REPORT ON THE 2019-2022 STABILITY PROGRAMME UPDATE

REPORT 32/19

AIReF
Independent Authority for Fiscal Responsibility

The Independent Authority for Fiscal Responsibility (AIReF by its Spanish acronym) was created with the mission of ensuring strict compliance with the principles of budgetary stability and financial sustainability set out in Article 135 of the Spanish Constitution.

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EXECUTIVE SUMMARY

The Independent Authority for Fiscal Responsibility (AIReF) must prepare a report on the content of the 2019 - 2022 Stability Programme Update (SPU). AIReF's assessment must encompass the macroeconomic forecasts underlying the 2019-2022 SPU and their budgetary scenario, with a special focus on the commitments that ensure compliance with the budgetary stability target, the government debt limit and the expenditure rule, in response to the mandate of articles 14 and 16 of the Organic Law 6/2013 creating AIReF.

AIReF received preliminary information from the Government on the 2019 - 2022 SPU, before 15 April, which included the macroeconomic and fiscal scenario for the entire period.

Based on these data, on 25 April AIReF endorsed the macroeconomic scenario underlying the 2019 - 2022 SPU and carried out an initial evaluation of the budgetary scenario, which was sent to the Government, including some recommendations to ensure compliance with the envisaged fiscal path and coherence between the macroeconomic scenario and fiscal forecasts, with the aim that these be taken into account in the final document, as far as possible.

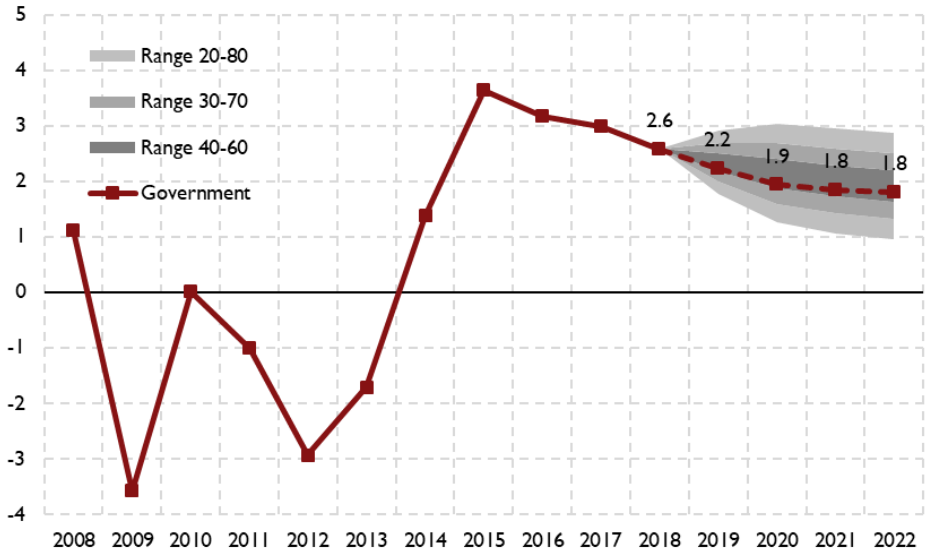
The SPU presented has incorporated many of the recommendations, which has allowed for a readjustment of the fiscal scenario compared to the one initially received. AIReF considered it to be feasible to achieve over the whole period, with the probability dropping in the last two years.

Is the Government's macroeconomic scenario plausible?

The profile of real GDP growth shown in the 2019-2022 SPU is considered prudent overall. The Government estimates that the growth of aggregate activity will gradually reduce by 2.6% in 2018 to 1.8% in 2022. These forecasts

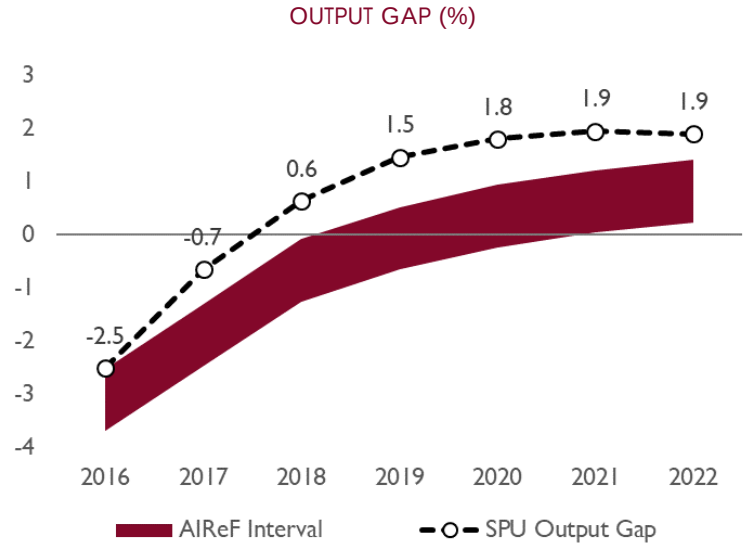
are in the central part of the interval estimated by AIReF and are in line with other available forecasts, both in the private and public sectors, which generally only cover the years 2019 and 2020.

REAL GDP GROWTH (%)

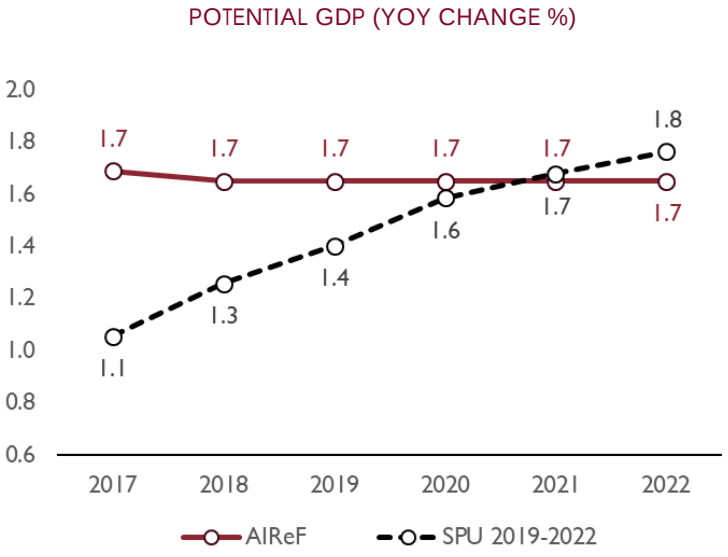


Source: Ministry of Economy and Business (dashed line) and AIReF's estimates

In terms of cyclical evolution, the SPU also poses a prudent scenario, with a business cycle considered to be ahead and expected to mature earlier. The evolution of the output gap expected in the SPU is ahead compared to the business cycle estimated by AIReF, with a gap that becomes positive as early as 2018. The cycle presented by the Government reaches its point of maturity in the middle of the forecasting period, earlier than AIReF's estimates. In addition, this feature implies a lower average potential GDP growth. As can be seen in the following figure, there are notable differences in the potential growth underlying the Government's estimation of the cycle with respect to AIReF's estimate. The SPU presents a potential GDP growth forecast that increases gradually until it converges to values close to those estimated by AIReF at the end of the period.



Source: Ministry of Economy and Business and AIReF's estimates



Source: Ministry of Economy and Business and AIReF's estimates

The composition of growth is prudent due to the contribution of domestic demand, offset by an optimistic view of the external sector. The progressive moderation of GDP expected in the SPU is characterised by a contribution of domestic demand that matures in the next 4 years. For its part, the contribution of external demand to growth becomes neutral from 2020 until the end of the forecasting horizon. While both the growth profile and growth level are considered to be credible overall, this composition is biased downward in domestic demand, according to AIReF's analysis and the existence of levers or supports to the growth of the main components of domestic demand,

alongside income policies that support the evolution of household consumption. In turn, the expected contribution of the external sector is considered optimistic, considering recent developments in world trade and the prospects for Spain's main trading partners, as well as the latent risks relating to the major economies of the euro area, the definitive departure of the United Kingdom from the European Union or the evolution of oil prices.

How does the macroeconomic scenario translate to the fiscal forecasts?

This macroeconomic scenario mainly translates to the fiscal scenario through tax revenues, including social contributions, which represent about 90% of the revenue of the Public Administrations (PAs). AIReF considers the revenue forecast of the 2019 - 2022 SPU to be feasible for most of the period, although with a different composition and a decrease in probability in the last years. According to the SPU, in 2022 revenue will have gained 1.8 points in relation to GDP, with its weight increasing from 38.9 to 40.7% GDP, 0.3% above AIReF's forecast. This difference, which fundamentally affects the tax forecasts, is due to the fact that AIReF estimates a lower impact of the revenue measures approved and announced by the Government. In addition, AIReF's fiscal scenario is somewhat more balanced in the distribution of the cyclical gain by type of tax, allocating more growth to indirect taxes and less to direct taxes with respect to the SPU estimates.

However, AIReF identifies a risk associated with the lack of consistency between a prudent macroeconomic and the Government's revenue estimates, which would be optimistic compared to the macroeconomic forecasts theoretically underlying them. AIReF's consistency analysis reveals that collection would be around 0.2% GDP lower for the 2020 - 2022 period if the Government's macroeconomic forecasts were to materialise.

On the expenditure side, the items most linked to macroeconomic developments would be unemployment benefits, which according to the SPU will reduce their weight over GDP by 0.1%, in line with AIReF's estimates.

The evolution of the rest of the expenditure items is marked by population variables and established policies or budgetary decisions taken by the various administrations. AIReF considers it feasible to achieve the SPU's downward path of non-financial expenditure throughout the entire period, although it would be considered unlikely in 2021 and 2022 should the Government's GDP forecast materialise. The SPU's expenditure path foresees an adjustment of 0.6% GDP from 41.3% to 40.7% GDP that is concentrated between 2019 and 2021 to then stabilise in 2022, compared to AIReF's estimates that maintain a

relatively stable path at around 41% GDP, with an adjustment of 0.4 percentage points of GDP.

AIReF's estimates envisage higher expenditure in nominal terms than those reflected in the SPU by 0.5% GDP. These differences are concentrated in gross capital formation and, to a lesser extent, in compensation of employees and social transfers in kind.

Is the Stability Programme Update's fiscal scenario plausible?

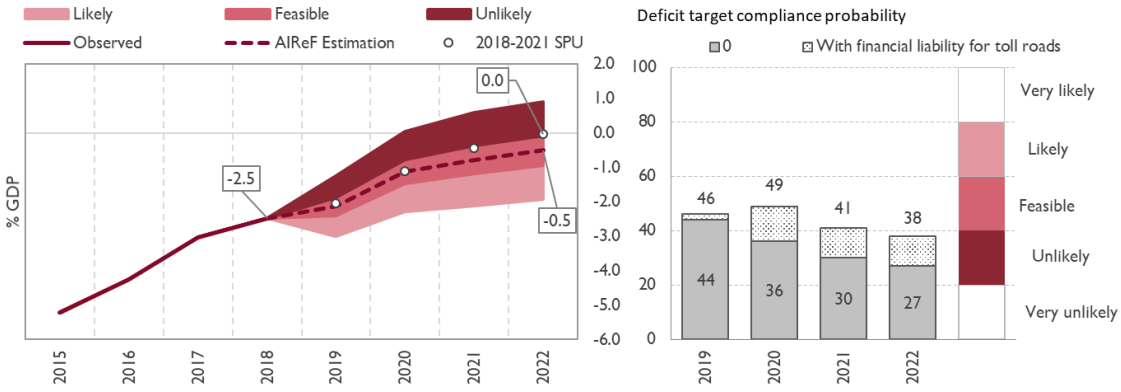
As a result of the evolution described above, the path foreseen in the SPU envisages a reduction of public deficit of 2.5 % GDP in 4 years, which is considered feasible until 2021 and unlikely, by a narrow margin, in 2022.

This reduction is mainly explained by the entry into force of several measures to increase revenue, some incorporated in the Budgetary Plan for 2019, but not processed due to the rejection of the draft GSB and the call for elections. These new revenue measures represent an increase in collection of 0.5 pp of GDP, although according to AIReF's estimates the impact would be 0.4 pp. The differences in the assessment of the new tax revenue measures are maintained with respect to the Budgetary Plan. These measures are in addition to those already in force that form part of the baseline scenario, with an assessment of 0.2% GDP, 0.1% less according to AIReF's estimates.

It also includes measures that would be the result of the implementation of the proposals of the spending review carried out by AIReF with a progressive effect toward the end of the period. These savings materialise increasingly as higher contributions throughout the period due to the reduction of hiring incentives and reduced expenditure on subsidies and social transfers in kind, a heading that contains non-hospital pharmaceutical expenditure, with an overall amount of 0.2 pp of GDP.

The rest of the SPU's measures, such as the revaluation of pensions, the rise in public salaries and social measures taken following the rejection of the budget, have been incorporated into AIReF's baseline scenario in previous reports, although an approximation of the SPU to AIReF's estimates in the evolution of these headings is observed.

NET LENDING/BORROWING OF THE PAS



Once again, the target distribution by sub-sector established in the SPU does not reflect the real situation of each of them. On the one hand, the Local Governments (LGs) have been recording a surplus above half a pp of GDP. In addition, the deficit estimated for the Regions in 2019 set in the SPU at 0.3% GDP differs from the 0.1% included in the "Deficit and debt notification to the European Union (EDP)". Finally, the SPU expects a reduction in the deficit of the Social Security Funds (SSF) up to the point where it reaches an equilibrium, which is not plausible without additional measures.

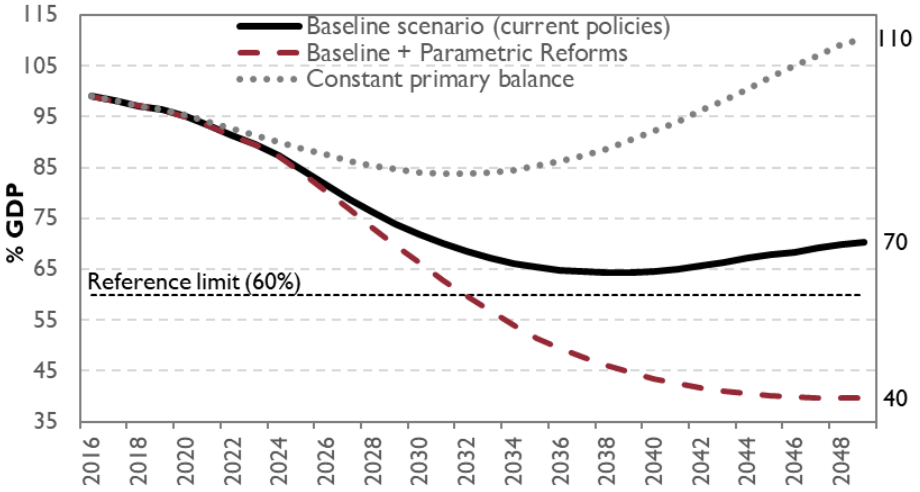
On the other hand, the SPU does not include sufficient information on the fiscal risks that may affect the sustainability of the PAs. Beyond the contingent liabilities, such as those resulting from court rulings or of the State's Financial Liability, AIReF identifies a series of fiscal risks that could hamper the reduction of the structural deficit. On the one hand, there are certain expenditure headings subject to upward pressure, such as compensation of employees, investment, or reform of the minimum income system. On the other hand, the weaknesses already identified by AIReF in the design of the Spanish fiscal framework may lead to additional strains on the structural deficit due to the progressive depletion of the LGs' surplus or due to the upward pressure on healthcare and education expenditure, which may arise, as noted by the SPU, from the reform of the regional financing system. Finally, a worse than expected macroeconomic evolution as a baseline scenario also entails a fiscal risk, as noted above.

What are the implications from the point of view of the sustainability of public finances?

AIReF considers the debt projections included in the 2019-2022 SPU to be at the limit of what is feasible. The path of public debt over GDP included in the SPU presents a downward trend throughout the period, with a cumulative adjustment of 8.4 points, above AIReF's normative scenario. According to

AIReF's sustainability analysis, in the normative scenario, a fiscal policy aimed at leading the debt-to-GDP ratio to its reference level and that assumes the maintenance of the purchasing power of pensions, would stabilise the debt-to-GDP ratio at around 70%. However, margins are necessary to deal with the vulnerability arising from contingent liabilities, geopolitical risks, financial crises or macroeconomic shocks.

EVOLUTION OF THE PAS' **DEBT**-TO-GDP RATIO IN DIFFERENT SCENARIOS



The fiscal strategy set forth in the SPU does not envisage fiscal effort in 2019 and distributes the effort to be made uniformly over the 2020-2022 period. As noted above, the deficit path envisaged in the SPU makes a correction of 2.5% in the next 4 years. The bulk of the correction (1.7%) is due to structural effort, new measures that are distributed uniformly over the 2020-2022 period, with an annual average of 0.6% GDP.

While AIReF's assessment coincides in the years 2019 and 2020, it differs in the efforts envisaged in 2021 and 2022. However, this aggregate approach to estimating the effort suffers from important methodological limitations, so it is necessary to complement it with a more granular approach, which takes into account the evolution of expenditure and exploits existing information on discretionary measures. In this sense, the evolution of the PAs' computable expenditure, expanding the coverage of the national expenditure, confirms a neutral fiscal policy in 2019 and a contractionary fiscal policy in 2020. On the other hand, based on the European Commission's more restrictive methodology, the evolution of computable expenditure stands above the requirements provided for in the recommendation of the ECOFIN Council in June 2018 and goes beyond the requirement of the debt rule, as set out in the SPU.

What recommendations does AIReF make?

Follow-up to the recommendations made previously in the process of preparing the SPU

AIReF has already made recommendations to the Government in its preliminary assessment of the SPU that have been partially taken into account in the final version of the SPU and in the fiscal scenario that underlies it. In this sense, the SPU includes the effect of the implementation of some of the proposals put forward by AIReF within the process of a comprehensive expenditure review committed by Spain, as well as the savings that could be obtained with some of the projects of the second phase of the process. As a result, AIReF considers it relevant to reformulate the recommendation made in this area as follows:

- Specify the measures to be taken in the framework of the comprehensive expenditure review agreed with EU institutions and whose execution, at various stages and in specific areas of expenditure, was commissioned to AIReF by agreement of the Council of Ministers.
- As a closure to the subsequent reviews commissioned, the Agreement of the Council of Ministers that specifies these measures should include the specific commitments taken, with a clear implementation horizon and a defined evaluation and follow-up procedure.

The Government has not followed the recommendation regarding the coherence between the macroeconomic scenario and fiscal forecasts. However, AIReF stresses the importance that this coherence is ensured, considering the risks and difficulties of evaluation that, from the perspective of the compliance with the fiscal targets, are associated to this lack of connection.

For this reason, AIReF maintains the following recommendation:

- Coherence between the macroeconomic scenario and fiscal forecasts should be ensured at different milestones of the budgetary cycle.

Finally, the recommendation to expedite the processing of planned tax measures so that they can come into effect at the beginning of 2020 remains in force.

Other Recommendations

New

For the first time the SPU publishes the forecasts of the Ministry of Labour, which represents an important step forward in transparency, in line with the suggestions for best practice contained in AIReF's Opinion on the Sustainability of the Social Security System. However, contrary to what happens with the forecasts of the Aging Report and AIReF, also contained in the SPU, the underlying assumptions or the methodology followed are not explained. For this reason, AIReF recommends that:

- The Ministry of Labour, Migration and Social Security should publish and make accessible the results, data, assumptions and methodology that underpin its forecasts for expenditure on pensions, so that it will be possible to replicate its estimates.

Reiterated recommendations

AIReF also continues to identify the need to regulate the flow of information, procedures and the calendar related to the process of endorsement of the macroeconomic scenario. For this reason, AIReF reiterates that:

- The flow and timing of information exchange should be regulated through an agreement or "memorandum of understanding", in line with the usual practices of surrounding countries.

Live recommendations

On the other hand, AIReF has recommended on several occasions that there is a need to devise a strategy that envisages a medium-term vision anchored in a credible debt reduction path, which allows future pressures on expenditure to be anticipated, thus enhancing financial sustainability. In this regard, the feasibility of the fiscal path envisaged in the SPU, the start of a new mandate and Spain's exit from the Excessive Deficit Procedure, moving on to design its fiscal policy within the framework of the preventive arm of the Stability and Growth Pact, are an opportunity to define a credible fiscal strategy for the medium term 2019-2022.

For this reason, AIReF keeps the following recommendations live:

1. The setting of budgetary stability targets for the 2020-2022 period should be underpinned by a government debt reduction path, translated into a detailed fiscal strategy, which includes an analysis of the evolution of the structural balance in the medium term.

2. The analysis and information that serves as a basis for determining the path of the stability targets and debt for the GG and for each of the sub-sectors should be published.
3. The fiscal strategy should take into account the European framework and provide relevant information on compliance.
4. The following information should be included in the SPU

   ✓ Budgetary forecasts for the general government sector and for each of the sub-sectors, including the measures and displaying their contribution to the planned deficit reduction.

   ✓ Government debt targets distributed by sub-sectors.

   ✓ Detailed information for the analysis of the expenditure rule for each of the sub-sectors (computable expenditure and reference rates for all the years covered by the SPU).

   ✓ More information on the risks that, if materialised, may affect the budgetary stability or debt targets.

5. An initial budget should be prepared in national accounting terms for the Central Administration and SSF.

1 INTRODUCTION

Current legislation establishes that the Independent Authority for Fiscal Responsibility (AIReF by its Spanish acronym) must prepare a report on the Stability Programme Update. The Stability Programme Update (SPU) represents the Government's main medium-term budgetary document and includes macroeconomic and fiscal forecasts for a period of four years. AIReF must report on the macroeconomic forecasts underlying the 2019-2022 SPU as well as its budgetary scenario, with a special focus on the commitments that ensure compliance with the budgetary stability target, the government debt limit and the expenditure rule, in response to the mandate of Articles 14 and 16 of Organic Law 6/2013 creating AIReF).

On 25 April, AIReF announced its endorsement of the macroeconomic scenario underlying the 2019-2022 SPU, based on the exogenous assumptions and defined policies. AIReF considered the Government's macroeconomic scenario to be prudent overall, taking into account the assumptions relative to the external environment and defined policies. This initial assessment was sent to the Government, allowing AIReF's conclusions and endorsement to be included before the SPU is submitted to the EU institutions.

AIReF received preliminary information on the 2019-2022 SPU from the Government, enabling it to perform an initial assessment of the budgetary scenario. Based on the preliminary information received, both macroeconomic and budgetary, AIReF issued its initial assessment of the budgetary scenario to the Government with recommendations that the Government were able to assess before submitting the SPU to EU institutions.

The Government modified the fiscal scenario after receiving AIReF's first assessment. AIReF's preliminary assessment concluded that there were significant differences in the evolution of expenditure, focused mainly on compensation of employees and on Gross Fixed Capital Formation (GFCF), while its evaluation of revenue was similar, but with a different composition. As a result, the Government included a higher compensation of employees in the final scenario of the SPU, bringing it almost in line with AIReF's estimates,

as well as greater investment, even though it is still below the level forecasted by AIReF.

The Government has also partially taken into account the recommendations made by AIReF in its preliminary assessment. AIReF made three recommendations on the coherence between the macroeconomic scenario and the fiscal forecasts, the processing of tax measures and the adoption of additional measures that underpin the expected fiscal path. In relation to the last recommendation, the Government included the application of the proposals resulting from AIReF's expenditure review in the SPU. To be precise, the Government increased the forecast of the social contributions to reflect the elimination of part of the hiring incentives in force and reduced expenditure on social transfers in kind due to the application of the proposals on non-hospital pharmaceutical expenditure.

Once the Council of Ministers approves the submission of the SPU, this report fulfils the mandate of articles 14 and 16 of Organic Law 6/2013 creating AIReF.[1] To this end, the analysis is divided into four main blocks: First, AIReF assesses whether the macroeconomic scenario is realistic. Second, the budgetary forecasts are analysed, paying special attention to the specified measures and considering their consistency with the macroeconomic scenario adopted. Lastly, AIReF's evaluation resulted in a series of recommendations and suggestions for best practice.

[1] As required by Article 16 of Organic Law 6/2013 creating AIReF and article 15 of Royal Decree 215/2014, of 28 March, approving its Organic Statute, in order to issue the report on the SPU, AIReF must have the text of the SPU available sufficiently in advance, accompanied by the corresponding medium-term budgetary forecasts, as well as any other information or documentation to support the forecasts and data included in the same.

