bias affecting macroeconomic forecasts over a period of at least 4 consecutive years, the Member State concerned shall take the necessary action and make it public."

The Government's forecasts for growth in real gross fixed capital formation for 2016 seemed optimistic. Both were at the upper end of the interquartile range of the consensus forecasts, and at the top end of the confidence band in AIReF's models, both for investment in capital equipment and, principally, for investments in construction. Nevertheless, the bias in these variables was not large, and updated consensus forecasts uphold the relative optimism of the Government's initial forecasts.

Real growth rates in exports and imports foreseen in the Government macroeconomic scenario for 2016 were in line with those of other public and private institutions and were centred within the uncertainty ranges in AIReF's models. The ensuing performance, however, has been slightly less buoyant than expected and external trade flows currently display a mild downturn.

Forecasts for a 3% increase in job creation and the unemployment rate falling to 19.7% in 2016 envisaged by the Government were also optimistic. These figures represented a large bias with respect to the consensus, but were not regarded as unlikely as they were in line with AIReF's forecasts. According to the most recently updated information available, both of these biases were justified.

The budget balance forecast by the Government was more ambitious than the consensus expectations. AIReF also found that it would be difficult to reduce the public deficit ratio to GDP to 4.2% in 2015 and 2.8% in 2016. The bias was large and ex post there is reason to believe it will be regarded as unjustified.

3. Macroeconomic forecasts for 2017

3.1 General remarks

The Macroeconomic forecasts for 2017 analysed in this report must be interpreted as a preliminary approximation, intended to facilitate drafting the budget scenario, but which neither envisages any feedback nor guarantees consistency with the hypotheses or fiscal policy measures included in said scenario.

The Government's forecasts for the macroeconomic scenario in 2017 make use of the most updated short-term information on indicators available, in contrast with the case of the most recent National Accounting data. In September, INE published a revision of the Annual series of National Accounts for the period 2012-2015, in which the real GDP growth rate for the first of these years is modified downwardly leaving the remainder unaltered. In cumulative terms, this provides a greater contribution from external demand to real output growth (at the expense of a weaker domestic demand). These annual series have not been employed in drafting these Government forecasts, and have not been taken into account for evaluation by AIReF, as the methodology applied requires the use of quarterly series, and INE is not due to disseminate information on updated series for the results of Spain’s National Accounting, that are coherent with the yearly data published to date, until 28 October.

Sufficient data has not yet been published on the methods and parameters underpinning the Government's forecasts[6]. As pointed out in all AIReF's previous reports on macroeconomic forecasts, although the methodology employed in drafting the forecasts is standard, with well-tested models and equations, the models used by the Government have not been published. In addition, the forecasts are likewise lacking the appropriate accompanying body of information and forecasts giving the accounting framework internal unity and consistency. This considerably hinders understanding the connection between the main variables contained in the macroeconomic scenario and between said variables and the budget scenario.

[6]Article 4.5 of Directive 2011/85/EU requires member States to publish the relevant methodologies, assumptions and parameters underpinning their macroeconomic and budget forecasts. The most recent Stability Programme Update, however, included an orientative table (pages 18-20) explaining *grosso modo* the methodology employed. This is an initial, but clearly insufficient, step toward increasing the transparency and comprehension of forecasts for the public. See [2016-2019 Stability Programme Update for the Kingdom of Spain]

3.2 Assumptions on the international environment

The basic hypotheses underpinning the macroeconomic scenario in the Draft Budgetary Plan for 2017 appear probable and even prudent. The Draft Budgetary Plan for 2017 contains balanced assumptions in the light of the latest forecasts by international organisations and the recent developments in commodities and debt markets (see tables C.1 and C.3 at annex). Following the lines proposed in the Stability Programme Update 2016-2019 (SPU) last April, the 2017 Draft Budgetary Plan outlines a scenario of slowing growth among major trading partners and, consequently, a smaller knock-on effect for the Spanish economy. With regard to the price of crude oil, the Draft Budgetary Plan has upwardly revised forecasts, in consonance with the evolution of futures markets. Lastly, assumptions made relating to the interest rates curve have remained constant both in the short and long term.