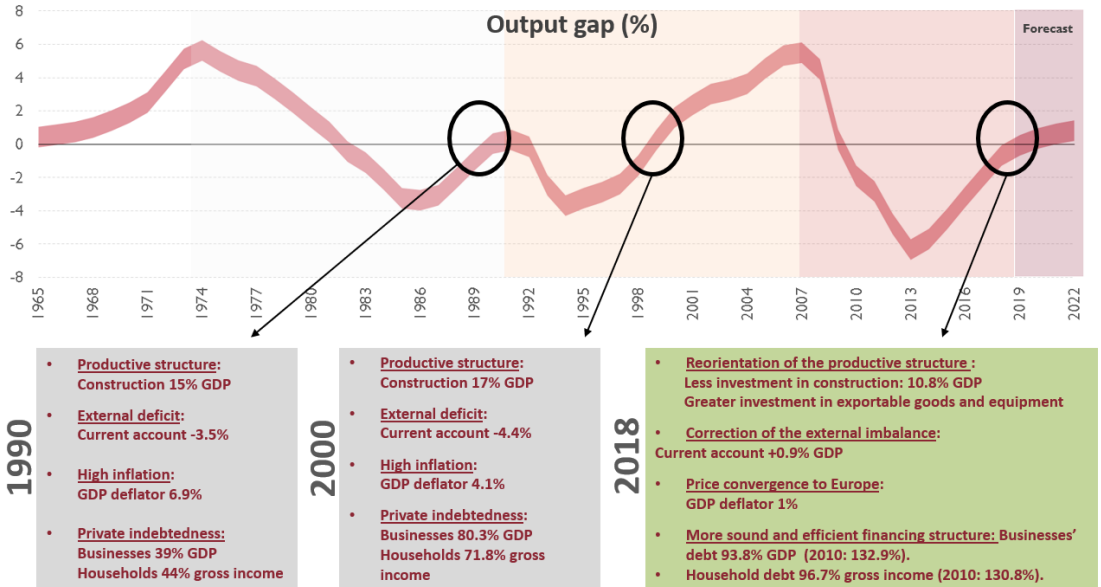
2 ASSESSMENT OF THE MACROECONOMIC SCENARIO

Definition of a reference inertial scenario

Cycle starting point

The year 2019 marked the start of a new economic cycle, from a more balanced position than in previous years. In view of AIReF's estimates of the output gap, 2019 marks the start of a new economic cycle. The current stance of the business cycle (neutral or with zero output gap) can be compared to the same situation in two recent moments; at the beginning of the '90s and at the beginning of the century, both also marking the start of a cycle. Benchmarking against historical data proves that the current position is sounder, with less weight in the construction sector, a current account surplus and weaker inflationary pressures, albeit the legacy of the recent economic crisis in terms of debt, both private and public, should be noted.

Figure 1. HISTORICAL EVOLUTION OF THE ECONOMIC CYCLE IN SPAIN



Source: AIReF

The estimated evolution of the cycle and the macroeconomic equilibria imply a potential growth slightly below 2%. The estimate of the output gap of the Spanish economy looks at the evolution of the main macroeconomic balances and their comparison with previous cycles. The sound current context generates earnings in terms of potential or long-term growth, estimated to be around 1.7% for the forecasting period.

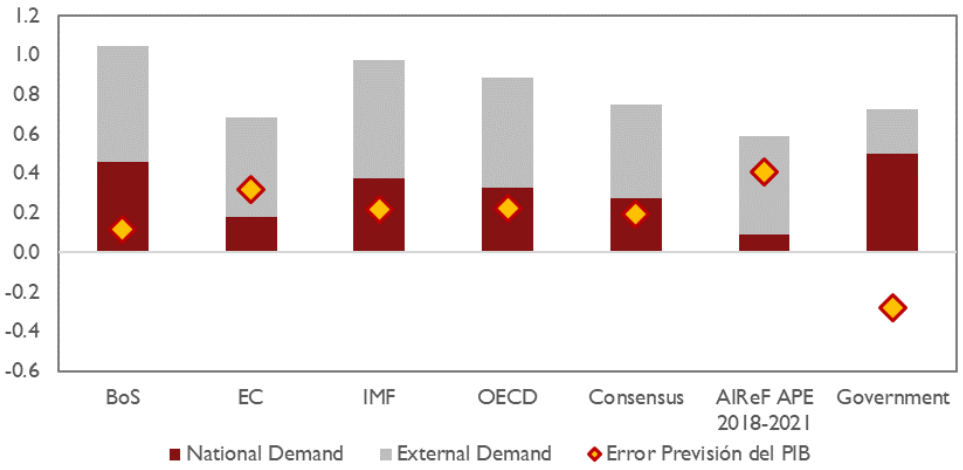
In the medium-term, this sound position supports growth, in particular in domestic demand. The composition of growth over the last few years, with a positive contribution of domestic and foreign demand, a progressive deleveraging of the private sector and less dependency on less productive sectors, underpinned by significant structural reforms, have made a positive impact on the potential growth of the Spanish economy. This starting point provides a solid base for the medium-term growth forecasts, especially for domestic demand. The forecasting horizon foresees the cycle maturing, with a real GDP that would tend towards converging with its long-term or potential growth rate.

Latest short-term information

Throughout 2018 the Spanish economy has once again experienced high growth rates, supported by the strength of domestic demand. After exceeding the 3% benchmark over the last 3 consecutive years, the yearly GDP growth rate in terms of volume was around 2.6% in 2018. In general, the main explanatory factor behind this evolution is based on the relative strength of domestic demand -in particular, private final consumption expenditure-, that last year more than offset weak foreign demand.

During 2018, the deteriorating external environment has been a continuous source of negative surprises whilst domestic demand behaved in line with previous years. The deterioration of the forecasts for world economic growth nd growth of the main economic partners has caused disruption in the Spanish economy due to a lower contribution from the foreign sector. This came as a genuine surprise, resulting in errors when estimating the foreign component by a vast majority of economic analysts (see figure 2).

Figure 2. BREAKDOWN OF ABSOLUTE 2018 GDP FORECAST ERROR



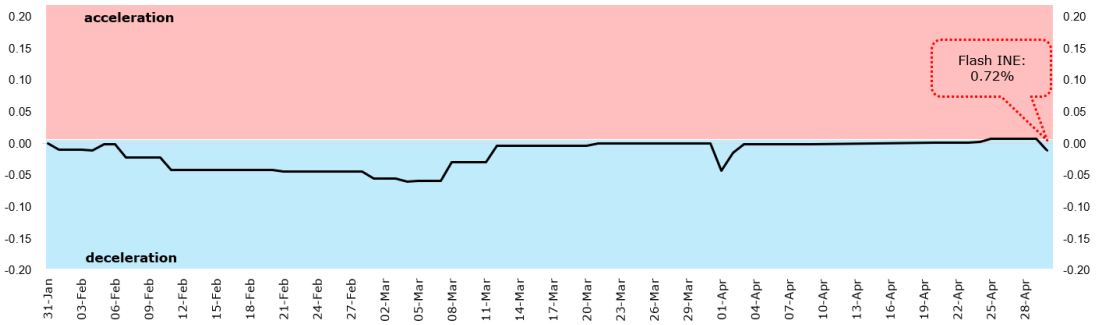
Source: AIReF

Recent short-term information points to a slight upturn at the start of 2019, confirmed by steady growth in the first quarter. In regard to the 0.6% growth observed in the last quarter of 2018, during the first months of 2019 the short-term data that feeds the forecasting model developed by AIReF in real-time showed an acceleration in the growth rate of the Spanish economy, that was then confirmed by the progress report published by the Spanish National Statistics Institute (INE by its Spanish acronym) on 30 April (see figure 3)[2]. As part of these high-frequency indicators, the most noteworthy positive surprise came from social security affiliation and activity in the service sector.

The growth forecast for the coming quarters indicates that the year-on-year rate of 2.3% will be maintained. The real-time GDP forecast indicates maintenance of GDP in quarter-on-quarter terms for the second quarter of 2019. This has a carryover effect on the inertial evolution of GDP throughout the whole year. This quarter-on-quarter rate implies a year-on-year growth rate of 2.4% and would underpin a 2.3% growth for the whole of 2019.

[2] See the "Thermometer of the Spanish Economy", published by AIReF on its website that lists the surprises recorded in the economic growth forecasts.

Figure 3. THERMOMETER OF THE SPANISH ECONOMY, GROWTH SURPRISES IN 2019-Q1



Source: AIReF

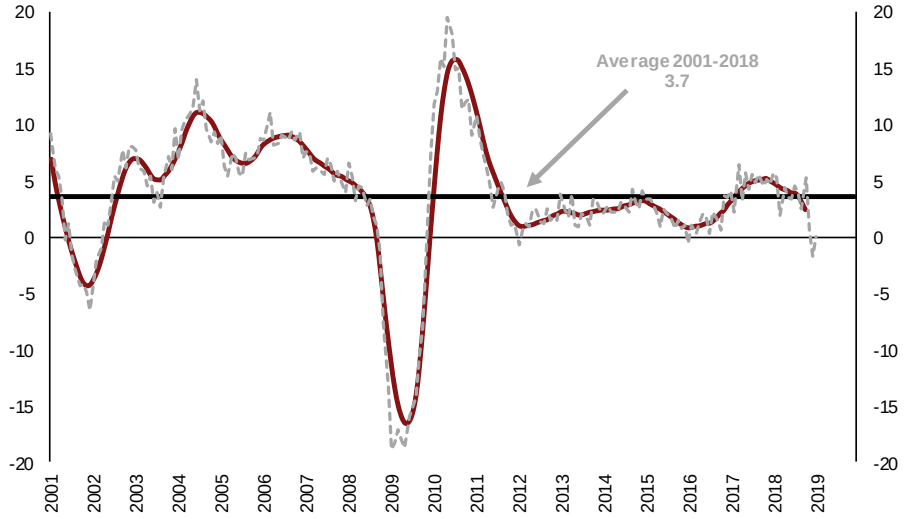
Note: positive (negative) values indicate a positive (negative) surprise with respect to the quarter-on-quarter growth of GDP in real time.

External environment risks

The medium-term risk balance is influenced by factors linked to an additional deterioration of the external environment, which would be partially offset by more accommodating demand policies. The medium-term scenario may be affected by a wide range of underlying factors linked to the external environment, the main ones being related to growth and world trade, and others more closely linked to the Eurozone. Although all identified risks individually pose relatively low costs for the Spanish economy, the materialisation of these risks as a whole must not be discounted since they are mutually dependent. This could result in a magnified combined impact. Conversely it could play a role in the evolution of fiscal and monetary policy.

Escalation of trade tensions between the USA and the Peoples' Republic of China, or late resolution, could trigger another round of downward revisions to the economic forecasts. Since the beginning of 2018 a gradual drop in the growth rate of world trade in goods has been observed, and a slight downturn in December 2018 and January 2019 was even recorded (See figure 4). Lower growth and world trade in goods weigh heavily on countries with a higher degree of foreign-market trade openness and it is expected that the same extends to other countries through global value chains. The debilitation of already weak growth in countries in the Eurozone and the decline in the demand for exports of goods and services could hamper the growth prospects of the Spanish economy in the medium-term.

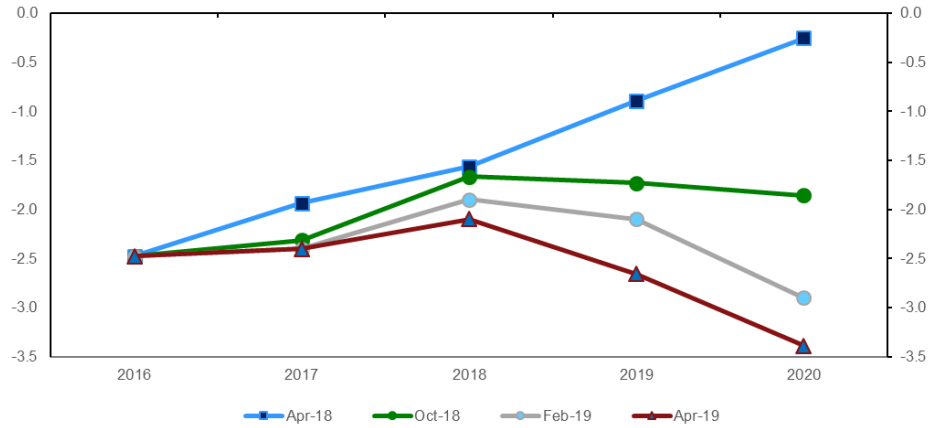
Figure 4. EVOLUTION OF THE VOLUME IN WORLD TRADE IN GOODS. YEAR-ON-YEAR RATES OF CHANGE



Sources: CPB Netherlands Bureau for Economic Policy Analysis and AIReF

In connection with the foregoing, uncertainty in the economic policy has been increasing since the first half of 2018 in different countries such as Italy where it would seem to be influencing the deterioration of its growth forecasts. The rate of change of Italian quarter-on-quarter GDP became negative in the last two quarters of 2018 which has been carried over to growth forecasts for 2019, while deficit forecasts of the Italian Public Administrations have significantly increased, in particular since the beginning of the year (see figure 5). This trend could raise doubts once again regarding the sustainability of Italian public finance and could spread to other economic sub-sectors and even to other countries. Even though the contagious Italian situation has been barely noticeable up to now in countries such as Portugal or Spain, the perception of risk could rapidly change in a non-linear way and spread to other countries.

Figure 5. EVOLUTION OF THE DEFICIT ESTIMATES OF THE ITALIAN PUBLIC ADMINISTRATIONS BY THE INTERNATIONAL MONETARY FUND.



Source: International Monetary Fund

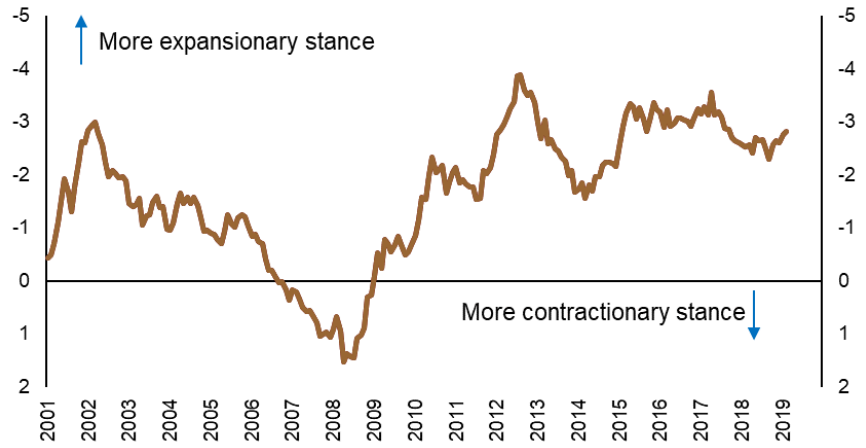
The departure of the United Kingdom from the European Union should be reiterated as a short-term risk factor. After successive rejections by the British Parliament to pass the deal negotiated between the Government of the United Kingdom and the European Union, there remains high uncertainty on the possible impact that it could have if the departure occurs in a disorderly way.

Even though towards the end of 2018 the profile of the price of oil per barrel was clearly slowing down, it has shown signs of a gradual recovery since the start of 2019, gaining strength over the last few weeks. This new upturn has led the price of crude oil to rise to around 70 USD per barrel, well above the opening price of 50 USD per barrel at the start of the year. Behind this upturn there are surprises to be found, a priori transitional, linked to armed conflicts, or political instability, whose future impact has not been fully recognised by the financial derivatives market which anticipates a gradual slowdown of the price of crude oil that may not end up materialising. Conversely, it could lead to a deceleration in world growth.

These risks could be mitigated by the recent changes in the fiscal and monetary policy stance. Faced with the gradual attenuation of world growth and lower inflationary pressures, several central banks, including the European Central Bank, the Bank of England and the Bank of Japan, have gone from adopting measures aimed at a progressive normalisation of the monetary policy to a distinctly accommodating stance (see figure 6). This has contributed to a relaxation of financial conditions. In the same way, the fiscal policy of several countries such as the Peoples' Republic of China, have moved towards having a marked expansionary stance. This recent change of stance of the monetary and fiscal policy of several countries may, in the

medium-term, extend to the real economy and act as a counterweight to any materialisation of latent risks.

Figure 6. MONETARY CONDITIONS INDEX (MCI) IN THE EUROZONE. REVERSE SCALE



Source: European Commission

Medium-term scenario: GDP and components

With these risks and the starting position in mind, it is predicted that the medium-term growth scenario will be supported by the contribution of domestic demand progressively converging with the potential growth rate, leading to a more mature economic cycle. Solid growth is anticipated in the 2019-2020 period, although with a downward trend, averaging around 2% year-on-year. At the same time, growth would gradually converge with the potential growth rate of the economy, reflecting the maturity of the economic cycle. Table 1 details the projected evolution, both for the GDP and its components as well as for the labour market (see table 1 for more information on the headline forecast by AIReF in its baseline scenario).

TABLE 1. **AIREF'S BASELINE SCE**NARIO

MACROECONOMIC SCENARIO	AIReF			
VOLUME	2019	2020	2021	2022
GDP (% change, unless otherwise stated)	2.3	2.1	2.0	1.9
Total Comsuption (contribution to GDP growth)	1.6	1.4	1.3	1.1
Private Consumption	2.2	1.9	1.8	1.6
Public Consumption	1.8	1.8	1.5	1.4
GFCF Machinery and equipment	2.5	4.9	4.0	3.4
GFCF Construction and Intelectual Property	4.7	4.4	4.1	4.1
Total Domestic demand (contribution to GDP growth)	2.4	2.4	2.2	2.0
Exports of goods and services	3.1	2.6	2.5	2.4
Imports of goods and services	3.5	3.5	3.3	2.9
Net exports (contribution to GDP growth)	-0.1	-0.2	-0.2	-0.1
Output gap (% Potencial GDP)	-0.1	0.3	0.6	0.8
PRICES	2019	2020	2021	2022
GDP (% change, unless otherwise stated)	1.5	1.7	1.8	2.0
Private Consumption	1.1	1.5	1.5	1.6
NOMINAL	2019	2020	2021	2022
GDP (% change, unless otherwise stated)	3.8	3.9	3.8	3.9
Public Consumption	3.1	3.4	3.1	3.3
GDP at current prices (eur billions)	1,254.6	1,303.3	1,353.1	1,405.6
EMPLOYMENT AND POPULATION				
Employment (% change, unless otherwise stated)	2019	2020	2021	2022
Total Employment FTE	2.2	2.0	1.9	1.6
Of private sector	2.5	2.3	1.9	1.7
Of public sector	1.1	1.0	1.7	1.3
Compensation of employees FTE (thousand €)	2.5	2.3	1.8	1.9
Of private sector	2.4	2.1	1.7	1.9
Of public sector	2.7	2.9	2.0	2.0
Productivity ratio per employee	0.2	0.1	0.1	0.3
Nominal unit labour costs (ULC)	2.3	2.2	1.7	1.6
Active population	0.3	0.3	0.5	0.5
Unemployment rate	13.7	12.2	10.9	10.0

Private consumption, the main driver of growth, is also in an expansionary phase, with medium-term support and benefiting from short-term measures, showing signs of maturity at the end of the forecasting period. During the 2019-2022 period, private consumption will be supported by economic policy measures with an impact on disposable income, namely the increase in the minimum wage. With respect to its main structural drivers, unlike the contribution of employment, thought to be significant, albeit in decline, the impact on housing wealth will become a major player as the forecasting period advances. Favourable credit facilities should contribute to the recovery of housing wealth, at the cost of an increase in the deficit and progressive deterioration of households' net lending (see figure 7).

However, depending on the progress made during the analysis horizon, the factors supporting consumption are likely to mitigate. The upturn in the household saving rate, currently at an historic low (see figure 7), combined with the lack of new income measures and the normalisation of monetary policy would also contribute to this behaviour.

Figure 7. HOUSEHOLD NET LENDING/BORROWING

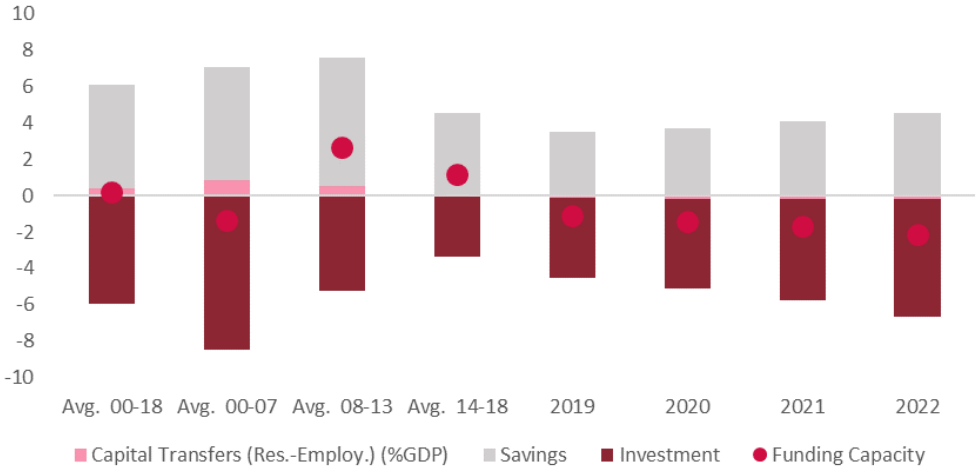
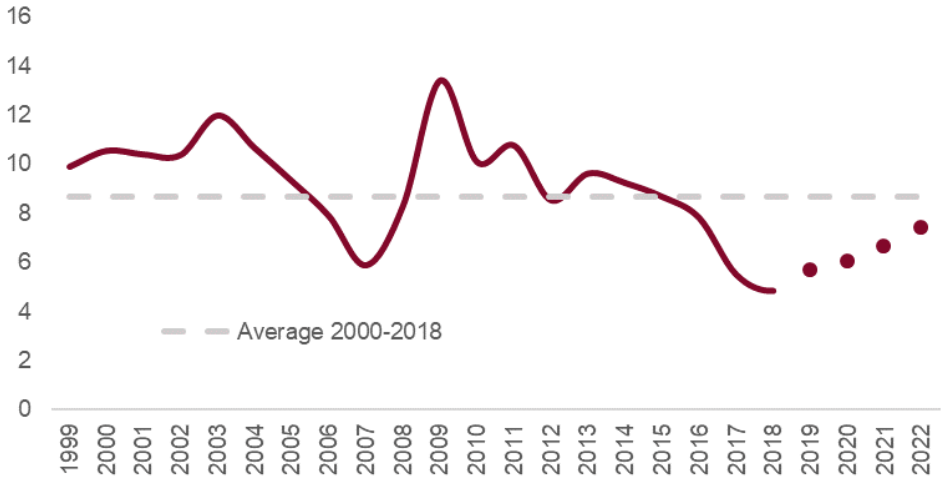


Figure 8. HOUSEHOLD SAVING RATE (% GDI)



Investment in construction will continue to show a high rate of change due to greater demand from households. The dynamic trend of employment, the sound financial position of households, combined with the upturn in housing prices, new credit operations for purchasing homes and good expectations for the sector will boost the residential construction segment. This said, it should be stressed that the baseline is slightly below the indicators of previous neutral cycle stages. In this context, the cyclical upturn of investment in construction, albeit less intense than in the previous business cycle, makes for an anticipated increase in relative weight in the construction sector, both in terms of activity and in terms of jobs created. (see figure 9 to figure 12).

Figure 9. NEW HOUSES SOLD (YEAR-ON-YEAR RATE, %)

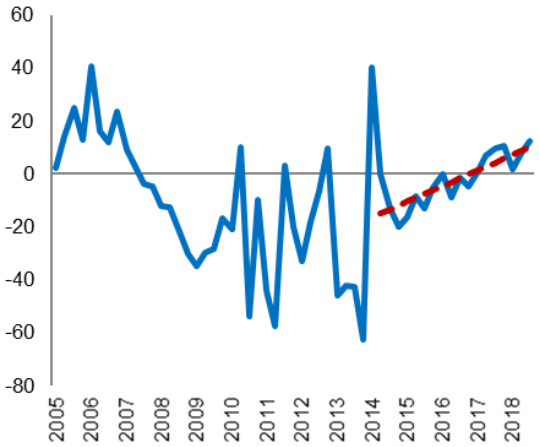


Figure 10. NEW CREDIT OPERATIONS GRANTED TO HOUSEHOLDS FOR PURCHASING HOMES (LEVEL)

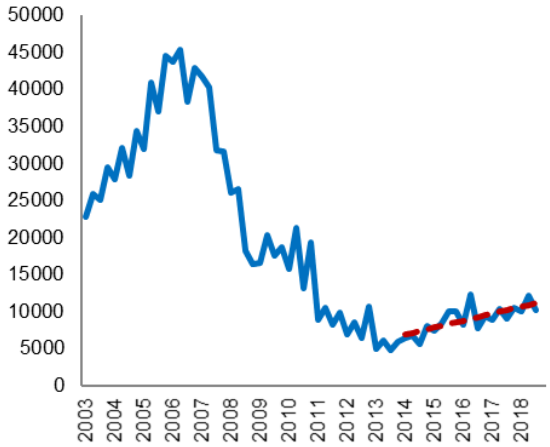
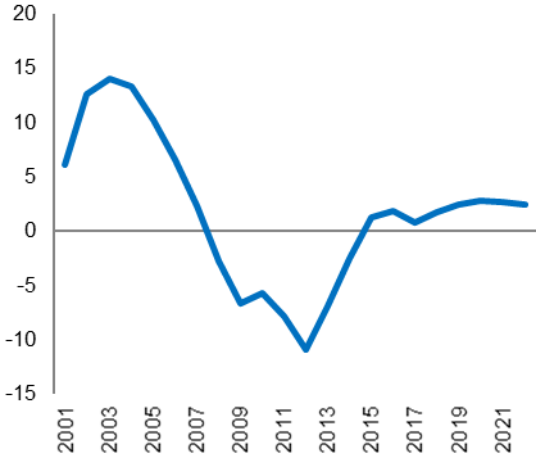
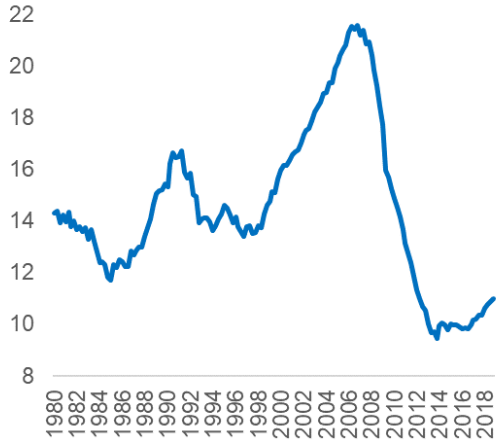


Figure 11. PRICE PER SQUARE METRE PRIVATE HOUSING (REAL YEAR-ON-YEAR RATE, %)



Source: INE

Figure 12. GROSS FIXED CAPITAL FORMATION, CONSTRUCTION (% GDP)

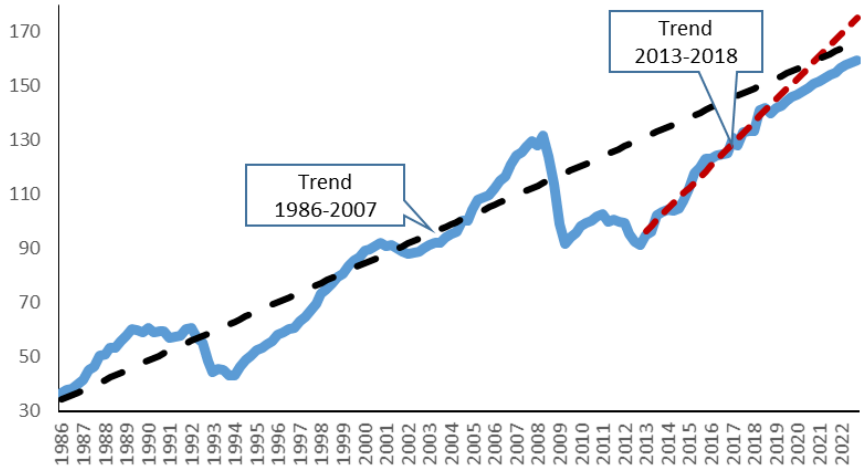


Source: INE and AIReF's estimates

Productive investment, backed by the stable position of companies, will continue to evolve dynamically in the medium-term, albeit more limited than in the previous expansionary cycle. Productive investment shows, in general, a high degree of synchronisation with the economic cycle. This means that, in turn, the cycle is expected to mature at the end of the forecasting horizon (see figure 13), coupled with a gradual erosion of net lending that has characterised non-financial companies since 2009. The last six years have been marked by a recovery in gross direct foreign investment flows, in line with those experienced towards the end of the 1990s. However, within the context

of international uncertainty, this could cause an impact on international flows and, in turn, on productive investment.

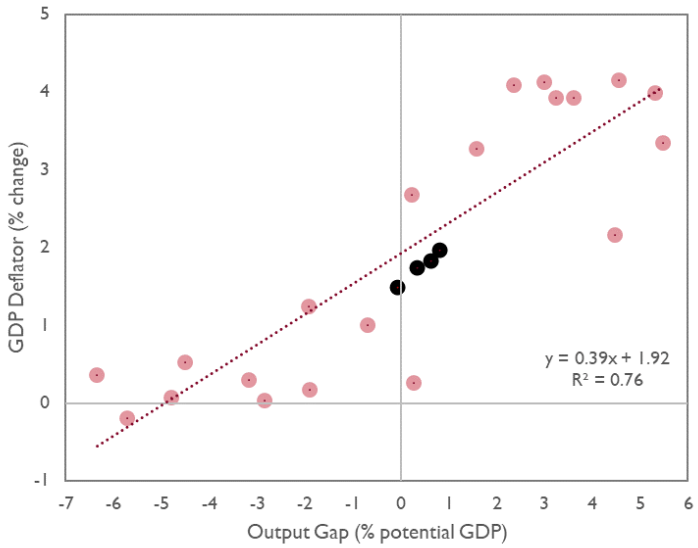
Figure 13. GROSS FIXED CAPITAL FORMATION, EQUIPMENT VOLUME



Source: INE and AIReF's estimates

The GDP deflator will recover its pace as the output gap increases and will behave in line with the historic relationship between both variables (see figure 14). Its influence is considered transitional even if there are downward pressures linked to oil prices and to weak world external demand. Despite the slow progress in the price levels, it is considered that this will not entail a reversion to positive ground in the growth differential in consumer prices in the Eurozone, in line with that observed in general terms over the last decade.

Figure 14. GDP DEFLATOR (YEAR-ON-YEAR RATE, %) AND OUTPUT GAP (% OF POTENTIAL GDP). 1996-2022

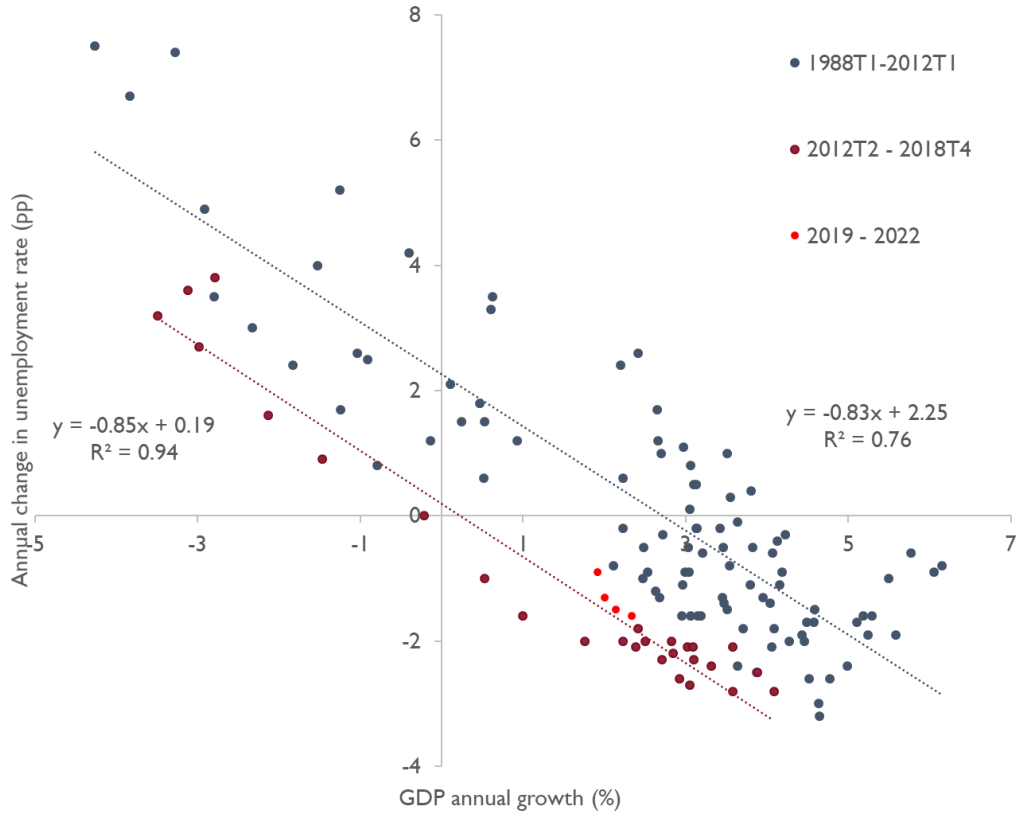


Source: INE and AIReF's estimates

In 2019 the dynamism of the labour market has kept its ground with progressive moderation in medium-term job creation. It is expected that the dynamism experienced in 2018 in private job creation will continue throughout 2019 albeit with a gradual downturn in the medium-term in line with the evolution of economic activity in general. However, the expected growth of investment from 2020 could generate a rapid accumulation of productive capital that limits the increase in demand for labour in the medium-term, above all by technology-intensive companies. Even so, towards the end of the forecasting horizon, economic growth and pressures on demand resulting from demographic ageing may act as a support in the medium-term, facilitating a reduction in the structural unemployment level.

As for employment in the Public Administrations (PAs), it is predicted that its growth in 2019 will maintain similar rates to those in 2018 in line with the evolution of the population, replacement needs in the public sector and greater demand for services to be provided, slowing down slightly towards the end of the forecasting horizon. On average for the entire forecasting period, it is expected that the growth forecast for public sector employment will be systematically less dynamic than that envisaged for the private sector and will stand around the values observed in 2017.

Figure 15. OKUN'S LAW FOR SPAIN 1998-2018 AND AIREF'S FORECASTS FOR 2019-2022



Source: INE and AIReF's estimates

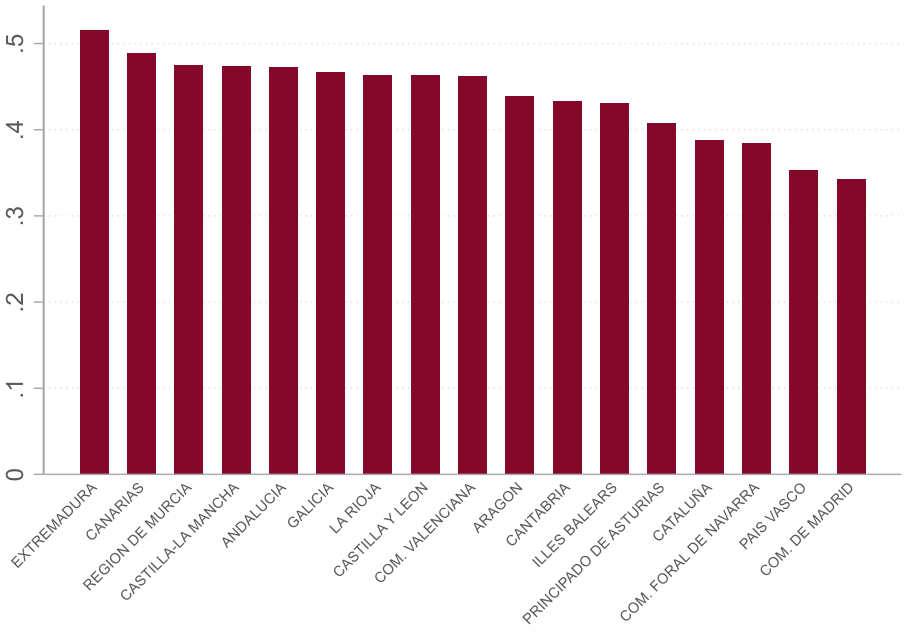
In the next four years the evolution of compensation per employee is expected to be greater than the increase in prices, in an environment of contained productivity per employee. Unlike that observed in 2018, where compensation per employee in the private sector increased (according to National Accounting data) but below the price level, private sector salaries could increase in 2019 in real terms, due to the dynamism of the labour market and impact of the rise of the minimum wage. In the medium-term, salary increases are moderate with respect to 2019, even though they will remain above the general price level growth, due to a contained increase in productivity, a greater drive in public-sector salaries and moderated growth of the active population.

Regarding the impact of the rise of the minimum wage by 22% it is important to stress that, in addition to its impact on the evolution of the average wage, its possible impact on employment has not yet been identified in the aggregate data available up to April. Indeed, microdata (individual data) needs to be available to appropriately estimate the possible impact of the increase in the minimum wage on employment since it is not possible to draw any conclusions of any significant quantitative impact from the aggregate data available up to now. It is foreseeable that the negative impact on

employment would be more significant in those Regions where the minimum wage is closer to the median wage (higher than the Kaitz index, shown in figure 16. On observing the accumulated evolution of employment from when the increase in minimum wage was announced, compared to the same time period in the last 18 years, no negative differential can be observed. The sources of aggregate data available include registrations to Social Security, job seekers, *Servicio Público de Empleo* contracts (Spanish State Employment Service - SEPE) and those in work identified in the Labour Force Survey (LFS) and are used to build evidence on the impact of the wage increase that, although is in no way conclusive, is opposite to the assumption of a significant negative impact on employment in the short-term.

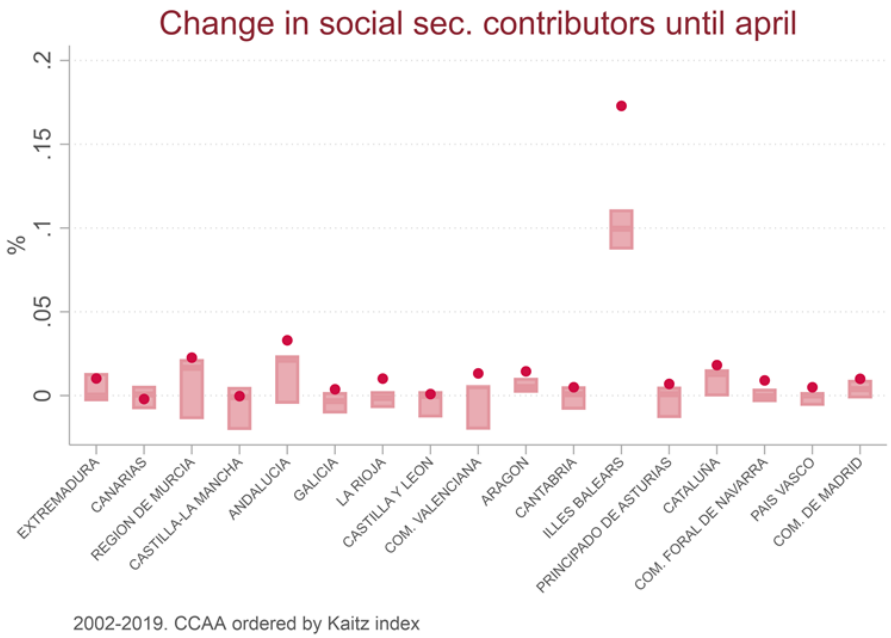
In respect to public sector wages, it is predicted that they will increase slightly above the price level. The general evolution of compensation per employee, prices and employment is consistent with a contained productivity per worker in the medium-term, in line with the values observed historically.

Figure 16. KAITZ INDEX (MINIMUM WAGE COMPARED TO AVERAGE WAGE COST)



Source: SEPE, INE and AIReF's estimates

Figure 17. ACCUMULATED CHANGE IN REGISTRATIONS IN THE FIRST FOUR MONTHS OF THE YEAR



Source: SEPE, INE and AIReF's estimates

BOX 1 IMPACT ON EMPLOYMENT OF THE INCREASE IN THE MINIMUM WAGE

Royal Decree 1462/2018, of 21 December, set the minimum wage for 2019 at €900 up from €735.90 in 2018. This increase of 22.30% in one year is the highest increase in recent times -especially in real terms- and many analysts, including AIReF -Report 45/18 on the Main Budgetary Lines of the Public Administrations 2019- predict that such a strong and sudden wage increase may have negative consequences on employment.

Amongst recent experiences of significant increases in the minimum wage in Spain it is worth noting the increase from €460.50 in 2004 to €600 in 2008. This increase of more than 30% is not comparable to the recent increase, however, since not only did it take place linearly over 4 years but it happened in a context of higher inflation than today. The most comparable previous experience with the current increase in the minimum wage took place in 2017, when the minimum wage was increased by 8% from €655.20 to €707.70 per month. Different econometric estimates of the impact of this increase show that it will have a negative impact on employment, albeit modest, and that, in general, it tends to be concentrated in the younger generation or among less-qualified workers.

On this occasion, the increase is a lot higher and the number of workers directly affected by the increase —those whose wage in 2018 was between the minimum wage in force this year and that approved for 2019— is very broad, greater than one million workers, and for many of them the wage increase will be very significant. It is completely legitimate to speculate that an increase of this size and implemented this quickly may have a significant impact on employment.

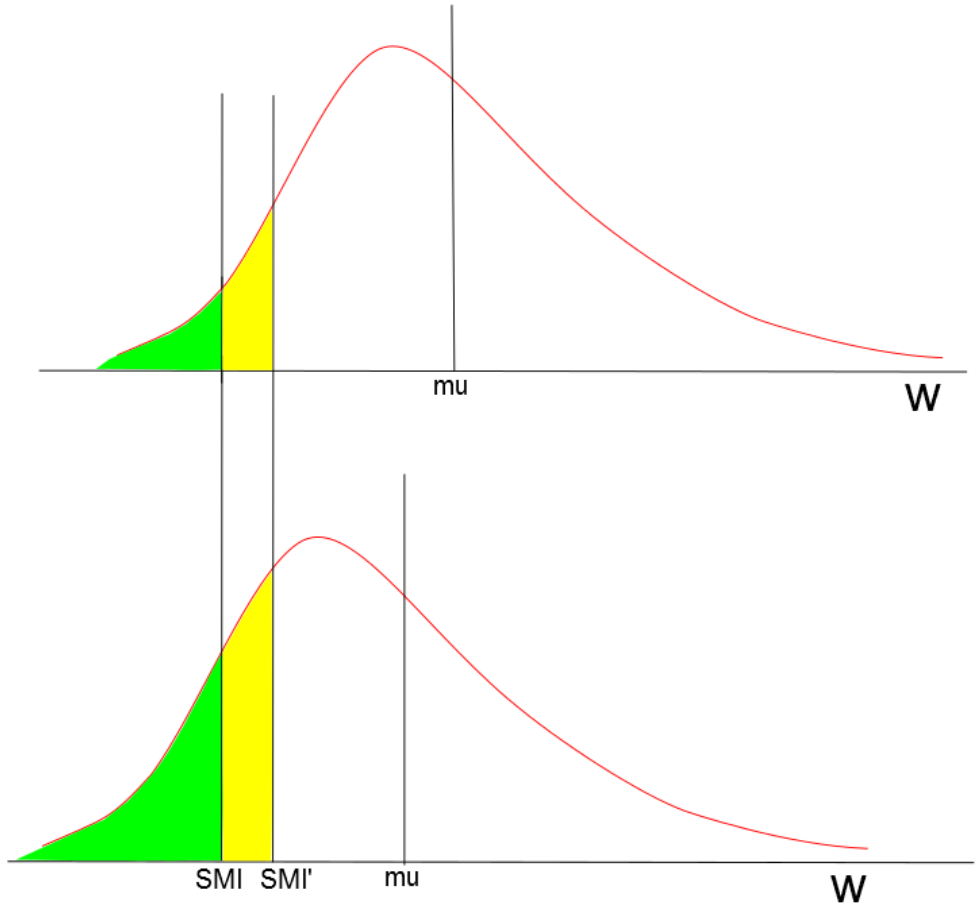
The first four months of 2019 have passed (six since the announcement of this measure) and an attempt should be made to make a preliminary estimate on the impact of the increase of the minimum wage to €900. This initial estimate can only use aggregate data to assess the impact on wages, professional development and working hours until the first microdata is available (individual data). Even so, bearing in mind the magnitude of the increase it cannot be ruled out that the aggregate data (statistics and time series) may already reveal some type of impact of the increase in the minimum wage.

The analysis carried out has used Social Security data; registrations with Social Security, unemployment benefit and contracts registered by the SEPE and LFS. Identifying the impact of the minimum wage depends on the capacity to separate these impacts from other concurrent causes that may have a simultaneous effect on employment. Given that in Spain the minimum wage

is a State-level initiative, increases in the Regions cannot be used to measure the differential effect between them, but a similar concept can be applied.

As the wage distribution in Spain is not uniform (some higher/lower than others), neither is the relative importance of the minimum wage. Therefore, in those Regions where the salaries are lower there should be more workers affected by the minimum wage and its hike than in those where the minimum wage to average wage ratio is lower. The idea, therefore, is to use the relative magnitude of the minimum wage as an approximation to the number of workers affected by the increase and ultimately the impact it has on employment. The Kaitz Index has been used as a first approximation to this relative significance, calculated as the ratio between the minimum wage and the wage costs per worker (normally the average wage is used) in the Region in question, which would be an average of the central point of the wage distribution.

FIGURE B1 – WAGE DISTRIBUTION

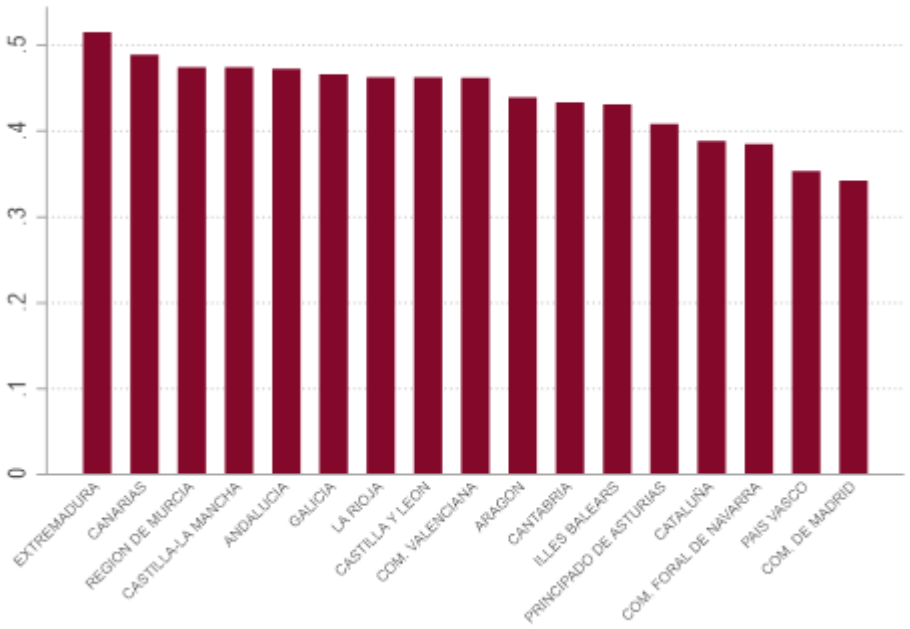


Source: AIReF

The assumptions on wage distribution means that in those Regions where minimum wage is relatively higher (upper part of Figure 1.1) the number of workers affected by the increase is also higher (difference between the yellow areas).

In this way, the Regions are ranked according to their position on the Kaitz Index, from Extremadura (51%) to Madrid (34%). While the increase of the minimum wage was already having an impact on employment, the impact should be more pronounced in those Regions where the wages are lower in comparison. In turn, the impact should be greater in those groups that earn the minimum wage more frequently (young workers and less qualified workers).

FIGURE B2 - KAITZ INDEX (MINIMUM WAGE COMPARED TO AVERAGE WAGE COST)BLAB BLA



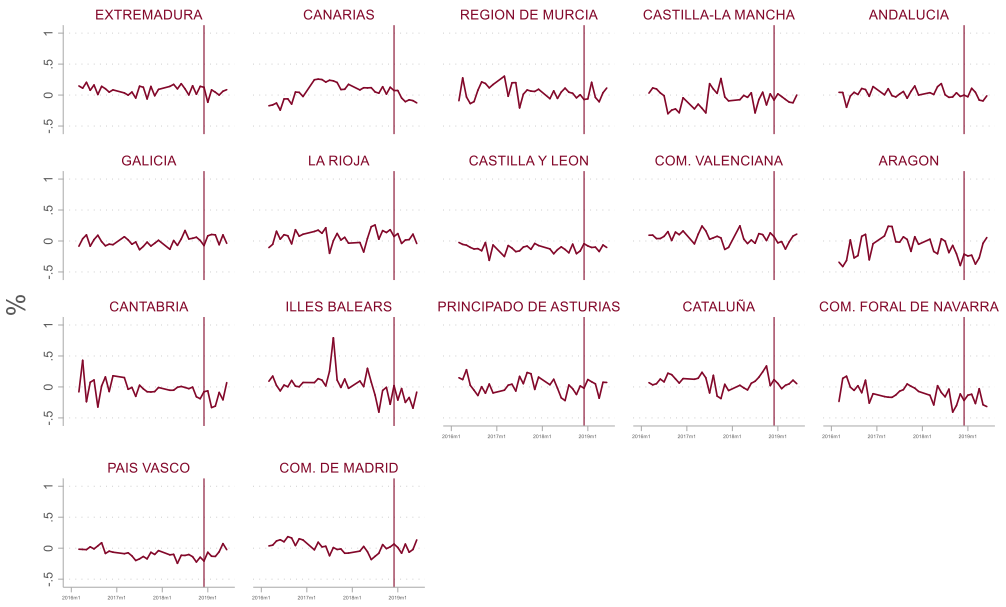
Source: INE and AIReF's estimates

From the aggregate data available to date, it is difficult to identify signs of a negative impact on those regions and sectors in which there should be a more reactive response in employment to the increase in the minimum wage.