The mild slowdown foreseen in the world economy and European partners with respect to previous forecasts is in line with the progressive global downturn forecast by the main international organisations. In the last forecasting exercise, conducted in September 2016, the ECB reduced slightly its growth forecasts for the euro area, mainly in view of the materialisation of downward risks linked to Brexit. With a weaker contribution by external demand, domestic demand is responsible for driving growth in the euro area, thanks to steady monetary stimuli, progress made in reducing private sector indebtedness, the upturn in employment and the boost to disposable income in households and companies resulting from even lower oil prices in historical terms. In line with these forecasts, the hypotheses put forward envisage slowing world growth and, at the same time, a steady bilateral US/€ exchange rate, despite appreciation of the euro against the British pound.

The hypotheses regarding the performance of Government debt securities are prudent, in line with market expectations in the short term and above these in the long term. The interest rate on Government debt at 10 years forecast in the Draft Budgetary Plan is expected to be 1.7 pp in 2016 and 1.9 pp by 2017. These forecasts are substantially above the implicit returns in futures markets (1 and 1.1 pp for 2016 and 2017, respectively) and would entail an increase in the risk premium with respect to Germany's 10-year benchmark. This hypothesis is seen as prudent as it assumes the progressive normalisation of monetary conditions in the Spanish economy (in line with a potential recovery in the trend in prices) while the markets foresee monetary stimuli, in response to negative developments over the last few months, such as Brexit, or slower than expected growth in advanced economies.

Trends in oil prices are in line with those of futures markets and the main international organisations' forecasts. The hypothesis for crude oil prices has been revised up with respect to the SPU 2016-2019, in agreement with the trend in the price of crude oil (Brent barrel), which has risen more than 45% since the minimum of 28.15$ per barrel on February 2016. Concretely, for 2016 and 2017 the figures in the Draft Budgetary Plan envisage oil prices rising to around 50$/barrel, returning to 2015 levels.

Despite the balanced external scenario submitted in the Draft Budgetary Plan, it should be pointed out that future risks persist, pointing downwards. In the coming quarters, certain contingencies might materialise causing a negative impact on the Spanish economy's exterior environment. First of all, on a European level, continuing uncertainty and prolonged negotiations on the UK's exit from the European Union could have an additional negative effect on growth in the eurozone, deteriorating agents' confidence and, in turn, commercial transactions and investment flows. Secondly, as mentioned by the OECD in its last forecasts report (see OECD Interim Economic Outlook, September 2016), two factors pose an additional risk in the current context of sluggish growth worldwide: (i) the slowdown in world trade which, if maintained, may further hinder productivity and consequently the growth outlook in the medium and long term; and (ii) distortions in financial markets (in prices of financial and real estate assets or in financial institutions' business models, for instance) that may cause interest rates on Government debt to be maintained for prolonged periods at exceptionally low levels both short- and long-term (35% of Government debt in advanced countries presents negative returns, according to OECD data). Lastly, the rapid recovery of oil prices may dampen domestic demand by limiting private agents' disposable income.

3.3 GDP and components of demand

The forecasts for GDP growth in 2017 have been revised down slightly from 3.0% projected in the spring of 2015, as expressed in the Stability Programme Update 2015-2018, to the current forecast of 2.3%. Nevertheless, neither slow GDP growth nor a mild slowdown in all the components of domestic demand –both of which are foreseeable for cyclical reasons– are the most noteworthy features in the present situation: most outstanding is the notable resilience to downturn shown by economic activity and, as a consequence, employment. These GDP growth forecasts fall within the interquartile range of the consensus forecasts and are in line with the latest available forecasts by the EC (2.5%), Bank of Spain and OECD (2.3%) and International Monetary Fund (2.2%). These may also be deemed likely, and even prudent, by AIReF, as they are in the lower band of the likelihood distribution in the models employed in their assessment (see graphs panel G.1).