Therefore, the difference between the yearly rate of change of job seekers with higher education and those without primary education – used as a proxy of workers with higher or lower qualifications, respectively-- does not

show any significant disruption coinciding with the entry into force of the new minimum wage (marked in Figure 1.3 by the vertical line) [3].

FIGURE B3 – DEMAND FOR EMPLOYMENT (3RD/2ND QUARTER GROWTH RATE)



Source: SEPE and AIReF's estimates

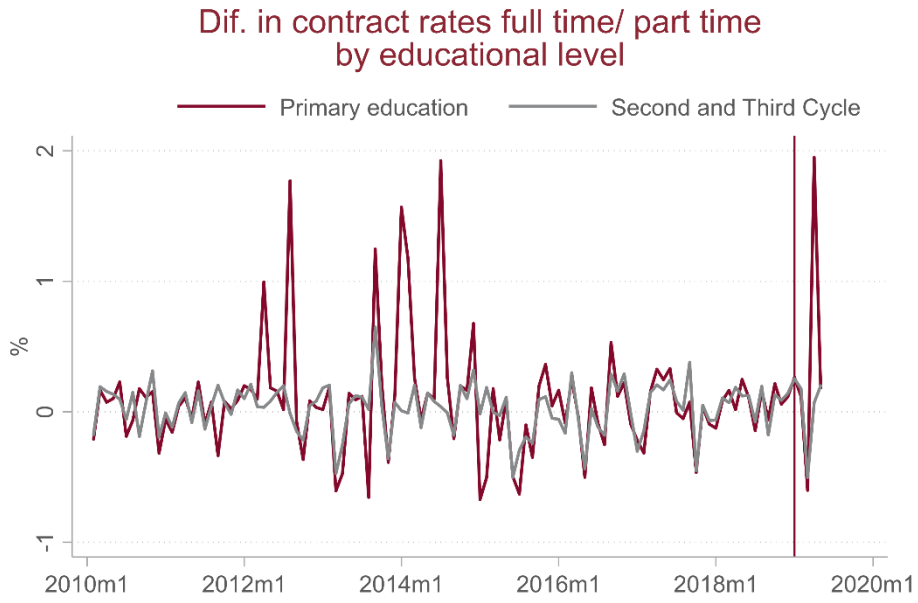
When comparing the yearly hiring rates between full-time and part-time contracts[4], again, no differences in qualification level are observed. Out of both types of contracts, temporary contracts are growing fastest, but the noisiness of the series calls for caution before reaching conclusions[5].

[3] The Regions in the figure are classified by their Kaitz Index, consequently the impact should be more noticeable in the top ones.

[4] In Spain, there is some evidence that the use of partiality has been one of the reasons why the minimum wage has had very little impact on employment. Jansen, M. (2016). This may be due to the adjustment made to the intensive margin (hours instead of job positions), with the wage bill being an "anchor" for employers, or even to an increase in unpaid overtime work or undeclared work.

[5] Unrepresented series

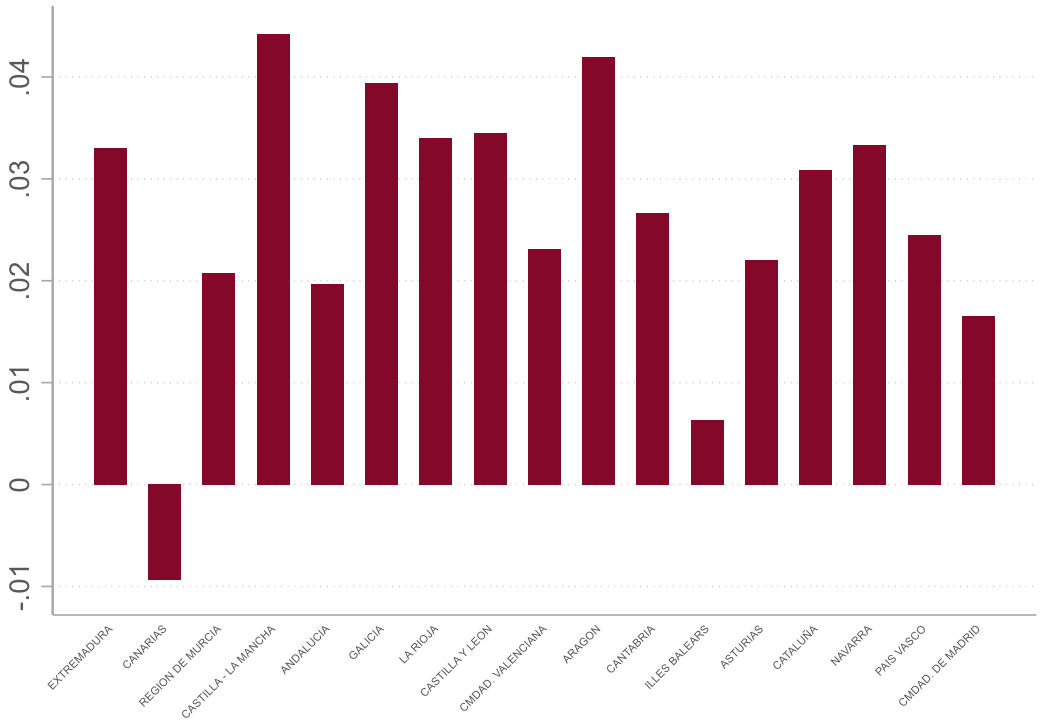
FIGURE B4 – TEMPORARY & FULLTIME EMPLOYMENT DIFFERENTIAL BY EDUCATION LEVEL



Source: SEPE (temporary contracts) and AIReF's estimates

Lastly, the third source available at the beginning of May 2019 is data on Social Security registrations by Region. One way of trying to separate the impact of the minimum wage from other factors that may be affecting employment is by analysing the difference between the rate of change of the General Scheme, which encompasses the majority of self-employed workers who have been directly affected by the increase together with the *Régimen Especial de Trabajadores Autónomos* (Special Scheme for Self-employed Workers - RETA), that includes self-employed workers who are not affected. Figure 1.5, once again, does not show any clear correlation between this difference and the ranking of the Regions according to the Kaitz Index.

FIGURE B5 – EMPLOYMENT GROWTH DIFFERENTIALS

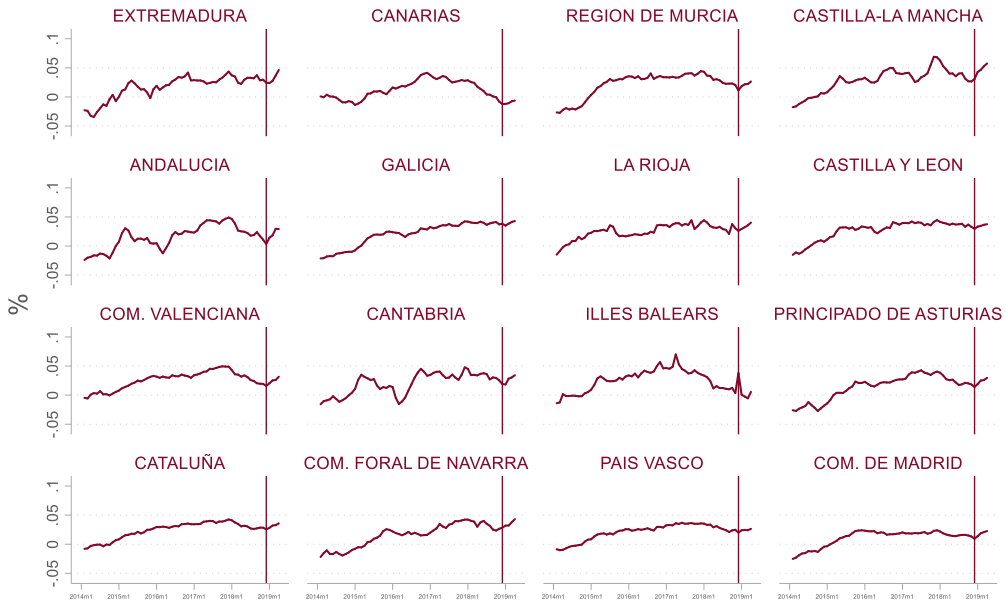


Source: TGSS

The time series of these differences does not show any pattern with the Kaitz Index even though it does indicate a disruption with respect to the end of 2018 in the opposite direction to what might be expected, observing an increase in the differences between affiliation to the General Scheme and to RETA (see figure 1.6)[6]

[6] Caused by a downturn in the growth rate of the RETA at the beginning of the year.

FIGURE B6 – EMPLOYMENT GROWTH DIFFERENTIALS IN SOCIAL SECURITY REGISTER



Source: TGSS

In summary, the available evidence to date does not allow for drawing any conclusions that affirm that the increase in the minimum wage is having a negative impact on employment. However, this statement must be appropriately qualified:

- On the one hand, the data available to date are only aggregate data. Once individual data are available a more detailed analysis on the impact of the increase may be conducted.

- The analysis carried out has only addressed the aggregate number of those affiliated to Social Security, job seekers or contracts recorded. It is not possible to analyse the impact on the time worked (the so-called intensive margin) from the data available. Once again, this problem will be solved once the relevant microdata is made available.

- Three months have passed since the entry into force of the measure. The impact that the increase might have had would have been a fraction of the full impact. In a labour market such as the Spanish one, with such high temporary employment rates, it is foreseeable that the possible effect on employment terminations occurs more through the termination of temporary contracts in force than through redundancy; therefore, there will be a lag.

- Lastly, the analysis performed has used a Kaitz Index as a measurement of the relative position of the minimum wage in the wage distribution and therefore the number of workers potentially affected. This indicator is an imperfect measure of the former. A more precise measurement would serve to qualify the results.

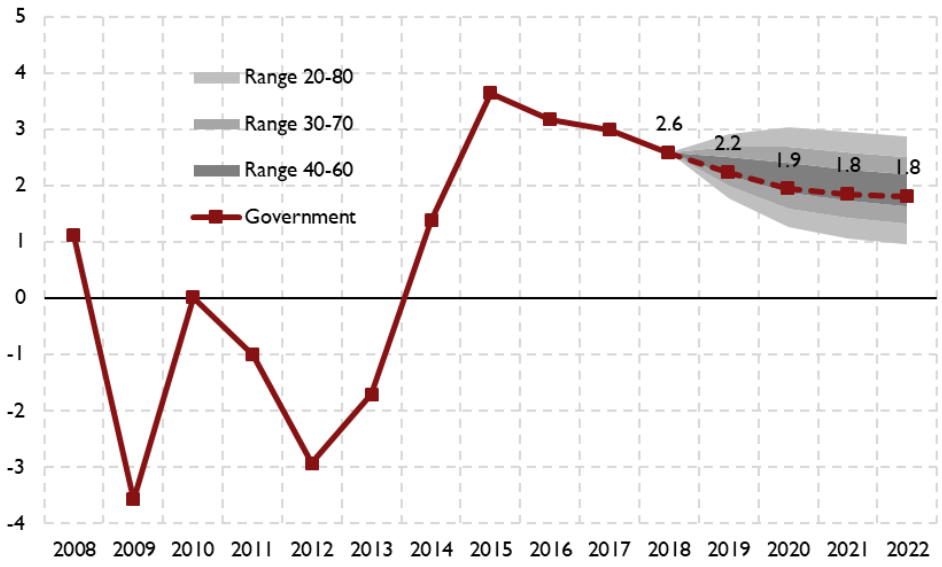
In the case of the foreign sector, it is forecasted that its contribution to growth will be maintained on slightly negative ground, in line with that observed over the last quarters. Although the inertial scenario derived from AIReF's models envisages a trend marked by greater trade openness, the downturn in the same, coupled with a lower-than-expected growth of foreign markets, conditions the exports forecast. The trend in imports is in line with the evolution of the economy's final demand. As explained earlier, the accumulation of external risks may have a significant impact on this path.

Ex-ante assessment of official forecasts

Summary of the assessment

The slowdown of real GDP growth shown in the 2019-2022 Stability Programme Update (SPU) is considered prudent. The Government's estimates anticipate that the growth of aggregate activity will decline slightly from 2.6% recorded in 2018 to 1.8% in 2022. These forecasts are in line with the rest of the forecasts available, both in the private and public sector, that generally only cover 2019 and 2020. Regarding 2021, the Bank of Spain estimates an increase of 1.7% (0.1 less than the Government), identical to the figure estimated by the IMF, which also maintains the same increase for 2022. In any case, with respect to AIReF's models, the growth of GDP contemplated in the SPU is considered prudent for the forecasting horizon.

Figure 18. REAL GDP GROWTH (%)

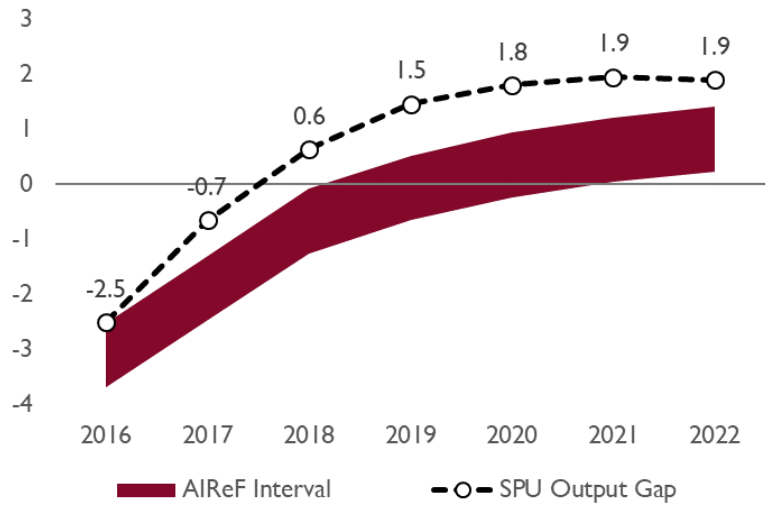


Source: Ministerio *de Economía y Empresa* (dashed line) and AIReF's estimates

In terms of the cyclic evolution, the SPU envisages a prudent scenario, with the economic cycle maturing earlier. The evolution of the output gap forecast by the SPU is thought to be advanced with respect to the cycle estimated by AIReF, with an output gap that returns to positive ground in 2018. The cycle presented by the Government hits its maturity point half-way through the forecasting period, before that estimated by AIReF (see figure 19). Furthermore, this characteristic implies a lower average growth of potential GDP. As observed in figure 20, there are notable differences in the potential growth underlying the Government's estimate of the cycle compared to

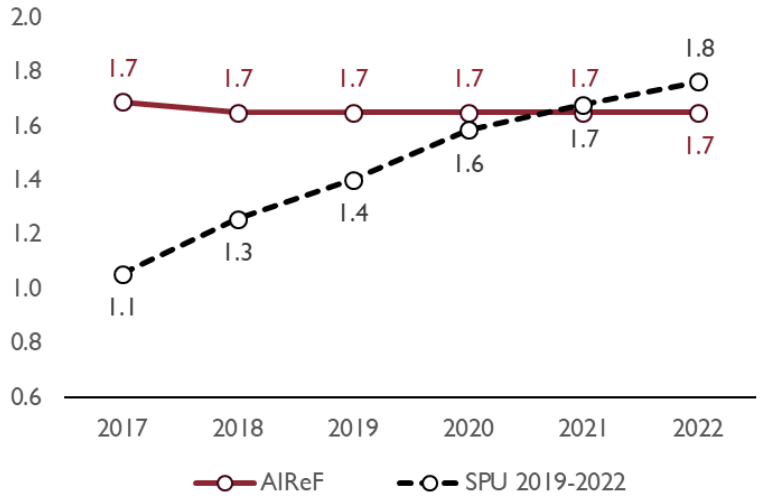
AIReF's estimate. The SPU presents a potential GDP growth forecast that slightly increases until it converges with values close to those estimated by AIReF at the end of the period.

Figure 19. OUTPUT GAP (%)



Source: *Ministerio de Economía y Empresa* and AIReF's estimates

Figure 20. POTENTIAL GDP (RATE OF CHANGE %)



Source: *Ministerio de Economía y Empresa* and AIReF's estimates

The composition of growth is prudent regarding the contribution of domestic demand, offset by an optimistic view of the external sector. This downturn is characterised by a contribution to national demand that is gradually slowing down, while the contribution to growth in external demand becomes neutral as of 2020 and up to the end of the forecasting horizon. Even though the

profile and the level of growth are considered realistic overall, their composition presents a downward trend in domestic demand and upward trend in the contribution of the external sector, based on AIReF's forecasts.

Assumptions on the evolution of the external environment

The basic assumptions underlying the macroeconomic scenario accompanying the 2019-2022 SPU are considered feasible overall. With respect to the previous 2018-2021 SPU, the external assumptions made by the Government have been revised and now reflect a scenario of greater uncertainty about worldwide growth and inflation.

The Government forecasts a growth of world GDP and in the Eurozone, in line with the main international agencies. Since 2018, economic activity and world trade alike have experienced a less favourable scenario than expected just one year ago. Trade tensions have significantly affected the main trade partners. As a result, the world growth assumption has been revised downwards, with special attention paid to growth of the main trade partners in the Eurozone. The Government anticipates that world growth, excluding the European Union, will stand around 3.6% in 2019 and will return to a more stable growth path as of 2020. This is in line with the forecast of the European Union. Likewise, the assumptions for GDP growth in the Eurozone are aligned with the forecasts of the European Central Bank and the European Commission that, after the negative surprises in economic growth linked to elements such as trade tension between the Peoples' Republic of China and the USA, have lowered their growth forecasts.

The Government's expectations with respect to the exchange rate of the Euro against the United States Dollar coincide with the top forecasting agencies. In relation to the exchange rate of the United States Dollar against the Euro, the Government establishes a similar forecast to that envisaged a year ago, expecting relative stability in the long term in the forecasting period. In reference to the nominal effective exchange rate, in a similar way to the European Commission, a depreciation of 1.6% in 2019 was forecast, which could be partially counterbalanced by the behaviour of external demand.

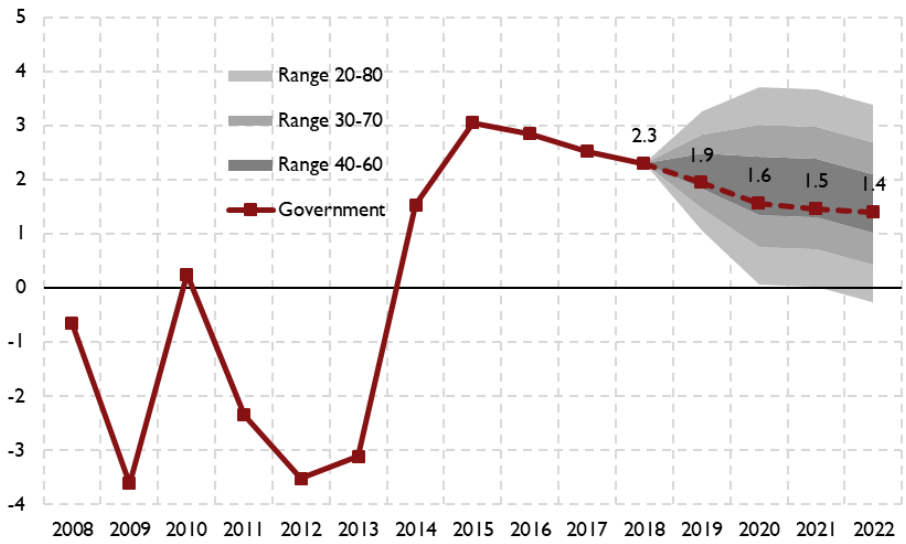
The path of the oil price over the last few months has seen upward surprises and it has followed a similar trend to that observed at the beginning of 2018. In relation to the expectations on the evolution of the oil price a similar scenario has been observed to that detailed in the SPU 2018-2021, that was amended in the end due to an unfavourable dynamic in the second half of 2018. This scenario, albeit aligned with the forecasts of the main international agencies, is subject to notable oscillations.

The assumption of the Government with respect to the performance of the ten-year government debt securities are slightly optimistic, lower than expected by the fixed-income market. The profile envisaged in the macroeconomic scenario of the SPU shows movement from the forecasted 1.3% in 2019 to 1.6% in 2022. Although in 2019 the delay in the expected normalisation of the ECB's monetary policy has notably contributed to reducing the required return on sovereign debt across the eurozone, the secondary markets anticipate a somewhat more pronounced rise in the returns at the end of the forecasting period. In all events it is anticipated that the normalisation process of the monetary policy will be drawn-out over time, therefore it is expected that the intervention rates will remain at historical lows for a prolonged period.

Main demand components

Breakdown by components, in relation to private consumption, the Government's forecasts are considered prudent. The Government's forecast for the evolution of private consumption, albeit in line with international Institutions, shows a slight downturn when comparing it both with the consensus of national institutions, as well as the intervals estimated by AIReF (see figure 21). Consumption depends on high synchronisation with the economic cycle, which justifies its downturn faced with signs of maturity present at the end of the forecasting period.

Figure 21. GROWTH OF REAL PRIVATE CONSUMPTION (%)

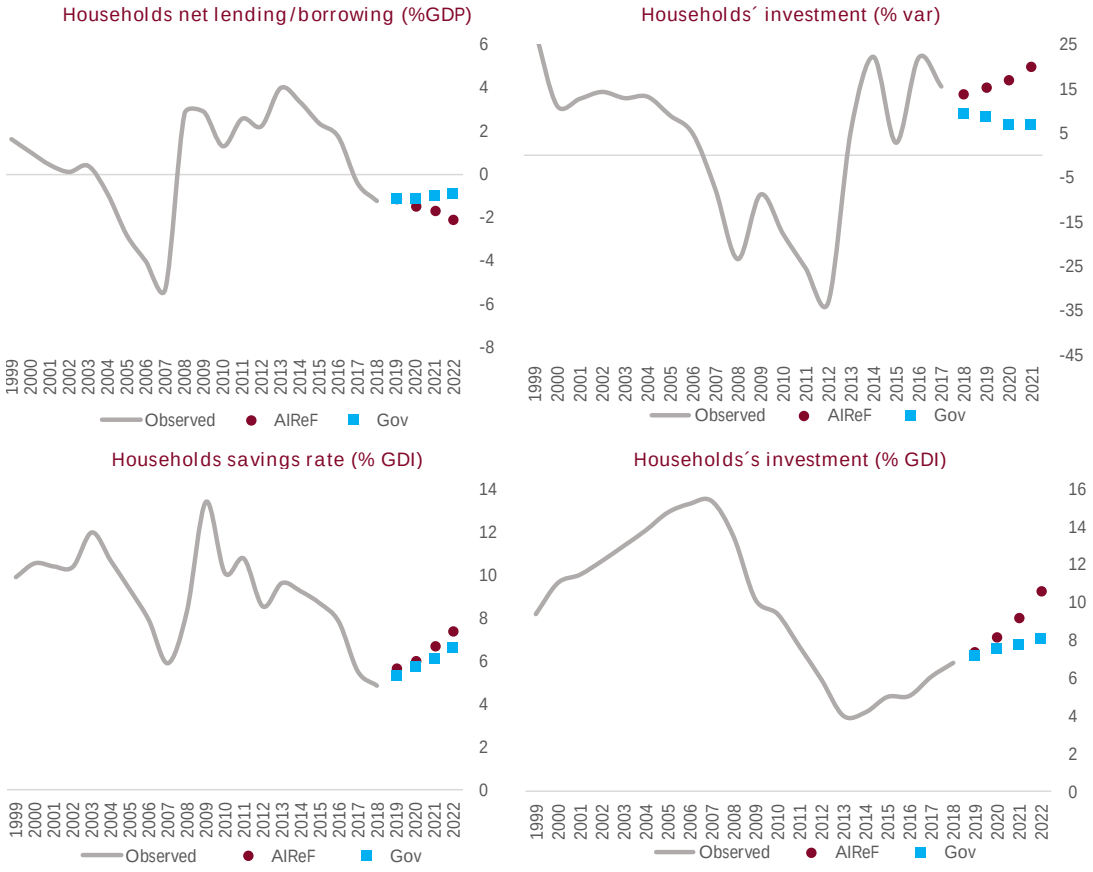


Source: *Ministerio de Economía y Empresa* (dashed line) and AIReF's estimates

The prolongation of the private consumption expansion cycle implies a deterioration of household net lending, the complete opposite to the

Government's forecast[7], since, as reflected in the definition of the inertial scenario, the evolution of consumption will be supported by various levers, such as a dynamic labour market, the sound financial situation of households, consistent favourable credit facilities and the presence of expansion measures with an effect on disposable income in the short term, coupled with increased borrowing and recovery of housing wealth reflected in an increase in investment by households, that will have repercussions on the deterioration of net lending (see figure 22).

Figure 22. AIREF-GOVERNMENT FORECAST COMPARISON FOR HOUSEHOLD ACCOUNTS SECTOR AND INTERNATIONAL SUSTAINABLE LIVELIHOOD FOUNDATION (ISLF) - 2019-2022 SPU

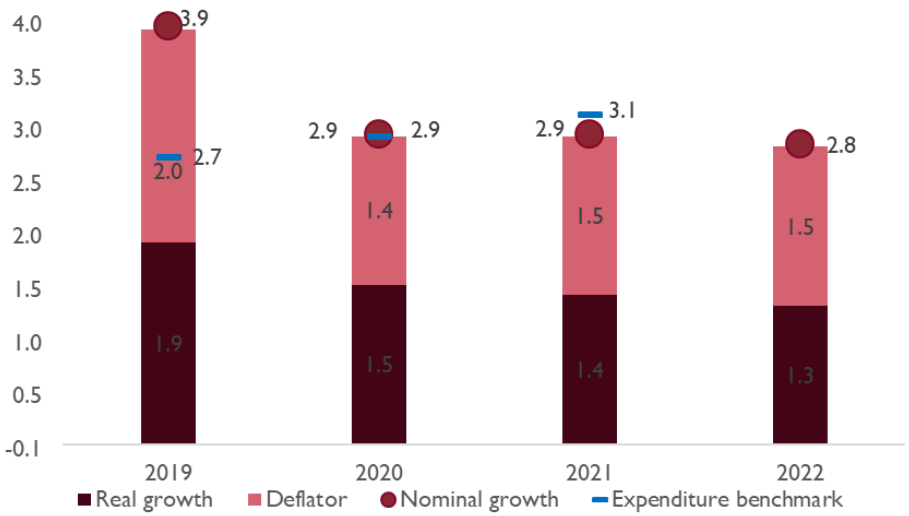


Source: *Ministerio de Economía y Empresa* and AIReF's estimates

[7] AIReF welcomes the Government's submission of the estimates for Household Sector Accounts and for the International Sustainable Livelihood Foundation (ISLF), following AIReF's suggestion for best practice to the Government.

The forecast of nominal public consumption in the SPU scenario maintains a credible profile[8]. This variable is key to linking the macroeconomic scenario with the budgetary component, which has been projected up until now with ambitious constraint in previous SPUs. In the current edition the Government predicts a slight rise of public consumption in nominal terms in 2019, maintaining an essentially restrictive stance for previous years, with growth still below nominal GDP. The contained evolution of public consumption is a key element in the Government's deficit reduction strategy, as long as the evolution of the remaining revenue and other expenditure items included on the Government's fiscal sheet materialise. Public consumption represents close to 20% GDP and is, therefore, a key element in the macroeconomic scenario envisaged in the SPU, it being the demand component for which the Public Administrations have a greater scope for action[9]. A breakdown of nominal and real evolution expected by the Government and its comparison with the expenditure rule is shown in figure 23.

Figure 23. GROWTH OF NOMINAL AND REAL PUBLIC CONSUMPTION (%)



Source: *Ministerio de Economía y Empresa* (dashed line) and AIReF's estimates

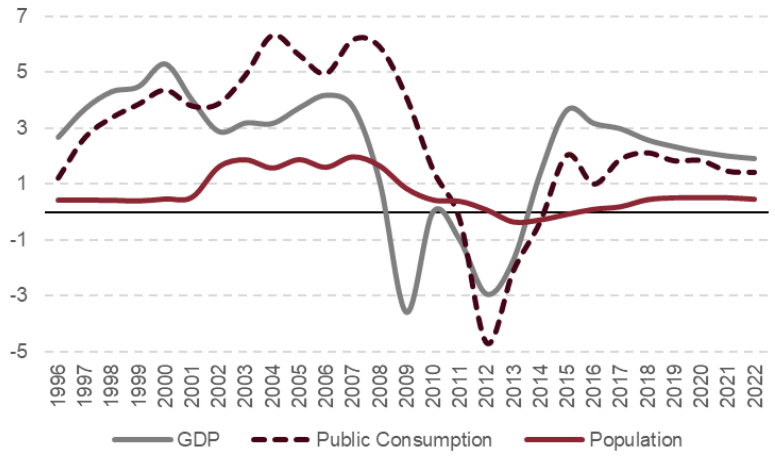
In real terms it is expected that public consumption will grow at slightly more moderate positive rates than the last two years, which may be slightly

[8] Information has been made available on the three main items making up public consumption (compensation of employees, intermediate consumption and social transfers in kind acquired on the market) aligned with the evolution of nominal public consumption projected in the SPU. However, information about other components that make up the aggregate has not been provided, such as so-called Sales (not disaggregated), or fixed-capital consumption.

[9] The meaning and assessment of public consumption is given in more detail in WP 2/2017 http://www.airef.es/es/contenidos/documentos-tecnicos/1004-documento-de-trabajo-2-2017-a-que-nos-referimos-al-hablar-de-consumo-publico

downwardly biased. The feasibility of this forecast essentially depends on two opposing factors[10]. On the one hand, population trends that are expected to rise slightly in this period according to Instituto Nacional de Estadística[11] (National Statistics Institute - INE) projections. This would entail a greater boost for expenditure as it would mean greater aggregate need for public services. On the other hand, it is to be expected that the good pace of the economy will exert pressure in the same sense in order to recover a higher level of coverage of public services (see figure 24). Therefore, an upside risk accordingly exists. However, the path forecast by the Government remains within the 40-60 confidence range (see figure 25).

Figure 24. REAL GROWTH OF PUBLIC CONSUMPTION, GDP AND POPULATION (%)

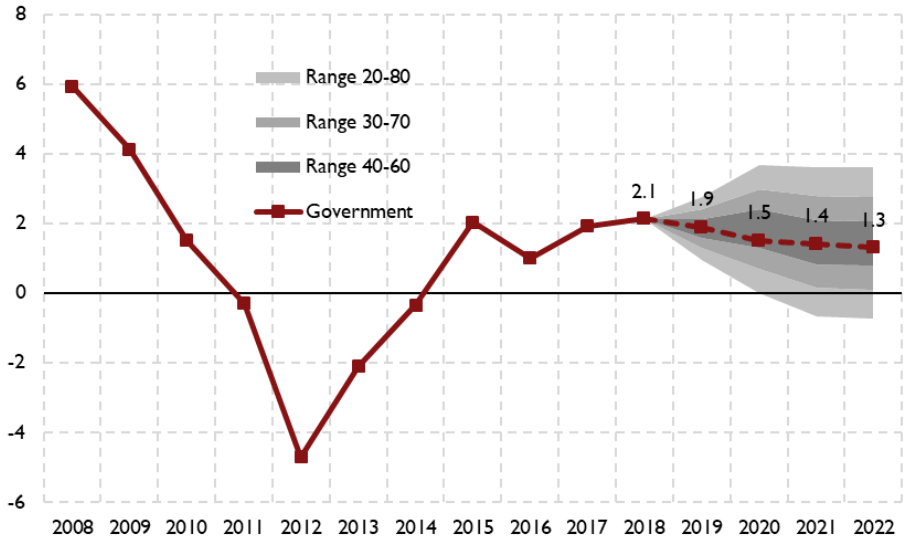


Source: *Ministerio de Economía y Empresa*, the *Intervención General de la Administración del Estado* (General Intervention Board of the State Administration - IGAE) and the INE

[10] An error correction model has been developed that relates public consumption in real terms with real GDP and the population.

[11] It is expected that the total population will rise by 0.45% year-on-year in 2019, 2020, 2021 and 2022 respectively.

Figure 25. GROWTH OF REAL PUBLIC CONSUMPTION (%)

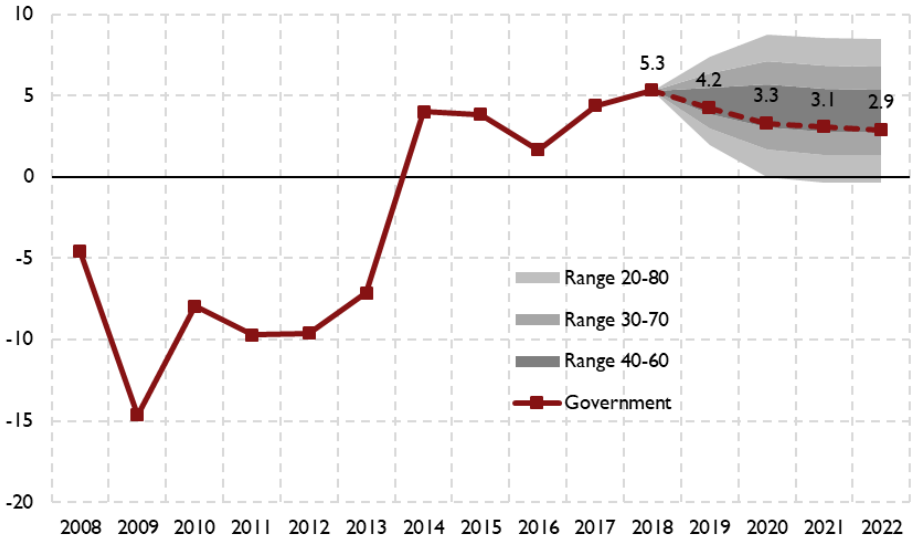


Source: *Ministerio de Economía y Empresa* (dashed line) and AIReF's estimates

With respect to investment, the Government's forecasts for gross fixed capital formation are considered feasible. Of its components, the trend projected by the Government for investment in construction leans towards pessimistic. Regarding the projections of AIReF's models a more dynamic progress is predicted for investment in construction than reflected in the SPU. The sound financial position of households, together with an upturn in public works serve as support to this evolution. Likewise, the recovery of housing prices and the ever-present potential of mortgage loans will also act as drivers.

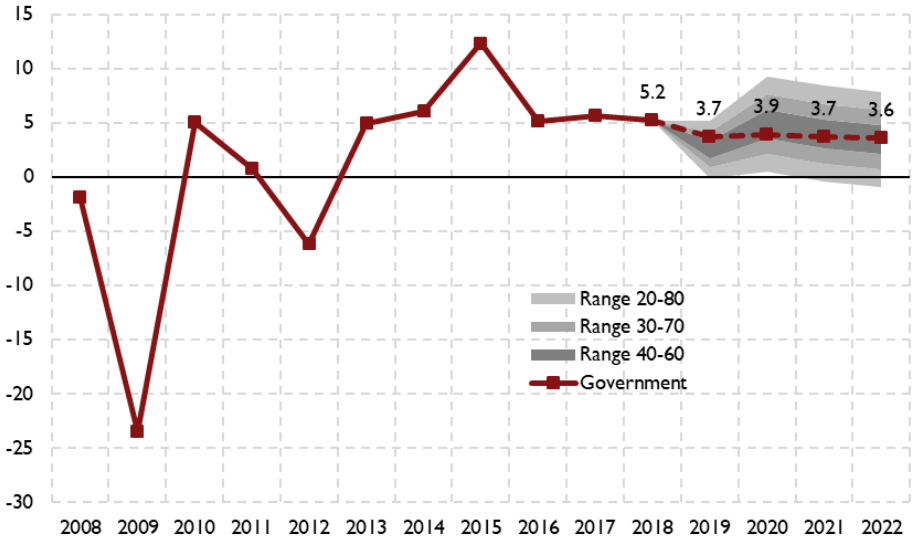
As far as investment in equipment is concerned, AIReF has detected a carryover effect in 2019 due to poor data published by National Accounting for the second half of 2018, that the Government seems to be downplaying. Apart from this fact, its forecast, based on the sound position of the companies and the historic trend supporting medium-term dynamic evolution, is reasonable, albeit more contained than the previous cycle. It is important to note that foreign direct investment flows continue to be high, but the uncertainty in the international context could weigh on them.

Figure 26. GROSS FIXED CAPITAL FORMATION (GFCF) AND INTELLECTUAL PROPERTY (%)



Source: data from the *Ministerio de Economía y Empresa* (dashed line) and AIReF's estimates

Figure 27. GROWTH OF THE GFCF IN EQUIPMENT AND CULTIVATED ASSETS (%)

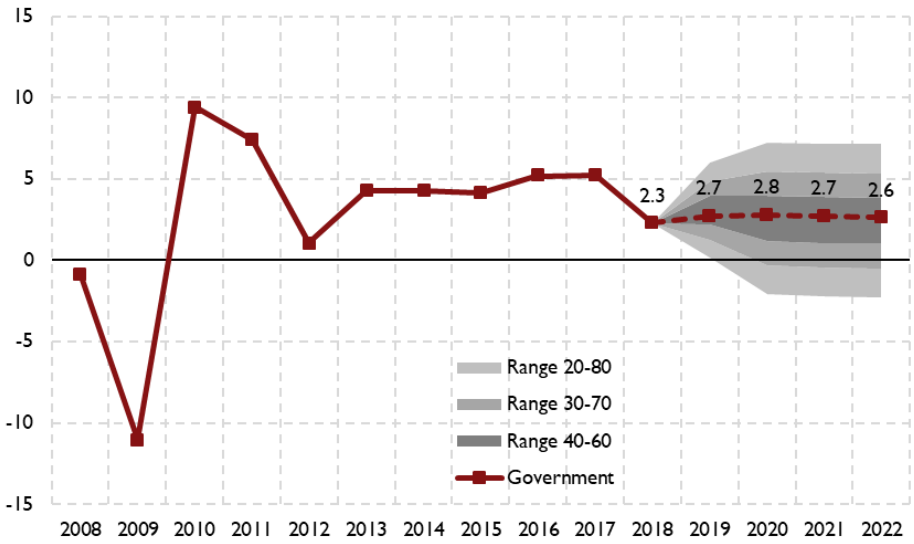


Source: *Ministerio de Economía y Empresa* (dashed line) and AIReF's estimates

The expected evolution of exports is one of more moderated growth but relatively sustained and considered to be likely. Last year results were negatively affected by transitional factors (for example the recovery of tourism flows to direct competitor countries), while it is foreseeable that the accumulated competitiveness gains will support a better performance as of 2019. World trade in goods continues to be the main driver, with a slightly

positive contribution to the relative Unit Labour Cost (ULC) in the short-term and the rate of change in the medium-to-long term. However, in the medium-term a lower rate of growth of the external markets may be a factor that mitigates export dynamics. Overall, the forecast presented by the Government in the years covered by the SPU remains very close to the half-way point of AIReF's forecast interval (see figure 28), this progress being somewhat lower in the medium-term to the scenarios presented by the IMF, European Commission and the Bank of Spain.

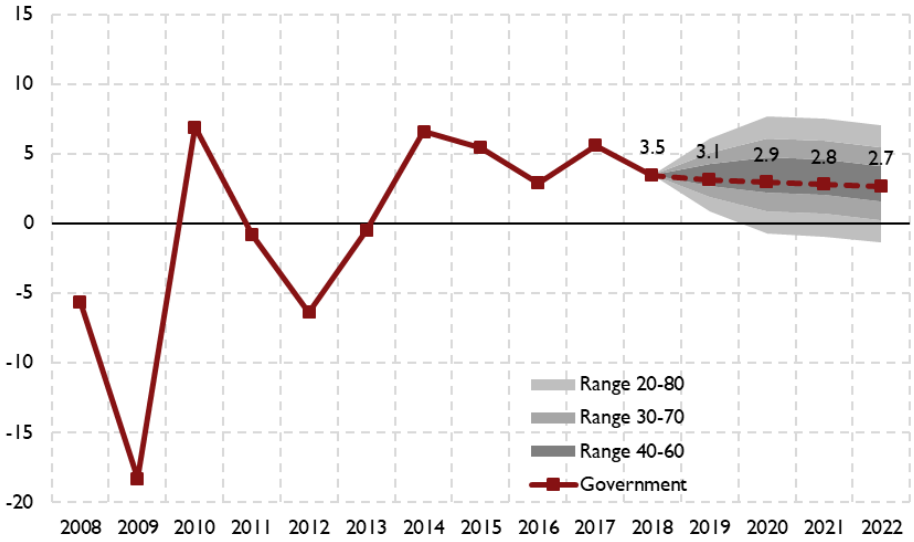
Figure 28. GROWTH OF REAL EXPORTS (%)



Source: *Ministerio de Economía y Empresa* (dashed line) and AIReF's estimates

In the case of imports, the trend described in the SPU is considered feasible, although slightly downwardly biased. The figure predicted by the Government for the increase in imports is also below that of the rest of the national and international institutions. However, it is true that their progress is conditioned by less intense domestic demand forecasted by the Government, and even in the short-term the behaviour of prices relative to imports may limit their growth. In any case, the Government's estimates largely fall within the intervals derived from AIReF's models. In an aggregate way, in terms of contribution of the external balance to growth, the Government's forecasts point to the maintenance of a positive contribution, in contrast to the slightly negative contribution of AIReF's models.

Figure 29. GROWTH OF REAL IMPORTS (%)

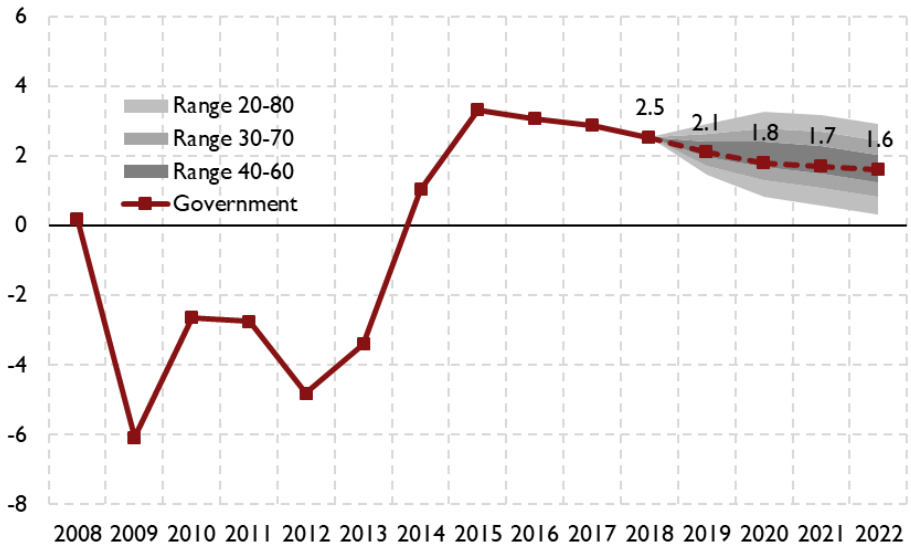


Source: *Ministerio de Economía y Empresa* (dashed line) and AIReF's estimates

Labour market and prices

The Government's forecasts for total employment rate (full-time equivalent), are considered to be feasible. The SPU anticipates employment to grow 0.1% below real GDP for the entire budgetary horizon. This dynamic assumes maintenance of the progress in productivity per employee, not deviating too much from the rest of the forecasts available and those made by AIReF itself. In this way, it is expected that the dynamic observed in 2018 will continue with more contained job creation in the medium-term. Its main support will continue to be the maturation of the economic cycle, together with a moderate increase in the active population. It is important to note that, for now, the possible impact of the increase in the minimum wage on employment cannot be identified in the aggregate data. Under these conditions, the decline in the unemployment rate projected by the Government is very similar to that expected by AIReF. At the end of the forecasting horizon unemployment may reach levels close to 10%, despite the fact that the structural or long-term rate should continue to be around 14% for the next few years.

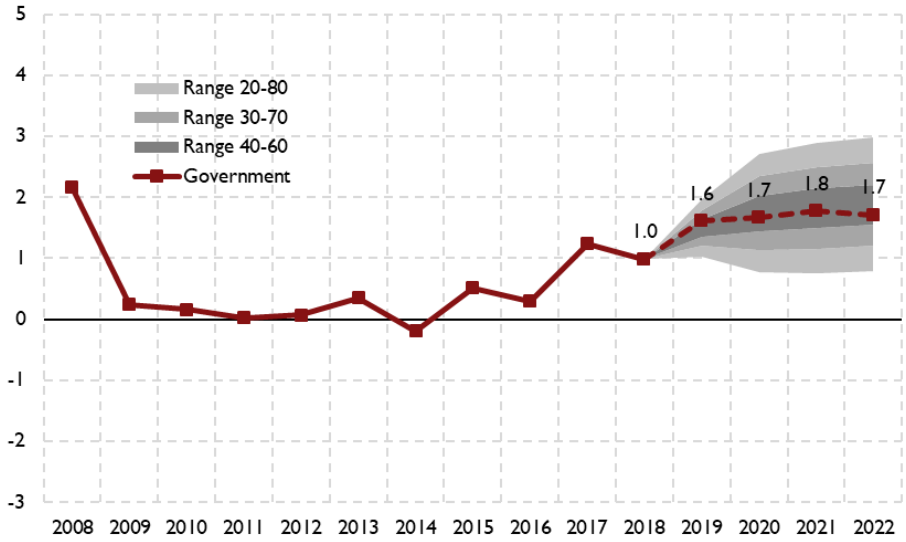
Figure 30. GROWTH OF EMPLOYMENT (%)



Source: *Ministerio de Economía y Empresa* (dashed line) and AIReF's estimates

The macroeconomic scenario of the 2019-2022 SPU includes a gradual acceleration of prices in line with AIReF's forecasts. Both the deflator of private consumption as well as GDP are expected to slowly pick up over the period until it reaches levels close to the inflation target of the European Central Bank for the end of the forecasting horizon. The path plotted for the GDP deflator is entirely consistent with AIReF's forecast models, albeit somewhat less expansive in the final part of the forecasting period. In any case, the greater dynamism of prices is in line with the cyclical phase and is consistent with the gradual acceleration of the underlying inflation, driven by domestic inflationary pressures due to reaching a positive output gap in such a short period of time. In turn, oil prices are not expected to exert upward pressure, although there may be risks in the short-term (Libyan conflict, sanctions on Iran and tensions in Venezuela). In addition, despite the expected positive differential in growth rates with respect to the Eurozone, it is expected that this will not translate into positive differential in growth rates of consumer prices.

Figure 31. GDP DEFLATOR GROWTH (%)



Source: *Ministerio de Economía y Empresa* (dashed line) and AIReF's estimates

The substantial increase envisaged in the SPU for wages contrasts with the moderate evolution of private consumption. For its part, the evolution of compensation per employee reflected in the Government's macroeconomic scenario marks a substantial gradual increase, greater than the evolution of prices, with rates higher than both private consumption and the GDP deflator, involving a similar gain in purchasing power. This fact contrasts with the moderation reflected in the scenario for private consumption, not expecting this gain to transfer to the real part of the economy. However, the profiles of compensation per employees of the Government and AIReF are different, since a higher wage increase is expected for this year as result of the rise in the minimum wage, whilst in the medium-term a tighter alignment with the GDP deflator is predicted. Likewise, considering that civil servant wages will increase by 2.7% on average in 2019, it can be concluded that the Government's forecasts involve a much more contained private wage dynamic, where there are no signs as yet of any transfer or mirroring effect from public wage agreements to private wages.[12]

In budgetary matters, AIReF considers feasible the macroeconomic impact of the measures advanced by the Government. AIReF made its own estimation of the macroeconomic impact of the different measures contained in the

[12] In this context, it should be noted that the information provided by the SPU does not discriminate between the private and public sector, and therefore it has not been possible to perform an individualised exhaustive analysis on the evolution of wages and productivity in each sector.

Budgetary Plan in its report on the Main Budgetary Lines of the Public Administrations. Thereafter, it was updated based on its report on the macroeconomic forecasts of the Draft General State Budget for 2019, underscoring that there were minimal changes and the same assessment would be maintained. In line with this analysis, AIReF maintained its assessment. Once the measures included in the 2019-2022 SPU have been analysed, AIReF maintains its assessment of the macroeconomic impact detailed in previous reports, estimating an approximately neutral aggregate effect, in line with what the SPU contains.

Ex-post assessment of the 2015-2018 forecasts

Realistic macroeconomic and budgetary forecasts are required by national and EU-level legislation and are subject to continuous assessment. According to current legislation, the Government must prepare a medium-term budgetary plan from realistic and unbiased macroeconomic and budgetary projections.[13] This assessment must encompass at least the last four quarters for which accounts have been closed and must be made public. Furthermore, it must be performed on a periodic basis, be unbiased and be based on objective criteria. In particular, AIReF's Organic Statute requires that it includes an assessment on the existence of any significant bias over the last four years in its reports on macroeconomic forecasts.[14] If forecast bias are identified, the Government must take the necessary actions to correct them and make them public.

The analysis of the forecasting errors in previous years allows any significant bias to be identified. Since 2015, AIReF has been conducting an analysis of the forecasting errors of the macroeconomic scenario included in the SPU. To do this, first the difference (the forecasting error) between previous macroeconomic projections and the data observed in National Accounting are calculated. Second, those forecasting errors falling outside the interquartile range of the Consensus of forecasting professionals (included in the FUNCAS panel) are classified as "large". In addition, a "large" error is also classified as "unjustified" if the deviation or error made has not turned out to be a better forecast of the data (once observed). Lastly, if a large and

[13] Directive 2011/85/EU of the Council, of 8 November 2011, on requirements applicable to the budgetary framework of the Member States and Royal Decree 337/2018, of 25 May, transposing this Directive into Spanish Law.