As for private consumption, an expansionary rate of 2.6% is forecast, after surpassing 3% in the current year. The causes of this sustained expansionary trend are vigorous recovery in the employment and housing markets, rapid job creation, moderation in prices and a reduction in household indebtedness, all of which are combined with greater consumer confidence and the impact of lower taxes. The slowdown in private consumption is smaller than the figure given in private institutions' consensus (2.4%) and than forecast by the Bank of Spain (2.0%), the European Commission (2.3%) and the OECD (2.1%). Though the Government's forecast falls without the interquartile range of the consensus, with a large upward bias, the comparison models used by AIReF situate the Government forecast close to centre of the confidence interval (see graphs panel G.1), and are therefore not regarded as unlikely.

The Government's forecast for public consumption in 2017 is likely. The forecast for 2017 consisting of 0.9% growth in real public consumption is compatible with the hypothesis of an extension to the 2016 Budget for the whole of the coming year, and falls within the interquartile range of public and private forecasts. Hence, this projection does not present a large bias.

Government forecasts for real gross fixed capital formation in 2017 show a slightly optimistic bias in comparison with those of private institutions. This is a large bias, if AIReF methodology is strictly adhered to, but not quantitatively significant (two tenths of a percentage point) taking into account the volatility of this variable. Furthermore, the government's forecast falls within the range of other public institutions, such as the Bank of Spain (4.8%), the European Commission (5.0%) and OECD (3.8%). These differences are qualitatively similar, both for investment in capital equipment, where the bias is not large, and in construction, where the bias is more noticeable. The models employed by AIReF to assess these forecasts do not allow their classification as unlikely.

Real growth rates in exports and imports forecast in the Government's macroeconomic scenario for 2017 are upwardly biased. In part, this is due to not having re-drafted the projections to incorporate the new National Accounting figures published by INE, which led to a downward revision of growth rates in 2015 from 5.4% to 4.9% for exports, and from 7.5% to 5.6% for imports. The figures in the Government's macroeconomic outlook fall without the interquartile ranges of private forecasts, indicating large upward biases in both variables. However, the trend in these two variables has recently featured a relatively stable expansion, with a slight upturn in exports and slowing somewhat in imports, such that, if INE's revised figures for 2015 are taken as the baseline, the foreseeable rates would be in line with the consensus forecasts, whereas if the figures prior to the revision are taken as the forecasting baseline, the Government's forecast could be regarded as unlikely, according to the assessment models employed by AIReF (see graphs panel G.1).

Summing up, the incorporation of new data for exports and imports revised down may be expected to affect the former's path less than the path of the latter, and therefore positively impact the forecast for GDP growth.

Information on the Government's forecasts on the labour market, costs, prices, external and Government accounts balances is extremely scarce. Employment is expected to grow one or two tenths of a percentage point less than real GDP, which would translate as an increase in apparent productivity. These forecasts are marginally above the consensus forecasts and those of Bank of Spain and OECD, but below those of the EC. As a consequence, a fall is envisaged in the unemployment rate, dropping to 17.8% next year, a slightly smaller figure than both the private institutions' consensus (18.3%), with respect to which a large bias is detected, and international institutions' projections. It is identical, however, to the Bank of Spain's forecast, and is also corroborated by the models employed by AIReF. The evolution of costs and prices forecast in the Government's macroeconomic outlook is closely similar to the private institutions' consensus, with an increase to positive rates in the region of 1.2%, slightly below the Bank of Spain's inflation forecast (1.5%). The current account balance as a percentage of GDP envisaged by the Government worsens by two tenths of a percentage point in 2017 with respect to 2016, to reach a surplus of 1.5%, in line with the consensus forecast, though a little higher than the balance foreseen by EC and OECD. As far as the budget balance is concerned, the private institutions consensus states that the target of 3.1% of GDP recommended by the EC will be missed in 2017, settling instead at close to 3.5%. At the time of drafting this report, any fiscal policy measures that could be implemented in 2017 are as yet unknown. Nor does the information provided allow a connection to be established to other variables in the macroeconomic scenario. As a result, the internal consistency of these public and national accounts balance targets cannot be assessed through the accounts of institutional sectors.