[14] Article 14.4 of Organic Law 6/2013, of 14 November, creating AIReF.

unjustified error for a specific variable is systematically repeated (i.e. it occurs for at least four consecutive years) this is classified as a significant bias.[15]

Drawn from its analysis, AIReF has identified large biases in previous editions and it has made recommendations in this respect. In previous reports, AIReF underscored the existence of a significant bias in the public consumption forecasts for the year following the forecasts prepared in autumn. As a result, it recommended that Government "adopt and publish the necessary actions to correct the significant biases detected".[16][17] Consequently, the Government committed to improving its forecast models and publishing its methodology, amongst other actions.

Even though no large biases have been identified upon analysing the 2015-2018 period, the accuracy of the forecasts noticeably subsided in 2018. Similar to the 2014-2017 period, using its own methodology AIReF did not identify large biases in the Spring forecasts for 2015-2018 in the current year nor the following one. However, large forecasting errors have been identified in nearly 60% of the cases analysed, of which 84% have been unjustified. This reduction of forecasting accuracy is more apparent in 2018, when the proportion of large and unjustified errors increased considerably. Such errors have been identified in all variables analysed except GDP and imports. With respect to Gross Capital Formation forecasts for the current year, large and unjustified errors have been observed in the last three years analysed.

In the case of Public Consumption forecasts for the following year, the Government showed worse forecasting performance than the panel of private forecasters. As shown in figure 32 and figure 33, for the 2015-2018 period the mean squared error of the Government's Spring forecasts are in the same range as those recorded by the panel of private forecasters (both in the forecasts for the current year as well as the following year). However, at the level of the individual components, the Government's forecasting efficiency is slightly lower than the panel's, with some exceptions. In the case of Private Consumption forecasts for the following year and the unemployment rate for the current and following year, the Government has presented more accurate forecasts on average. Furthermore, in the case of Public Consumption forecasts, the panel of forecasters have been substantially more accurate than the Government. In this context, AIReF awaits the publication

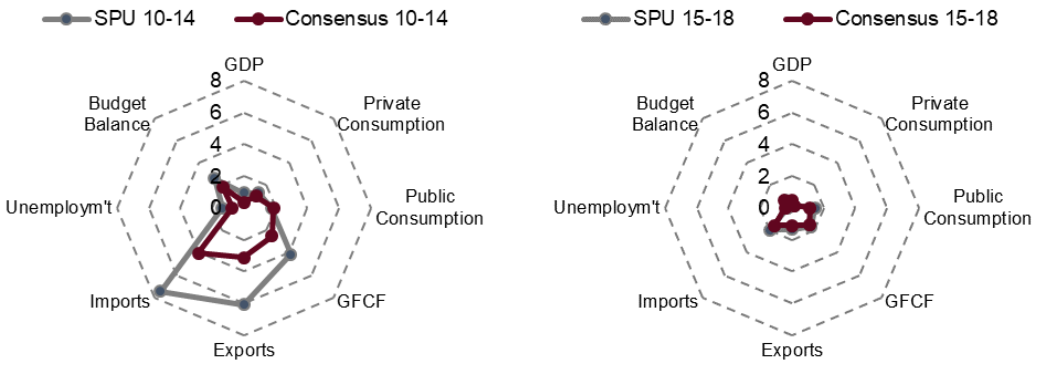
[15] A detailed description of the methodology used can be found in the Report on the macroeconomic forecasts of the Draft General State Budget for 2015.

[16] Report on the Macroeconomic Forecasts of the 2017 Draft Budgetary Plan..

[17] Report on the Macroeconomic Forecasts of the 2018 Draft Budgetary Plan..

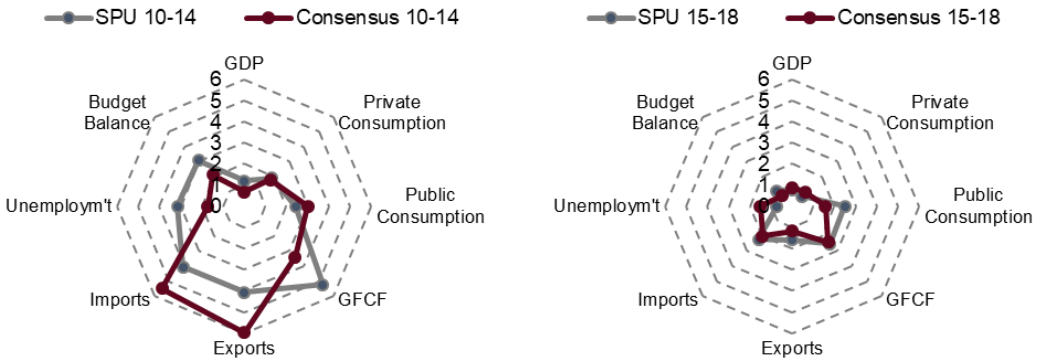
of the measures announced by the Government to improve the Public Consumption models.

Figure 32. ROOT MEAN SQUARE ERROR (RMSE) – CURRENT YEAR FORECAST (%)



Source: AIReF's calculations based on INE and *Ministerio de Economía y Empresa* data .

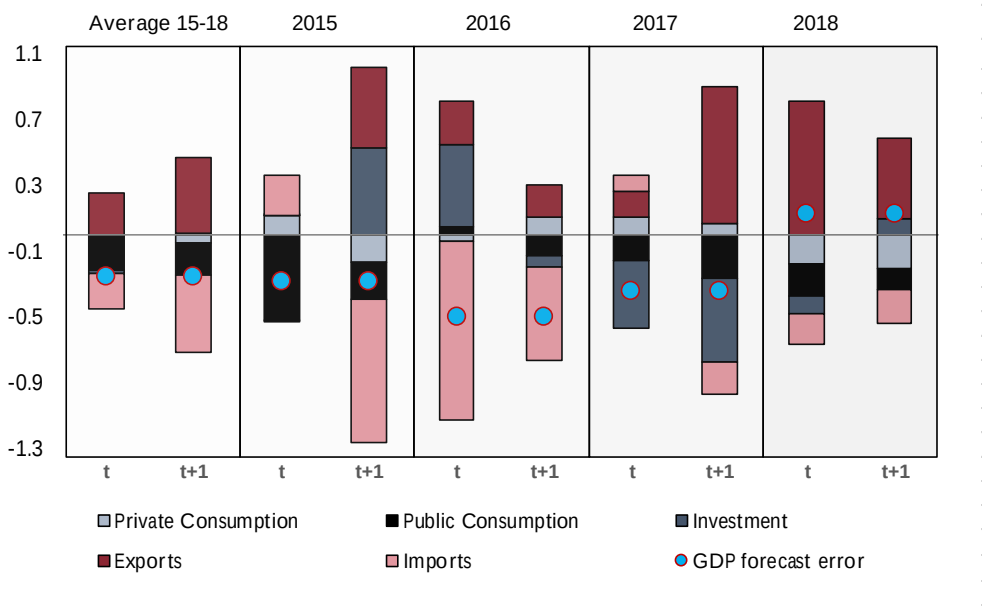
Figure 33. ROOT MEAN SQUARE ERROR (RMSE) – FOLLOWING YEAR FORECAST (%)



Source: AIReF's calculations based on INE and *Ministerio de Economía y Empresa* data

The bias observed in average GDP growth 2015-2018 can be explained almost entirely by the bias observed in Public Consumption. Albeit true that the projection was slightly lower on average than the final observed value, at the forecasting performance component level there is considerable disparity. Firstly, the forecasting errors of Private Consumption and Gross Capital Formation contributed practically zero to the forecasting errors of GDP, both for the current year and for the following one. Furthermore, the poor forecasting performance in exports and imports, which were over-estimated in equal proportion, have had a relatively neutral impact on GDP forecasting errors. Lastly, almost the entire prudent bias observed in the GDP forecast can be explained by Public Consumption errors (with optimist bias in budgetary terms), both for the current and following year.

Figure 34. CONTRIBUTION TO GDP FORECAST ERRORS (PERCENTAGE POINTS)



Source: AIReF's calculations based on INE and *Ministerio de Economía y Empresa* data

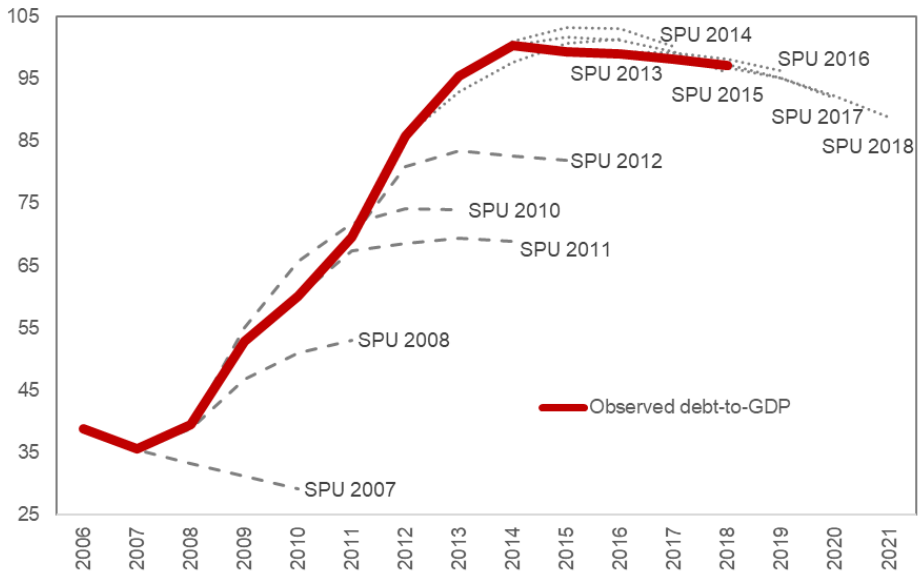
In any event, if compared with the 2010-2014 period, an improvement can be seen in the forecasting efficiency in 2015-2018. Similar to that observed in the Report on the 2019 Budgetary Plan, the mean squared error of the Government's forecasts goes down substantially in the 2015-2018 period compared to that recorded in the 2010-2014 period. In general, this improvement is observed in all variables, both for the current year and the following. The exception is identified in the Public Consumption forecast for the following year, whose mean squared error slightly increases between the 2010-2014 and 2015-2018 periods. Between both periods a noticeable drop in the amount of forecasting errors for the following year are observed in the foreign trade, imports and gross capital formation variables. Even though part of the reduction in the period-on-period mean squared error observed is due to the moment of the cycle in which the forecasts were made, it is important to mention that the difference in the forecasting efficiency between the panel of private forecasters and the Government is now marginal.

The disappearance of optimistic bias in the macroeconomic forecasts in the 2010-2014 period is reflected in the observed bias in the forecasts of the medium-term debt-to-GDP ratio. In its previous report on the 2018-2021 SPU, AIReF underscored the inconsistency observed between the macroeconomic and fiscal projections, which implied systematic corrections in the trend of the deficit targets of the PAs.[18] Up to 2012, the optimism of the long-term

[18] Report on the 2018-2021 Stability Programme Update.

macroeconomic projections, in particular coming out of the economic recession, turned out to be reflected into large forecast errors in the debt-to-GDP ratio of the PAs. In this context, as can be seen in figure 35, the debt-to-GDP ratio observed ended up being, on average, 21 percentage points higher than that originally projected three years before. Moreover, as of 2013, and coinciding with the changes in the budgetary drafting process that brought about the entry into force of the Organic Law on Budgetary Stability and Financial Sustainability (LOEPySF by its Spanish acronym) and the change in the economic cycle, the debt-to-GDP ratio projected for the next 3 consecutive years has been practically the same as that finally observed.

Figure 35. EVOLUTION OF THE DEBT-TO-GDP RATIO AND SPU PROJECTIONS (%GDP)



Source: AIReF's calculations based on Bank of Spain and *Ministerio de Economía y Empresa* data

For the first time, the 2019-2022 SPU includes its own study, that does not identify significant biases. AIReF welcomes this exercise and finds it to be in line with international best practices. New to the 2019-2022 SPU is a study on the macroeconomic forecasting errors like the one carried out by AIReF (see Box 2). The main conclusion drawn from the Government's analysis is that there are no significant biases in the macroeconomic forecasts for 2014-2018. Although it analyses a larger number of variables, the study performed by the *Ministerio de Economía y Empresa* is more restrictive in terms of the time horizon considered as well as the criteria for identifying significant biases. AIReF welcomes this exercise because it is in line with international best practices and provides more transparency, rigour and credibility to the process of preparing the forecasts. However, some areas have been identified where there is room for improvement.

BOX 2 EX-POST ANALYSIS OF THE MACROECONOMIC FORECASTS BY THE GOVERNMENT

Since the entry into force of Royal Decree 337/2018, of 25 May, the Government is responsible for conducting an ex-post assessment of the macroeconomic forecasts.[19] For the first time, the 2019-2022 SPU includes the main conclusions of a study carried out on the forecasting errors of the macroeconomic scenario underlying the last five SPU (years 2014-2018). Similar to AIReF, the methodology used in the SPU calculates the forecasting errors from the first publication available of the annual National Accounting data. In addition, it contrasts said errors with those made by the Consensus of private forecasters (in this case, March of this year), identifying those situations where there have been large and unjustified errors.

The study carried out by the *Ministerio de Economía y Empresa* rules out the existence of imprudent, large or unjustified errors for a better approximation over at least four consecutive years. The presence of imprudent, large or unjustified errors is limited to specific years in the Public Consumption and Gross Capital Formation items and the budgetary balance of the PAs. Likewise, in general, deflators were under-estimated, in particular the one of GDP. Conversely, the Government's analysis concludes that the labour market forecasts were "quite accurate". Lastly, the transposition of these errors to net lending results in optimist forecasts over half of the time for foreign exchange balances and that of the PAs, without finding any imprudent, large or unjustified errors in the rest of the sectoral balances.

The study by the *Ministerio de Economía y Empresa* analyses 32 variables, whilst AIReF focuses on the most important 8. This greater level of detail implies that over half of situations are not compared with the interquartile range of the panel of professional forecasts (due to unavailability) but rather with a threshold calculated from the interquartile range of a similar variable and the standard deviation of the growth of the variable under analysis. The detail of said methodology is still not available and will be published by the *Ministerio de Economía y Empresa* shortly. Secondly, the study is limited to the analysis of the forecasting errors of the current year, whilst AIReF applies said methodology to the following year and also has carried out studies that cover

[19] To be precise, the *Dirección General de Análisis Macroeconómico y Economía Internacional* (Directorate-General of International Macroeconomic and Economic Analysis) of the *Ministerio de Economía y Empresa* is responsible for analysing the macroeconomic projections. For its part, the *Secretaría de Estado de Presupuestos y Gastos* (Secretariat of State for Budget and Expenditure) and the *Secretaría de Estado de Hacienda* (Secretariat of State for Finance) of the *Ministerio de Hacienda y Función Pública* (Ministry of Finance and Public Function - MINHAFP) are responsible for carrying out an ex-post assessment of the fiscal forecasts.

the entire forecasting horizon of the SPU.[20] Lastly, the methodology followed by the *Ministerio de Economía y Empresa* envisages an additional criterion of prudence. In practice, this criterion is more restrictive, since it limits to almost half the identified large and unjustified errors when forecasting GDP components, unemployment rate and budgetary balances of the PAs, excluding those forecasting errors derived from assuming lower GDP growth, lower revenue from tax collection or higher budgetary expenditure than finally observed.

Both the transposition of the European legislation, through Royal Decree 337/2018, of 25 May, as well as the publication of the aforementioned study on forecasting errors, represent a step forward in terms of transparency. These types of studies, as well as being in line with international best practices, lend rigour and credibility to the forecasts in particular and budgetary planning in general (allowing for the analysis to be replicated and methodologies to be compared).

However, being limited to the current year, it is impossible to know the Government's medium-term forecasting efficiency from this analysis horizon. It is sufficient to recall that AIReF has previously identified significant biases in Public Consumption for the year to come, but not for the current year. As detailed earlier, the accumulation of small errors in the macroeconomic forecasts, if systematic, can have a great impact on debt forecasts and negatively affect budgetary planning. Furthermore, there are some methodological points that need to be clarified, such as the fact that the principle of prudence is not applied to the forecast of imports in volume but only to its deflator. Looking ahead, AIReF is waiting for the publication of the methodological document mentioned in the SPU and the related assessment on the budgetary projections required by Spanish legislation.

[20] Report on the 2017-2020 Stability Programme Update.

Sensibility analysis of the 2019-2022 SPU

European legislation requires the presentation of a sensibility analysis to identifying the budgetary impact from changes in the main exogenous assumptions. The Code of Conduct of the European Commission on the format and content of the SPU recommends that the main changes in the macroeconomic and budgetary forecasts be detailed in respect to last year. Likewise, the European Commission requires that a sensibility analysis is carried out if there are any changes to the main exogenous variables underlying the macroeconomic forecasts and that may have a budgetary impact. In the same context, Royal Decree 337/2018, of 25 May, on the requirements applicable to macroeconomic and budgetary forecasts, establishes the main principles that the economic forecasts must follow and requires an update to the sensibility analysis that takes into account existing risk scenarios. Even though there are no guidelines specifying the type of methodology or characteristics of simulated disturbances, it is indeed clarified that Governments must provide information that facilitates the understanding of how changes in the macroeconomic variables affect revenue and expenditure separately.

The 2019-2022 SPU includes a section dedicated to sensibility analysis. As in previous years, the Government includes a detailed sensibility analysis with its corresponding impact on economic activity, the main budgetary variables, the PAs' debt and employment. Four scenarios are simulated: i) gradual increase in interest rates over the eight quarters, ii) a temporary decline in the growth of demand for exports simulated through slower economic growth of Spain's trade partners and iii) a progressive increase in crude oil prices. The results presented have been estimated with the Dynamic Stochastic General Equilibrium (DSGE) model together with Risk Evaluation and Mitigation Strategies (REMS) rationale.

The macroeconomic and budgetary impact of a permanent increase in interest rates is relatively in line with AIReF's internal models. The 2019-2022 SPU simulates a gradual increase in interest rates by 120 basis points during the eight quarters, keeping them at this level up to 2022. The resultant accumulated impact on GDP during the analysis period amounted to around 1 percentage point. It is worth noting that the simulated shock, although with a similar overall intensity to that included in the 2018-2021 SPU, which is spread over the eight quarters instead of four, has a very similar impact on the economic activity to that recorded in the previous year. Although the slowdown in activity is transferred to full-time equivalent employment, this occurs in a diminishing way, when comparing it with the results obtained in the sensitivity exercise performed in the 2018-2021 SPU. The drop in associated labour activity implies lower GDP-employment elasticity at the end of the

period. This could indicate that the potential impact could be even greater to that described in the sensibility exercise. With regard to the PAs' accounts, the evolution of revenue and public expenditure is detailed. In this context, although the evolution of the budgetary balance and debt-to-GDP ratio are in line with AIReF's estimates, the accumulated positive impact of interest rates on public revenue stands out.

The sensibility of economic activity to lower growth in demand for exports seems feasible although slightly under-estimated with respect to AIReF's estimates. The scenario implies a downturn in the rate of growth of demand for exports of 4 percentage points during 2019, to later return to the evolution of the baseline scenario. As a result, the simulations point towards a negative impact on GDP in 2019 of 0.5 percentage points and -3.0 percentage points for exports. According to AIReF's internal models, a similar shock will have a much greater effect. Just like in the 2018-2021 SPU, it does not envisage a specific scenario that facilitates the identification of the independent impact of a decline in the demand for exports from the United Kingdom in the case of a disorderly departure from the European Union. The United Kingdom represents between 7% and 7.5% of Spanish goods exports and has a close relationship through financial flows, not only with Spain, but also with numerous trade partners.

The simulated impact of a permanent increase in the oil price simulated in the SPU are considered to be in line with AIReF's models. The SPU includes a scenario that assesses a rise in crude oil price per Brent barrel of 10 USD in relation to the values used throughout the forecasting period of the baseline scenario, an increase of practically 15%. On the one hand, the impact on general activity will be around -0.4 percentage points in 2022, with a profile that is very similar to the outline published by AIReF in the box on sensibility analysis of the 2018-2021 SPU[21]. On the other hand, the public balance is in line with a cyclic sensibility of revenue of 0.5 percentage points, showing deficit and debt greater than the baseline scenario by 0.3 and 0.7 percentage points, respectively. In the same way, as is the case of the interest rate scenario, equivalent employment has a different dynamic, with an impact that stabilises around 0.1 percentage points at the end of the forecasting period.

Lastly, it is important to point out that recently the price of oil has been on an upward path, similar to that observed in the first months of 2018 and exceeding the levels envisaged in the baseline scenario.

[21] Report on the 2018-2021 Stability Programme Update of the Kingdom of Spain. Report 24/18. Pages 39 and 40.

Endorsement of the macroeconomic forecasts

AIReF endorses the Government's macroeconomic forecasts included in the 2019-2022 Stability Programme Update. As a summary of the analysis carried out, AIReF considers the Government's macroeconomic scenario to be prudent overall, taking into account the exogenous assumptions and defined policies.

With respect to transparency, AIReF underscores substantial progress being made on two counts. First, in light of the suggestion for best practice made by AIReF in previous reports, the Government has provided information on the income flows of institutional sectors, facilitating a more complete and conciliated picture of the macroeconomic scenario.

Secondly, in line with international best practices, for the first time the 2019-2022 SPU includes its own study on errors made in the macroeconomic forecasts. AIReF welcomes this exercise, providing greater transparency and accuracy to the process for preparing macro-fiscal forecasts and hopes that this will continue over time.

3 BUDGETARY SCENARIO OF THE 2019-2022 SPU

Analysis of the budgetary scenario

AIReF considers it feasible to achieve the deficit path estimated in the SPU up to 2021 but unlikely, by a tight margin, to achieve budgetary balance in 2022. The path projected in the SPU envisages reaching budgetary balance in 2022, which entails a reduction of the deficit by 2.5% GDP, which AIReF deems unlikely, although by a tight margin. This reduction is mainly concentrated in 2020 and foresees an adjustment of 0.9% GDP, largely explained by the entry in force of measures to increase revenue.

The evolution of revenue foreseen in the SPU is considered feasible throughout the period, except in 2022 by a small margin. In aggregate terms the tax projections of the SPU and AIReF remain in line throughout the period. However, the composition of the revenue is different between the Government's scenarios and those of AIReF. On the one hand, AIReF predicts a more positive evolution of indirect taxes throughout the entire period, despite estimating a lesser impact due to the establishment of new tax figures. Conversely, direct taxes show a more optimistic evolution in the Government's forecasts. Significant differences are also observed in the section of Sales and other current revenue with the Government's estimate being higher for the entire period by around 0.1% GDP. In this case, the differences are concentrated in 2019, presenting growth rates very similar to the rest of the period.

The expenditure path included in the SPU is considered feasible throughout the entire reference period. After the upturn in 2018, the SPU envisages a reduction in the weight of public expenditure over GDP from 41.3% to 40.7%, 0.2% below that estimated by AIReF. The SPU includes an increase of 0.5% in social transfers in kind that are more than offset with a reduction in the rest of the headings, especially in interest by 0.3%.

If the Government's macroeconomic forecasts materialise, the probability of reaching the revenue level of the SPU would reduce. AIReF has analysed the

coherence between the Government's macroeconomic scenario and its revenue forecasts. For this, the Government's macroeconomic assumptions were entered into AIReF's revenue forecasting models, resulting in lower-than-expected tax collection of around 0.2% GDP for the 2020-2022 period. In turn, a certain lack of coherence between a prudent macroeconomic scenario and the Government's revenue estimates is noted, which would be optimistic with respect to the macroeconomic forecasts that theoretically underpin them.

The denominator effect of a lower GDP makes the reduction of the weight of expenditure over GDP foreseen in the SPU unlikely. The nominal GDP considered in AIReF's scenario is above that predicted by the Government especially at the end of the period. Therefore, should the Government's nominal GDP materialise, the weight of expenditure over GDP would go up by 0.3% for the same expenditure level estimated by AIReF, hence this path being considered unlikely. This is because AIReF's estimates take into account higher expenditure in nominal terms than those deduced in the SPU by 0.5%. These differences are concentrated in gross capital formation, and to a lesser extent, in compensation of employees and social transfers in kind.

The denominator effect on revenues would offset, in weight over GDP, the loss in revenue collection derived from a more unfavourable macroeconomic environment. Similarly, the weight of revenue would go up 0.3% due to the denominator effect, although as explained in the previous paragraph, there would also be lower tax collection, which means that the change in weight of revenue over GDP would be lower by 0.1%, observing a lower change in the likelihood of the path.

As a result, the materialisation of the SPU's macroeconomic forecasts leads to the opinion that the deficit reduction path is unlikely. The reduction in revenue with respect to AIReF's initial scenario due to lower collection derived from a more adverse macroeconomic environment, combined with a similar expenditure level, would increase the deficit throughout the entire period, except in 2019 when marked differences between the SPU's macroeconomic scenario and that of AIReF have not been detected.