4. Conclusions: realism and risks in the forecasts

The government's forecasts are generally realistic but they are subject to a number of different risks. Firstly, there are risks stemming from exogenous assumptions on which the macroeconomic forecasts are based. Prudence in the assumptions for higher interest rates and oil prices than those currently in place implies that the Government's central forecasts may be overshot, whereas slower growth among the major trading partners or a greater-than-expected negative impact from Brexit would have the opposite effect. Secondly, there is some uncertainty associated to the lack of specific plans for implementing the fiscal policy which will inevitable have some restraining effect on demand in the short term if the corrections to the Spanish Government's accounts recommended by the European institutions are to be achieved. Overall, the risks to GDP growth are regarded as balanced.

The risks deriving from the exterior environment are approximately balanced. On the one hand, some uncertainty remains over the situation in the eurozone and the end state of the agreement on Brexit. To this downward risk, we must add principally the worldwide growth slowdown, weighed down by stagnation in trade. Contrariwise, in the financial sphere, the rate curve is subject to upward risks (resulting from lower rates). Indeed, recent negative surprises such as slower growth than expected in American markets have led to the flattening of the rate curve, with expectations for long-term yields on sovereign debt more or less unchanged.

Uncertainty over the fiscal policy to be implemented in 2017 will clear to some extent as soon as the Government submits the Draft Budgetary Plan to the European Commission in mid-October. AIReF will assess this project and issue a report including an analysis of the potential impact of the measures proposed therein regarding the initial macroeconomic scenario examined in this report.

5. Endorsement of the forecasts and specific recommendations

AIReF endorses the Government's forecasts for the macroeconomic scenario as likely. AIReF considers the Government's overall macroeconomic scenario to be plausible.

AIReF recommends that the necessary measures are adopted and made public in order to correct the significant biases observed in the forecasts of government consumption over the last four years, in compliance with Directive 2011/85 on budget frameworks.

AIReF submits to the Government three suggestions for good practices:

1. **To integrate the key elements in the forecasts into a simplified national accounting framework**, to make it possible to understand the connections between economic activity, demand and employment, on the one hand, and income flows and borrowing requirements, on the other hand, and to identify the impact of the policy measures taken by the Government.
2. **To provide more information on the relevant methodologies, assumptions and parameters underpinning the forecasts**, thus adhering to the requirements set forth in Directive 2011/85 on budget frameworks, and article 29 of the LOEPSF that defines the content of General Government sector budget plans in the medium term.
3. **To ensure at all times internal consistency among annual and quarterly National Accounting estimates,** in order to facilitate access to the most updated statistical information at any given moment, for use as the baseline in forecasts and macroeconomic analyses.

ANNEX: TABLES AND CHARTS

Tables

C.1) Basic hypotheses for the 2016-2017 scenario

Basic assumptions underlying the Macroeconomic Scenario in the 2017 Draft Budgetary Plan.

Annual percentage change, unless otherwise indicated

	2015	2016 (F)	2017 (F)
Short-term interest rates (Euribor at three months)	0.0	-0.3	-0.3
Long-term interest rates (Government debt at 10 years, Spain)	1.8	1.7	1.9
Exchange rate (USD/EUR)	1.1	1.1	1.1
World GDP growth, excluding the eurozone	3.2	3.1	3.5
GDP growth in the eurozone	1.9	1.6	1.5
Oil prices (Brent, USD/barrel)	52.2	43.4	49.1

(F) Forecast

Sources: Central European Bank, European Commission and Ministry of Economy and Competitiveness