Figure 36. PA NET LENDING/BORROWING

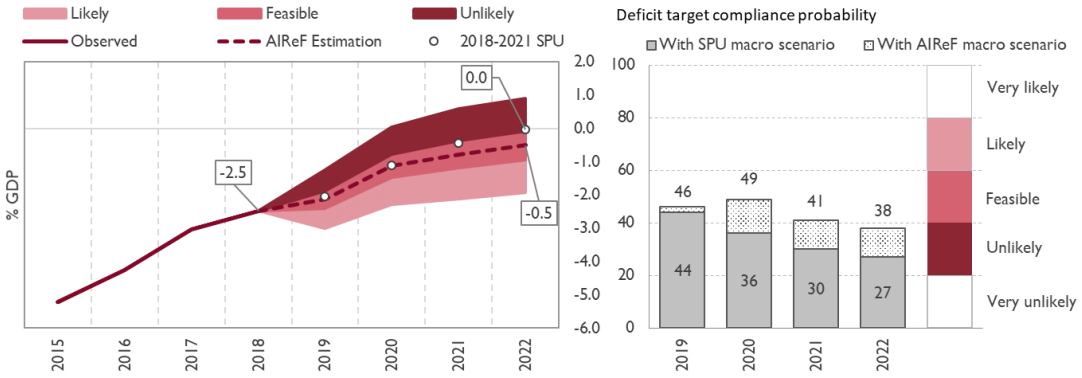


Figure 37. PA NON-FINANCIAL REVENUE

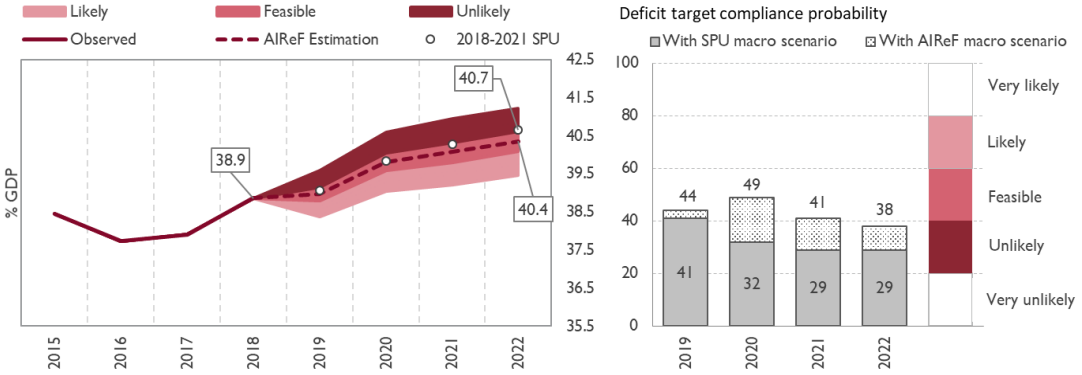
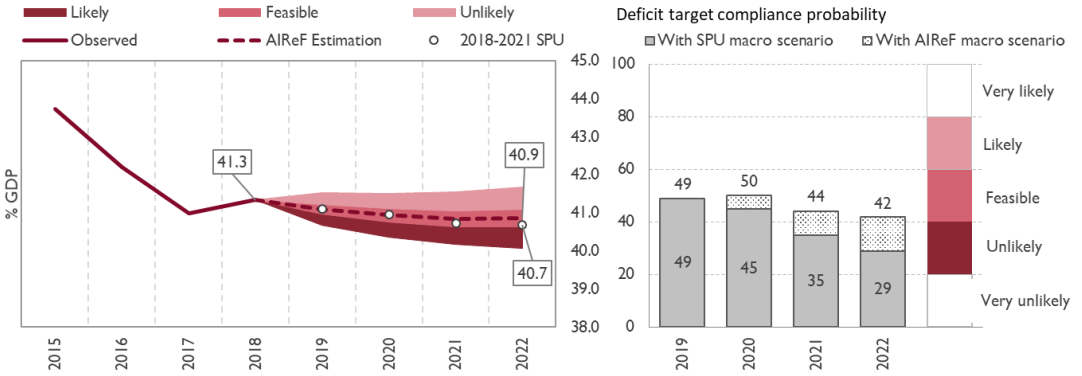


Figure 38. PA NON-FINANCIAL EXPENDITURE



Once again, the allocation of targets by sub-sectors envisaged in the SPU does not reflect the real situation of each of them. On the one hand, the Local Governments (LGs) have been registering a surplus above 0.5% GDP, brought about by the stable growth of revenue that had very little to do with the economic cycle, the subdued evolution of expenditure closely related to population variables and the role of local intervention boards as guarantors of fiscal rules. The SPU itself pointed out that the LGs maintained the budgetary balance target set in previous years in accordance with legislation, despite that in the "Deficit and debt notification to the European Union (Excessive

Debt Procedure or EDP)" published April estimated an LG surplus of 6,271 million euros in 2019.

The deficit estimated for the Regions in 2019 set in the SPU at 0.3% is different **to the 0.1% included in the "Deficit and debt notification to the European Union (EDP)".** The SPU does not explain this modification. However, an element on which there hangs a high level of uncertainty, and that would mean a change to the balance of this magnitude, would be the proposed modification of the VAT Immediate Information System that was proposed in the rejected draft GSB for 2019. This change would have an impact on the distribution of the deficit by sub-sectors, in the Regions and in the Central Administration, but would not affect the balance of the PAs.

The SPU predicted a reduction in the deficit of the *Fondos de la Seguridad Social* (Social Security Funds - FSS) until reaching the balance that is not feasible in the absence of measures. As already mentioned, in AIReF's opinion on the Sustainability of the Social Security System[22], the current deficit of the system is essentially structural and for this reason it is not foreseeable that the budgetary balance of the sub-sector will be reached in 2022 if no additional measures are adopted.

Assessment of the measures contained in the SPU

The SPU incorporates the tax package included in the Draft GSB for 2019and the savings derived from the proposals made in the spending review as well as measures already approved in 2018 and 2019. AIReF's tax projections are based on the tax measures already provided for in the Budgetary Plan for 2019 that did not get past the processing stage when the Draft GSB was rejected and elections were convened. Furthermore, the savings derived from the spending review proposals made by AIReF were also taken into account, which the Government has incorporated as part of the baseline scenario of the SPU. Conversely, the measures already approved in 2018 and 2019 have not modified AIReF's forecasts. The SPU contains the impact of the measures for social expenditure and social security contributions already adopted, although they are only quantified for 2019. It also includes the measures proposed for the Territorial Administrations. These measures have been assessed by AIReF in previous reports and therefore form part, in line with this assessment, of its baseline scenario defined under no-policy-change.

[22] AIReF (2019), Opinion 1/2019 s on the sustainability of the Social Security System: http://www.airef.es/es/centro-documental/opiniones/opinion-sobre-la-sostenibilidad-de-la-seguridad-social/

The differences in the assessment of the new tax revenue measures are maintained with respect to that included in the report on the Budgetary Plan. The Government foresees that all measures will be in force by the beginning of 2020, in such a way that they will have an impact on revenue at that time. For this reason, it will be necessary that there is no delay whatsoever in the processing of these measures over this year. The estimate of their impact is the same as that included in the Budgetary Plan, which assumes 0.4% GDP in additional revenue. For its part, AIReF has revised the estimates of the year-on-year impact of these measures that was carried out at the time and has reached the conclusion that there are no changes with respect to those detailed in the Budgetary Plan[23]. As a result, the differences in the overall impact of the measures of around 0.1% are the same as those included in said report. Likewise, the uncertainties that have been detected surrounding the implementation of the measures as well as the definitive impact that they will have on revenue should be reiterated.

TABLE 2. NEW TAX REVENUE MEASURES INCLUDED IN THE SPU AND AIREF'S ESTIMATE

Tax	Revenue measures	SPU Annual impact (from 2020)	**AIReF's estimate** Full year Ranges
PIT	Increase of rates on higher income	328	(245 ; 255)
Corporate Income Tax	Limitation on exemptions and deductions for double taxation and minimum rate on taxable base	1,776	(1,650 ; 1,900)
	Discounted rate for SMEs	-260	(-242 ; -278)
VAT	Reduced rates for veterinary services	-35	-35
	E-book discount*	-24	-24
	Gender taxation and inequality	-18	-18
ST	Green taxation (Hydrocarbons Tax)	670	(649 ; 693)
New taxes	Tax on Financial Transactions	850	(420 ; 850)
	Tax on certain Digital Services	1,200	(546 ; 968)
Fraud prevention	Limitation of cash payments	218	(100 ; 200)
	Strengthen list of defaulters	110	(50 ; 100)
	International best practices for preventing and combating fraud	500	(200 ; 270)
Wealth Tax		339	(0 ; 8)
TOTAL MEASURES		5,654	(3,541 ; 4,889)

* All measures and their impact were included in the Budgetary Plan for 2019, except the VAT discount for e-books, which was included in the Draft GSB for 2019

[23] Report 45/18, of 25 October, on the Main Budgetary Lines of the Public Administrations for 2019 http://www.airef.es/es/informes-tipo/informes-sobre-los-proyectos-y-lineas-fundamentales-de-presupuestos-de-las-aapp/

The SPU includes savings derived from spending review proposals made in 2018-2019, although they are not explicitly quantified. AIReF has submitted the results of its review of expenditure on subsidies and public aid performed in 2018-19 to the Government, as a first phase of the full spending review committed to by Spain. The assessment undertaken has brought to light significant room for improvement in the management and quality of public subsidies and policies in general, which has enabled AIReF to consolidate a series of proposals that, if they were to materialise, would mean significant savings in the last few years of the period covered in the SPU. On this basis, the SPU incorporates the impact of some of these proposals which result in a containment of expenditure on subsidies, according to the wording of the same, and, in respect to the scenario initially assessed by AIReF, in a reduction of non-hospital pharmaceutical expenditure. Although the amount of the saving is not explicitly quantified, it can be concluded from the comparison between the scenario assessed initially by AIReF and the definitive version in the SPU, that a reduction in social transfers in kind of 1,500 million euros at the end of the period is expected, obtained gradually and, in particular, concentrated in the last two years.

The SPU also includes saving targets for the second phase of the spending review that began in 2019 in terms of recruitment incentives. AIReF is conducting the second phase of the aforesaid review process, which affects certain tax benefits, recruitment incentives, transport infrastructures and hospital expenditure on drugs and capital goods. In this case, the SPU states saving of 0.1%GDP in contribution benefits currently in force as a quantitative objective, subject to the results that are achieved from the assessments under way. The saving foreseen by the SPU amounts to 500 million euros year-on-year, which would mean a 60% reduction in current contributions at the end of the period. On the other hand, the result, whether higher contributions or less expenditure, depends on how the discontinued incentives are structured.

The rest of the SPU's measures were previously included in AIReF's baseline scenario in previous reports. The measures with greater quantitative impact affect expenditure on pensions and compensation of employees, as a result of the revaluation of pensions and the application of the Agreement between the Government and the Trade Unions affecting all administrations. These measures were already analysed in the report on the 2018-2021 SPU and successive reports and its impact is explained in the assessment of expenditure of the corresponding headings, being incorporated in the baseline scenario of the Government as well as that of AIReF. In this context, the differences detected in the estimate in the previous SPU has been partially corrected, nearing AIReF's forecasts both in the case of expenditure on pensions as well as compensation of employees. Likewise, the baseline scenario of AIReF and

the SPU already include the impact of the approved social expenditure measures[24] following the rejection of the Draft GSB and that were assessed by AIReF in its report on the Initial Budgets of the Public Administrations[25], as well as the measures envisaged by the territorial administrations in their medium-term budgetary plans.

In addition to the previous measures, the Regions have communicated significant revenue initiatives in 2019 and less relevant initiatives in the rest of the period in their budgets and medium-term budgetary plans. In 2019, the SPU includes a positive impact of 754 million euros from the measures envisaged for the Regions or an impact on the same, essentially derived from disposal of investment and equity assets, amounting to 430 million euros, and a higher collection derived from State regulation of the regional branch of the Tax on Hydrocarbons valued at over 300 million euros. Added to this are some higher tax collection measures offset by lower taxation measures adopted especially on Inheritance and Donation Tax. AIReF considers the impact of these measures to be 200 million euros lower, not taking into account the total amount of the disposal of investments. For 2020, 2021 and 2022, in the regional sphere the SPU envisages less revenue due to the reversal of the disposals and regional tax measures to lower Personal Income Tax (PIT), even though the negative impact should be offset by higher collection expected from central Government measures on Wealth Tax. In 2020 AIReF does not consider the lower revenue due to the reversal of disposals and estimates that the impact of the measures provided for in the SPU with respect to Wealth Tax will be practically zero.

Likewise, the Regions intend to adopt expenditure measures, notably including those related to personnel, centralised procurement of medicines and credit blocks, with a combined negative impact, more marked in 2020. For 2019 the scenario of the SPU includes greater expenditure on the personnel measures adopted by the Regions in addition to those applied in general (229 million euros), largely cancelled out by the positive impact of regional saving measures in pharmacy spending (centralised procurement of medicines, amongst others) and, above all, credit blocks (160 million euros). In 2020, additional expected savings will be reduced by pharmacy measures, whilst greater expenditure of 359 million euros is expected for Regional measures on

[24] Royal Decree-Law 6/2019, of 1 March, urgent measures to guarantee equal treatment and equal opportunities between women and men in employment and occupation and Royal Decree-Law 8/2019 of 8 March on urgent measures for social protection and the fight against job insecurity in the working day.

[25] Report 11/2019, of 3 April, on the Initial Budgets of the Public Administrations for 2019: http://www.airef.es/es/centro-documental/informe-presupuestos-iniciales-de-las-administraciones-publicas-2019/

personnel as well as 160 million euros for not repeating the credit block measures of the previous year. For 2021 and 2022, additional effects of higher expenditure from personnel measures are expected and a certain positive impact from the regional measures in relation to pharmacy and healthcare products is maintained.

In the LG sub-sector, the SPU includes revenue and expenditure measures of limited impact for those that offer no specific information on their content nor their further impact on the 2020-2022 horizon. The expenditure measures mentioned in the SPU are those derived from Law 27/2013, on the Rationalisation and Sustainability of the Local Administration, indicating that there will be a delay in their effects, most significantly those derived from the reduction in capital expenditure due to the non-execution of investments or reduction of transfers. These expenditure measures are mentioned but not qualified, except for 2019. Regarding revenue measures, the SPU expects an increase in taxes over the period that should offset the higher expenditure, which would stabilise the balance.

Revenue and expenditure linked to macroeconomic evolution

A significant part of revenue, and to a lesser extent, of expenditure is highly conditioned by the macroeconomic evolution. The evolution of revenue from taxes and social security contributions is linked to the macroeconomic variables that determine their bases. Likewise, there are certain expenditure items, mainly in unemployment benefits, that are closely linked to the economic cycle. These relationships are reflected in the revenue forecast models and determine their short-to-medium term growth. To this cyclical evolution we must add the impact of regulatory changes, both those that are in force as well as those new measures included in the SPU. The evolution of these revenue and expenditure items depending on the expected macroeconomic evolution is explained below.

Revenue

The greater part of the cyclical gain in the SPU comes from current revenue from taxes. The current revenue from tax increased 1.3 percentage points, out of which 0.4 is due to the adoption of new tax measures and 0.9 due to the evolution of the economic cycle. Income-related taxes, i.e. PIT and Corporate Income Tax (CIT), are the only ones gaining weight over GDP due to the evolution of the economic cycle, with the contribution resulting from the new measures remaining equally split between this type of tax and taxes on production, 0.2 in each case.

TABLE 3. REVENUE GAIN FROM 2018 TO 2022 IN % OVER GDP IN SPU AND AIREF'S SCENARIO

SPU Scenario	Gain (Δ % s GDP) (2022-2018)			
	Total	Baseline scenario		New measures included in SPU
		Cycle	Previous measures (*)	
Revenue	1.80	1.1	0.2	0.5
Taxes on production and imports	0.1	-0.1	0.0	0.2
Current taxes on income and wealth	1.2	1.0	0.0	0.2
Social security contributions	0.6	0.3	0.2	0.1
Sales and other current revenue	0.0	0.0	0.0	0.0
Capital revenue	-0.1	-0.1	0.0	0.0

(*) Measures approved and with effects expected throughout the rest of the period

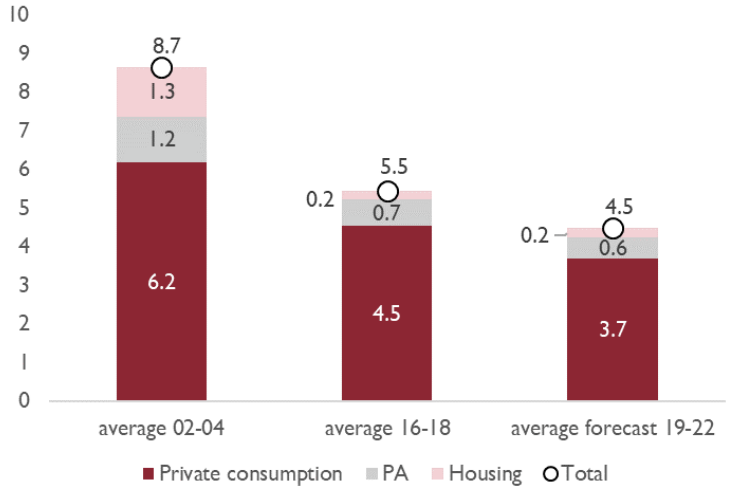
AIReF's scenario	Gain (Δ % s GDP) (2022-2018)			
	Total	Baseline scenario		New measures included in SPU
		Cycle	Previous measures (*)	
Revenue	1.5	1.0	0.1	0.4
Taxes on production and imports	0.4	0.3	0.0	0.1
Current taxes on income and wealth	0.8	0.6	0.0	0.2
Social security contributions	0.5	0.2	0.2	0.1
Sales and other current revenue	-0.2	-0.1	-0.1	0.0
Capital revenue	0.0	0.0	0.0	0.0

(*) Measures approved and with effects expected throughout the rest of the period

AIReF's fiscal scenario is somewhat more balanced in the cyclical gain distributed by type of tax and more conservative in the assessment of the impact of the measures. Overall, the Government's estimates are in line with those of AIReF, although differences are noted in the composition. On the one hand, whilst taxes on production generate an increase in revenue of 0.3% GDP over the period, income taxes increase their weight by 0.6%. On the other hand, AIReF's fiscal scenario brings down the impact included in the SPU by 0.1% due to the new tax measures.

AIReF estimates, once the measures are ascertained, a year-on-year average growth of 4.6% for the 2019-2022 period of taxes on production and imports, 4.9% for taxes on products. The main components of this heading are VAT and special taxes. The elasticity of this type of revenue on nominal GDP is a little higher than the one for VAT and lower in the case of special taxes, corresponding to similar elasticity in the 2002-2004 period with a cyclical position similar to the period projected. The favourable evolution of the housing market, with an expected growth of investment in construction far above nominal GDP coupled with the wage increase explains an elasticity higher than one in the case of VAT.

Figure 39. EVOLUTION OF THE VAT BASE AND CONTRIBUTION BY COMPONENTS IN AIREF'S SCENARIO (% VAR.)



The Government predicted, before including the impact of the measures, an average year-on-year growth for the period of 3.3% for these taxes, 3.7% for those on products. This leads to implicit elasticity in relation to nominal GDP lower than one and close to one if the exercise is carried out based on national demand. This difference with respect to AIReF's estimate is partially justified by the greater contribution of external demand contained in the Government's macroeconomic scenario when compared with that of AIReF, which would imply greater revenue coming from VAT in AIReF's estimate due to higher dynamism of domestic demand and a more optimistic projection. As a result, AIReF considers the path included in the SPU for these types of revenue items to be likely.

Figure 40. EVOLUTION OF TAXES ON PRODUCTS VS. NATIONAL DEMAND (% VAR.)

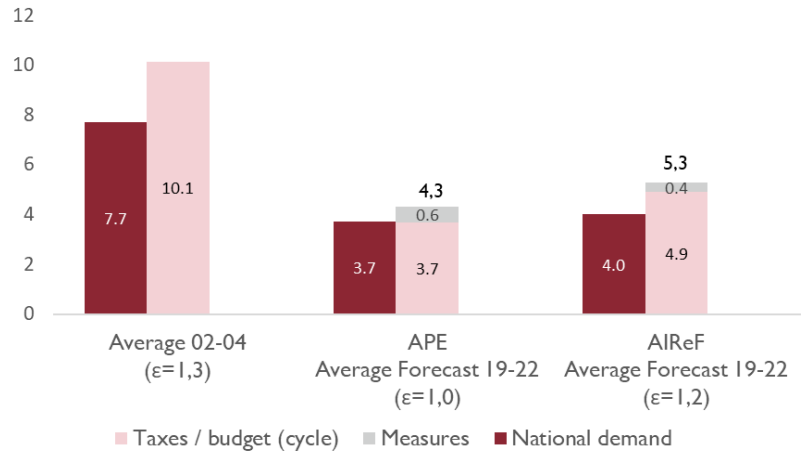
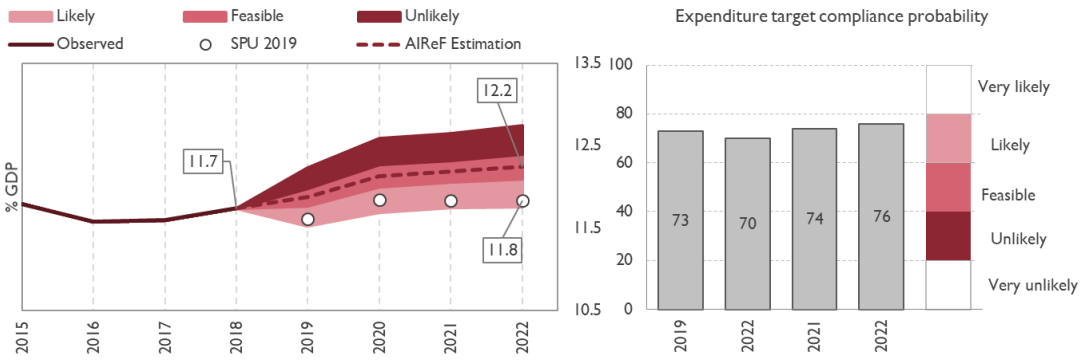


Figure 41. TAX ON PRODUCTION AND IMPORTS OF GG AS % GDP %



AIReF's forecasts for revenue from taxes on income and wealth are more moderate than those of the Government. Once the impact of the measures has been ascertained, income taxes, mainly PIT and CIT, grow on average by 6.1% during the period analysed in the SPU, whereas AIReF's fiscal scenario increases by 5.2% on average. The implicit average elasticity on nominal GDP in the case of SPU is 1.7, greater than that resulting from AIReF's models that calculate an elasticity of 1.4, causing AIReF to consider the path included in the SPU to be unlikely. Within income taxes, AIReF's fiscal scenario envisages a similar trend for CIT, although it foresees a greater acceleration in the growth of the Gross Operating Surplus (GOS). It is in the evolution of income taxes, mainly PIT, where the differences between the Government's and AIReF's estimates are concentrated, with an average growth for the 2019-2022 period close to 5% due to the positive evolution of employment and wages, but below that estimated by the Government, at 6.1%.

Figure 42. CONTRIBUTIONS TO GROWTH OF INCOME TAX (% VAR.)

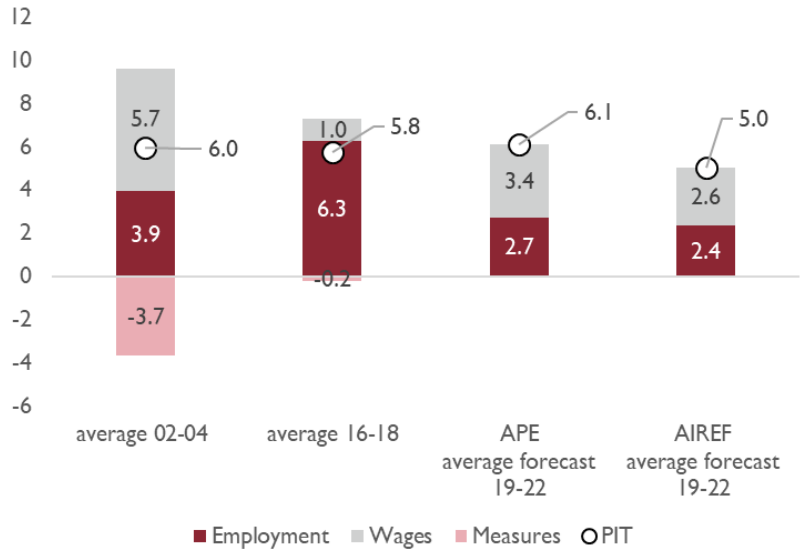


Figure 43. EVOLUTION CIT VS. GROSS OPERATING SURPLUS (% VAR.)