C.2) Government macroeconomic forecasts

MACROECONOMIC SCENARIO 2016-2017

		FORECASTS	
	2015	2016	2017
Real GDP by demand components (% var)			
Final consumption expenditure	2.6	2.8	2.2
-Final consumption expenditure of households (a)	2.9	3.3	2.6
-Final consumption expenditure by government	2.0	1.0	0.9
Gross capital formation	6.5	5.4	4.1
-Gross fixed capital formation	6.0	5.4	4.2
Tangible fixed assets	6.5	5.8	4.5
Construction	4.9	4.3	3.9
-Dw ellings	3.1	4.2	3.8
-Other buildings and constructions	6.4	4.3	4.0
Capital goods and and biological resources	8.8	8.0	5.2
Intellectual property products	3.6	3.5	2.5
-Change in inventories (contribution in pp)	0.1	0.0	0.0
Domestic demand (contribution to GDP grow th)	3.3	3.2	2.5
Exports of goods and services	4.9	5.4	5.7
Imports of goods and services	5.6	7.0	6.7
Net foreign demand (contribution to GDP grow th)	-0.1	-0.3	-0.2
GDP	**3.2**	**2.9**	**2.3**
GDP at current prices: billions of euros	1,075.6	1,114.7	1,157.2
GDP at current prices: % var	3.7	3.6	3.8
PRICES (% var)			
GDP deflator	0.5	0.7	1.4
Private final consumption expenditure deflator	-0.2	-0.2	1.3
Real terms of trade (goods and services)	0.7	1.8	1.2
LABOUR COSTS AND EMPLOYMENT (% var)			
Compensation per employee (labour cost)	0.4	0.8	1.2
Compensation of employees (labourt cost)	3.8	3.6	3.6
Total employment (b)	3.0	2.7	2.2
Productivity per employee (b)	0.2	0.2	0.1
Unit labour costs (ULC)	0.2	0.6	1.1
Memorandum items (EAPS data)			
Unemployment: % economically active population	22.1	19.7	17.8
FOREIGN SECTOR (% GDP)			
Balance of current operations w ith the rest of the w orld	1.3	1.7	1.5
Net lending (+) / borrow ing (-) vis-à-vis the rest of the w orld	2.0	2.3	2.1

(a) Households and NIPISHs

(b) Full-time employment equivalent

SOURCE: INE and Ministry of Economy and Competitiveness

C.3) Forecasts by international organisations

Forecasts by International Organisations

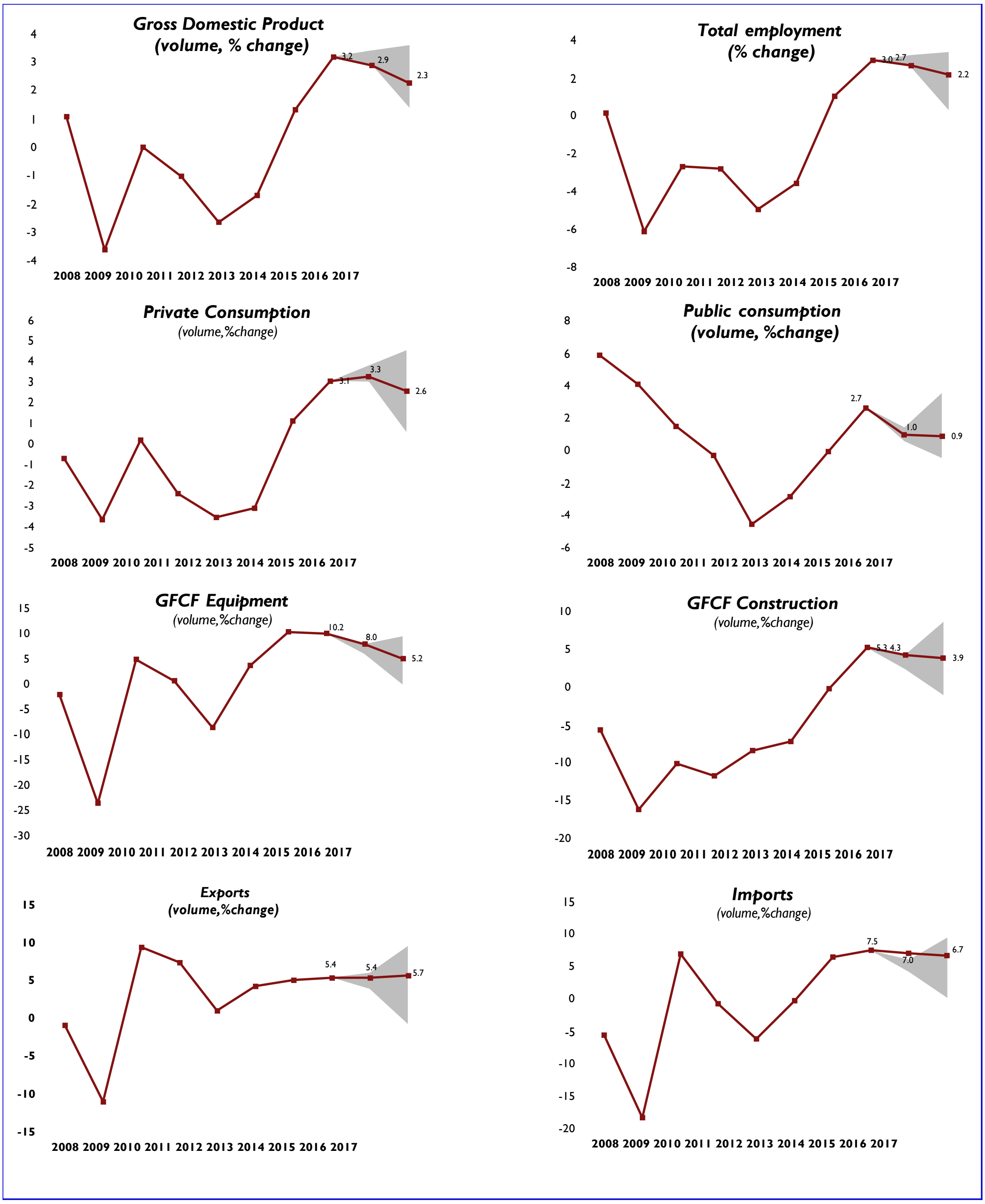
(Annual percentage change, unless otherwise indicated)

		2015	2016	Change (1)	2017	Change (1)
ECB (September 2016)	World GDP (excluding the eurozone)	3.2	3.0	-0.2	3.5	-0.3
	Eurozone GDP	1.9	1.7	0.3	1.6	-0.1
	World Trade (imports of goods and services, excluding the eurozone)	0.7	0.9	-1.3	2.8	-1.0
	Brent oil prices (USD per barrel)	52.4	42.8	7.9	47.4	6.2
	Three months Euribor (%)	0.0	-0.3	0.0	-0.4	-0.1
	Interest rates on Government debt in the eurozone at 10 years (%)	1.2	0.7	-0.5	0.6	-0.8
	Exchange rate USD/EUR (level)	1.11	1.11	0.0	1.11	0.0
	Nominal effective exchange rate for the euro	-7.1	3.6	-1.2	-0.1	-0.3
IMF (WEO October 2016)	World GDP	3.1	3.1	-0.1	3.4	-0.1
	GDP in the eurozone	2.0	1.7	0.2	1.5	-0.1
	GDP in the EU	2.3	1.9	0.1	1.7	-0.3
	Trade in goods and services	2.6	2.3	-0.8	3.8	0.0
	Brent oil prices (USD per barrel)	50.8	44.5	8.3	52.6	10.4
	Three months Libor (%)	0.0	-0.3	0.0	-0.4	0.0
European Commission (May 2016)	World GDP	3.0	3.1	-0.2	3.4	-0.1
	Eurozone GDP	1.7	1.6	-0.1	1.8	-0.1
	GDP in the EU	2.0	1.8	-0.1	1.9	-0.1
	World impoirts of goods and services	2.6	2.1	-1.5	3.2	-1.1
OECD (June 2016, Interim September*)	OECD GDP	2.1	1.8	-0.4	2.1	-0.2
	Eurozone GDP *	1.9	1.5	-0.3	1.4	-0.5
	Trade in goods and services	2.0	3.6	0.0	4.8	0.0
Market expectations (October 2016)	Long-term interest rates (Government debt at 10 years, Spain)	1.2	1.0	-0.6	1.1	-0.8
	Brent oil prices (USD per barrel)	52.4	50.4	5.9	54.3	7.5

(1) The change expresses the difference between assumed and actual figures in the report on the 2016-2019 Stability Programme Update.

Charts

G.1) Government forecasts and AIReF uncertainty ranges



Sources: *Drafted by the authors with data from INE, MINECO and AIReF estimates.*