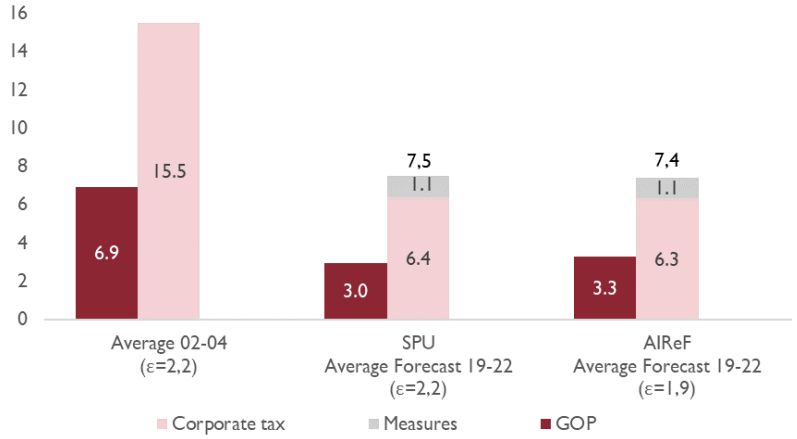
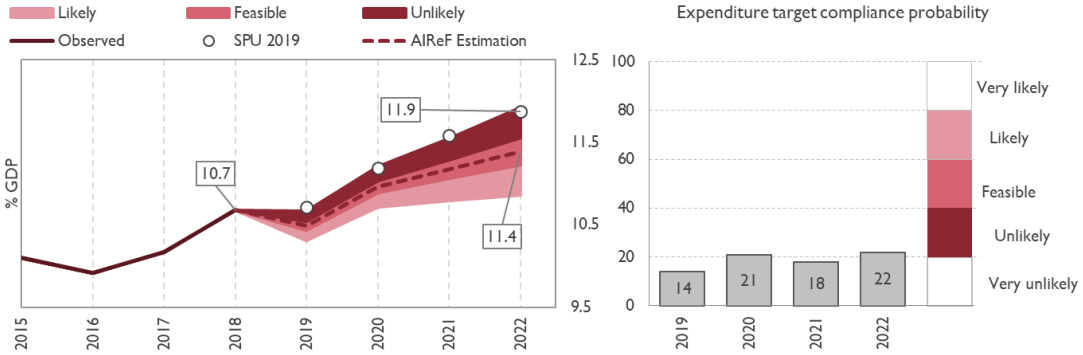


Figure 44. CURRENT TAXES ON INCOME AND WEALTH. GENERAL GOVERNMENT AS % GDP



AIReF considers that the path of revenue from social security contributions in relation to GDP is feasible throughout the entire period. In the scenario forecasted in the SPU, revenue from social security contributions gains 0.6% in weight over GDP throughout the period, 0.1% more than in the scenario forecasted by AIReF. 0.3% of the increase contained in the SPU scenario, gradually distributed throughout the period analysed, is justified by the evolution of the cycle, in particular by the predicted increase in the contribution bases marked by the improvement in wages and employment. With respect to the scenario forecasted by AIReF, cyclical gains are lowered by 0.1% compared with that reflected in the SPU scenario. In relation to the impact of the measures relating to social security contributions, in the SPU scenario a gain of 0.1% is expected due to the measures incorporated in the Stability Programme and of 0.2% due to the measures already approved and applied in 2019, such as the increase in the maximum and minimum contribution bases. AIReF considers the quantification of said measures to be feasible, with a similar impact on its budgetary scenario. A balanced contribution is expected for the whole period in the growth of the contribution

bases and employment as opposed to the previous period in which it was based more on the growth of employment.

Figure 45. SOCIAL SECURITY CONTRIBUTIONS. GENERAL GOVERNMENT AS % GDP %

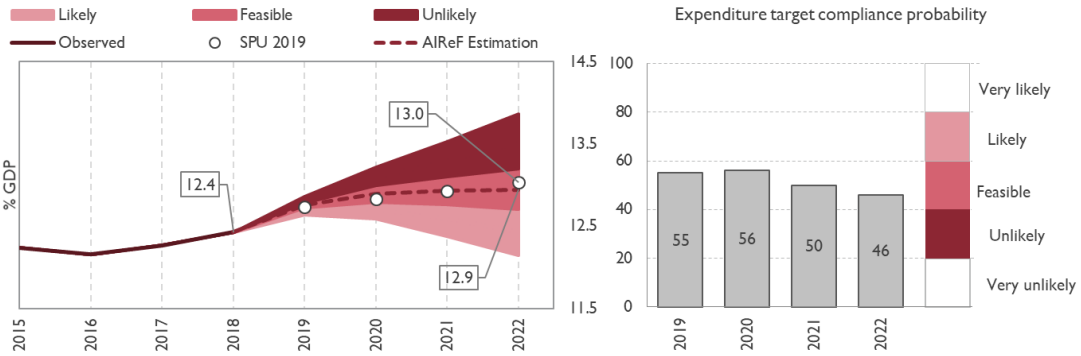
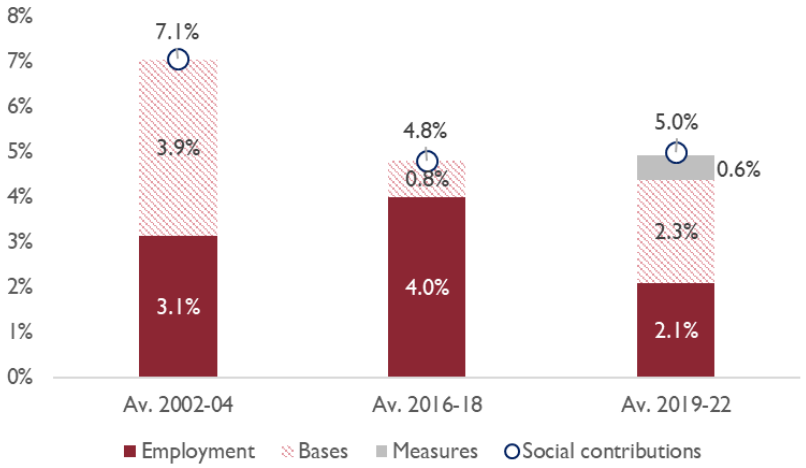


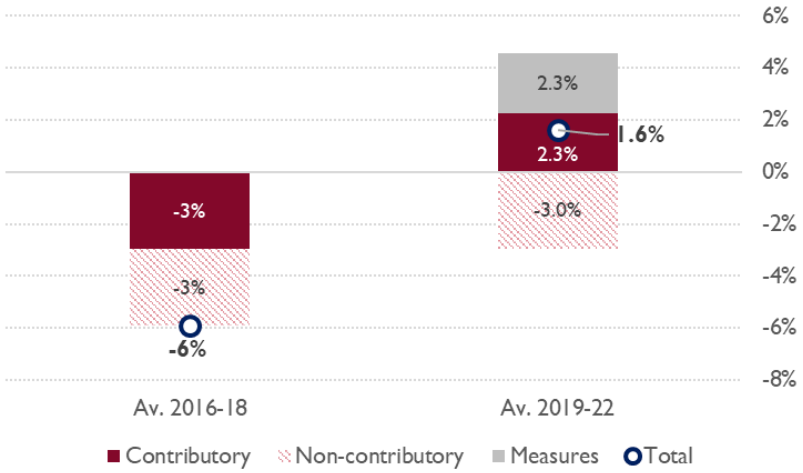
Figure 46. BREAKDOWN OF THE GROWTH OF SOCIAL SECURITY CONTRIBUTIONS.



Expenditure

According to the SPU, unemployment benefits will go down in terms of GDP in line with AIReF's estimates. The inertial evolution of expenditure is flat since the impact of the contraction of the unemployment rate is seen to be offset by an increase in the wage bill and in the coverage rate, which is returning to its pre-crisis levels. As a result, the weight of beneficiaries of the contributory benefit compared to non-contributory subsidies goes up. With respect to the measures, the recovery of the unemployment benefit for those above 52 years of age has an accumulated impact of 1,230 million euros, with the maximum impact expected for 2020. This measure includes the reduction in the qualifying age from 55 to 52 years old and continues for the maximum duration of the benefit up to the ordinary retirement age, instead of early retirement age, and the amount of the retirement contribution is increased from 100% to 125% of the minimum contribution base.

Figure 47. BREAKDOWN OF THE GROWTH OF UNEMPLOYMENT BENEFITS.



Revenue and expenditure related to discretionary policies

The rest of the revenue items and most of the expenditure evolves more independently to the macroeconomic scenario and depends to a greater extent on structural factors. A very important part of expenditure such as compensation of employees or pensions depend on legislation in force or, as in the case of investments or subsidies, directly on budgetary appropriations made by each administration. Therefore, its evolution is not directly influenced by the situation of the economic cycle. The evolution of these headings and of the underlying structural determinants are detailed below.

Revenue

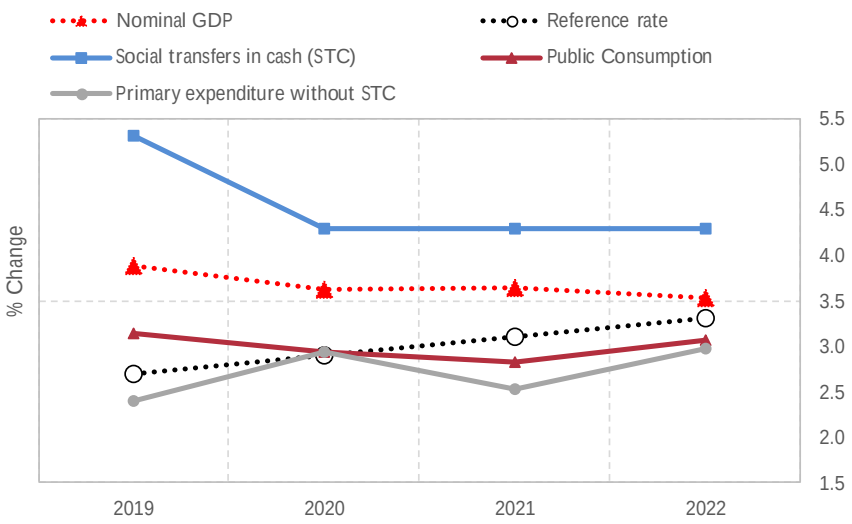
With respect to the Sales and Other Current Revenue heading, the SPU scenario is more optimistic than AIReF's estimates, although no specific measures with respect to these types of revenue items are presented. The SPU estimates that its weight over GDP will remain constant during the period. This heading, of limited importance representing 3.4% GDP in 2018, includes revenue from sales, amounting to 2.1% GDP, property income (mainly interest and dividends) representing 0.6% and current transfers (mostly revenue coming from the European Union) amounting to 0.7% GDP in 2018. The scenario predicted by AIReF is more pessimistic than that of the Government, especially in 2019, with a more moderate growth forecasted due to the inclusion in the baseline scenario of the measures that are lowering university fees and other fees in some Regions, following the trend over the last two years. Furthermore, in 2018 in the Regional sphere extraordinary revenue from transfers from the European Union were also recorded that are not expected to be repeated during the period.

In relation to capital revenue, a loss of 0.1% in its weight over GDP is expected both in the SPU scenario and that of AIReF. This heading, of little relative importance since it represents only 0.6% GDP in 2018, includes revenue from taxes of this type, tax on inheritance and donations and taxes on the increase in the value of urban land to a greater extent, revenue from final transfers coming from the European Union, and the negative adjustment for uncertain collection. A loss of 0.1% of its weight over GDP is predicted in the SPU and AIReF's scenarios due to the high 2018 baseline in which the Regions received an unexpected inflow coming from European funds not expected to be consolidated in the period under analysis.

Expenditure

The primary expenditure path predicted in the SPU, excluding expenditure on pensions and the rest of cash benefits is expected to grow below the reference rate of the expenditure rule. The scenario of moderate growth in expenditure predicted in the SPU continues to evolve in line with the reference rate for 2019-2020 throughout the entire period and below that permitted by the reference rate for the rest of the years.

Figure 48. EVOLUTION OF EXPENDITURE FORECASTED IN THE SPU



Source: Stability Programme, MINHAFP 2017-2020 reference rate and AIReF's estimates for 2021-2022

The differences between AIReF's estimates and those contained in the SPU are centred on the evolution of public consumption and investment. The net adjustment of 0.7% GDP of non-financial expenditure predicted in the 2019-2022 SPU concentrates on current expenditure, essentially lower public consumption and interest charges than predicted by AIReF, and to a lesser degree in capital expenditure, with a reduction of 0.3% GDP in the period.

The main expenditure items that make up public consumption present an adjustment of 0.5% GDP in the SPU, greater than that predicted by AIReF. The adjustment is based on systematic growth lower than the nominal growth of the economy and lower than the reference rate of the expenditure rule in 2021 and 2022 of the aggregate of compensation of employees, intermediary consumption and in kind social benefits.

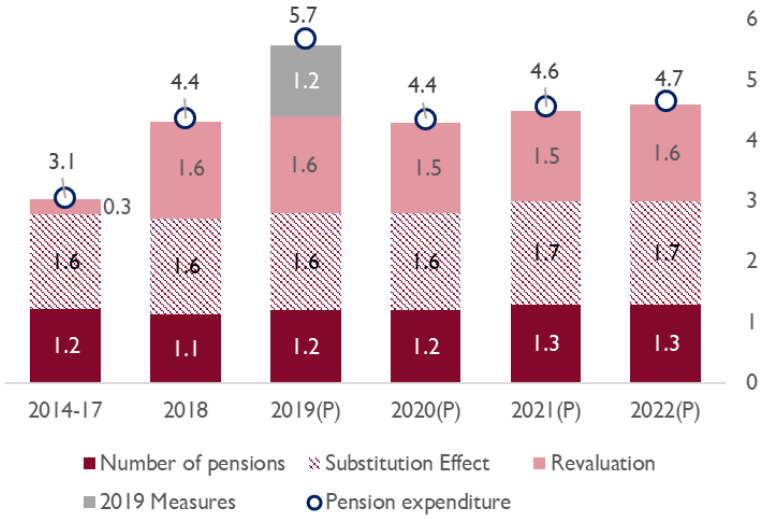
TABLE 4. COMPARISON OF SPU AND AIREF FORECASTS

TOTAL GENERAL GOVERNMENT	2018	2019		2020		2021		2022	
		SPU	AIReF	SPU	AIReF	SPU	AIReF	SPU	AIReF
Expenditure	41.3	41.1	41.1	41.0	40.9	40.7	40.8	40.7	40.9
Compensation of employees	10.5	10.5	10.5	10.5	10.5	10.4	10.5	10.4	10.4
Intermediate consumption	5.0	5.0	5.0	5.0	5.0	4.9	4.9	4.9	4.9
Social transfers in kind	2.6	2.5	2.5	2.5	2.5	2.4	2.4	2.3	2.4
Social transfers other than transfers in kind	15.3	15.5	15.6	15.6	15.7	15.7	15.7	15.8	15.7
Interest	2.5	2.4	2.4	2.3	2.2	2.2	2.1	2.2	2.1
Subsidies	1.0	1.0	1.0	0.9	1.0	0.9	1.0	0.9	1.0
Other current expenditure	1.5	1.5	1.5	1.5	1.4	1.5	1.4	1.5	1.4
Gross capital formation	2.1	2.0	2.0	2.0	2.2	2.0	2.2	2.1	2.3
Other capital expenditure	0.9	0.8	0.7	0.7	0.6	0.7	0.5	0.6	0.5

Pensions

Cash social transfers predicted in the SPU presented an average increase of 4.6%, in line with AIReF's forecasts. This path incorporates measures adopted regarding pensions and other social benefits, and an evolution of expenditure on unemployment benefits in line with that predicted by AIReF. The Government's scenario for expenditure on pensions would seem to be coherent with that of AIReF, which predicted growth of 4.8% for the forecasting horizon. AIReF estimates that the number of pensions will increase by 1.3% and that the substitution effect derived from some new pensions that are higher than the former ones will be 1.7%. To this we must add the impact of the revaluation with the CPI for the entire forecasting period, 1.6% on average, except minimum and non-contributory pensions that were revalued by 3% in 2019.

Figure 49. GROWTH OF PENSION EXPENDITURE AIREF PROJECTIONS (%GDP)



In contrast to the previous SPU, the Government also assumes that revaluation according to a PRI (Pension Revaluation Index) of 0.25% will be abolished, but does not mention the suspension of the Sustainability Factor until 2023. The revaluation of pensions in line with CPI has an estimated impact of around 2,000 million euros year-on-year. Furthermore, the estimates also include the impact of the extraordinary payment due to the deviation of 0.1% with respect to the inflation of the 2018 revaluation, the revaluation of minimum and non-contributory pensions by 3% in 2019 and the increase in the percentage applicable to the regulatory base of the greater part of widows' pensions from 56% to 60% from January 2019. The SPU does not mention the suspension of the application of the sustainability factor to 2023; this suspension is included in AIReF's scenario. Overall the estimate of the measures made by the Government coincides with that of AIReF. Pension expenditure increases by 0.4% GDP in the SPU horizon, reaching a historic maximum of 11.2% in 2022.

The main projection of pension expenditure contained in the SPU is that published in the Ageing Report 2018[26] (AR2018) of May last year. This prediction is based on demographic forecasts by Eurostat, the macroeconomic assumptions agreed by the Member States and the Commission and, the model for forecasting pension expenditure of the *Ministerio de Economía* (Ministry of Economy), supervised by the European Commission. The main result is an increase in pension expenditure by 1.7%, up to 13.9% GDP in 2050, under the key assumption that pensions are revalued year-on-year with a PRI of 0.25%.

[26] Ageing Working Group (2018), Ageing Report 2018, Institutional Paper 079, https://ec.europa.eu/info/publications/economy-finance/2018-ageing-report-economic-and-budgetary-projections-eu-member-states-2016-2070_en

Furthermore, for the first time two alternative forecasts have been included: those by the *Ministerio de Trabajo, Migraciones y Seguridad Social* (Ministry of Labour, Migrations and Social Security) and those by AIReF. In January 2019 AIReF published its Opinion on the Sustainability of the Social Security System[27]. In turn, it is the first time that the forecasts by the *Ministerio de Trabajo* (Ministry of Labour) have been published although the underlying assumptions and the methodology were not explained.

The *Ministerio de Trabajo* estimates a contraction in expenditure in 2050, whereas AR2018 details an increase of 1.7% GDP. Both take the application of the PRI as their baseline scenario, which would imply a 0.25% revaluation for the entire period. However, the difference of 3 points is explained mainly by the criteria that are applied in the revaluation of the maximum entry pension: at the CPI in AR2018 and 0.25% in the case of the *Ministerio de Trabajo*.

AIReF's estimates predict, in a scenario with a 0.25% PRI, an increase in pension expenditure of 0.5% GDP in 2050. This would be above the estimates by the *Ministerio de Trabajo*, but would be a third of that estimated in AR2018. The difference with respect to the AR2018 is mainly explained in the differences in the assumptions used, especially the demographic ones[28].

TABLE 5. PENSION EXPENDITURE (% GDP)

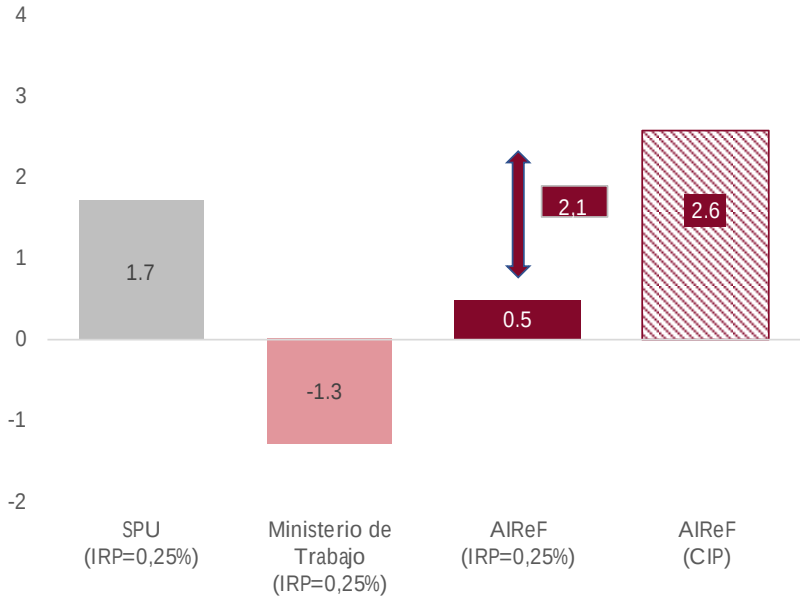
	2050-baseline	baseline	2020	2030	2040	2050
AR2018 *(PRI=0.25%)*	1.7	12.2	12.3	12.6	13.9	13.9
Ministerio de Trabajo (PRI=0.25%)	-1.3	10.7	10.1	10.1	10.0	9.4
AIReF (CPI)	2.6	10.6	10.7	11.3	13.0	13.2
AIReF *(PRI=0.25%)*	0.5	10.6	10.6	10.1	11.2	11.1

Baseline: the baseline year is 2016 for AR2018 and the *Ministerio de Trabajo* and 2018 for AIReF

[27] AIReF (2019), Opinion on the Sustainability of the Social Security system, Opinion 1/19, http://www.airef.es/es/centro-documental/opiniones/opinion-sobre-la-sostenibilidad-de-la-seguridad-social/

[28] Also worthy of note is that the forecasts of the AR2018 include Social Security contributory and non-contributory pensions and civil servants' pensions, whereas those of AIReF only include Social Security contributory pensions.

Figure 50. PENSION EXPENDITURE



AIReF estimates net immigration above that envisaged in the Eurostat projections in 2015. The demographic forecasts basically depend on three factors: fecundity, mortality and net immigration. The SPU's forecasting exercise is based on the 2015 Eurostat projections that predict a contraction of 15% of the working-age population between 2018 and 2050 to 26 million people. This *Japanisation* scenario is due to retirements of the baby-boomer cohorts not being sufficiently offset by the net arrival of immigrants, whose year-on-year average flow is estimated at 125,000 people, well below the 270,000 estimated by AIReF and that allow the working-age population to stabilise. AIReF's methodology was published in October 2018[29].

The differences are less notable with regard to the rest of the assumptions. Therefore, the changes in the demographic factor explain that the contribution of the labour factor estimated in the AR2018 is null, as opposed to a contribution of 0.6 percentage points forecasted by AIReF, nearer to the historic 1981-2017 average of 1.1 percentage points. As a consequence, the AR2018 scenario needs a somewhat optimistic assumption for growth of productivity, of 1.2% to ensure medium-to-long term economic growth. With a demographic assumption more in line with historic dynamics, real GDP growth rates of 1.6% may be reached in the forecasting horizon. This project has a determinant impact on the ratio of pensions over GDP in the long term, mainly via denominator.

[29] AIReF (2018), "Demographic forecasts: an integrated approach", Special Document 2018/1 http://www.airef.es/es/centro-documental.-documentos-especiales/

TABLE 6. FORECAST ASSUMPTIONS

		2018	2050	
			AR2018	AIReF
Levels	Working-age population	31.2	26.2	30.3
	- Net immigration 2018-2050		125,000	270,000
	Activity rate	73.6	77.1	79.8
	Unemployment rate	15.1	8.4	7.7
Average	Real GDP		1.2	1.6
	Productivity		1.2	1.0
	Labour factor contribution		0.0	0.6
	CPI rate		2.0	1.8

AIReF predicted an impact due to the revaluation at the CPI of 2.1 % GDP compared to the scenario with the PRI. Since 2018 the PRI was on hold and the pensions were indexed once again using the CPI, making it reasonable to envisage a no-policy-change scenario in which pensions are revalued against prices and gain more weight over GDP. Indeed, this assumption is that defined by the Government itself in its baseline scenario in the SPU. Therefore, AIReF's baseline scenario predicted an increase in pension expenditure of 2.6% GDP, which implies an estimated impact of abolishing the PRI of 2.1% in 2050.

Healthcare

The SPU forecasts on the increase in healthcare expenditure in the period are in line with those estimated by AIReF. The SPU forecasts maintain healthcare expenditure as a percentage of GDP (according to the Classification of the Functions of Government, or COFOG), implying an average growth of 3.7% in the period, although upward pressure related to the reform in the financing system of the territorial administrations has been recognised. This growth is slightly lower than predicted by AIReF, which considers an average increase of healthcare expenditure closer to 4% based on the results of the model developed for this purpose. AIReF's model for the short and medium term estimates the expected evolution of the main healthcare expenditure headings based on their historic evolution, budgetary execution data and the estimated impact on measures already adopted. The Public Healthcare Expenditure Statistics allows the breakdown by budgetary headings to be transformed into a breakdown by expenditure functions. The main line of pressure on expenditure is hospital expenditure, due to existing pressures on compensation and intermediary consumption, which record expenditure on hospital pharmacy, amongst other concepts.

Figure 51. BREAKDOWN OF HEALTHCARE EXPENDITURE GROWTH (%).

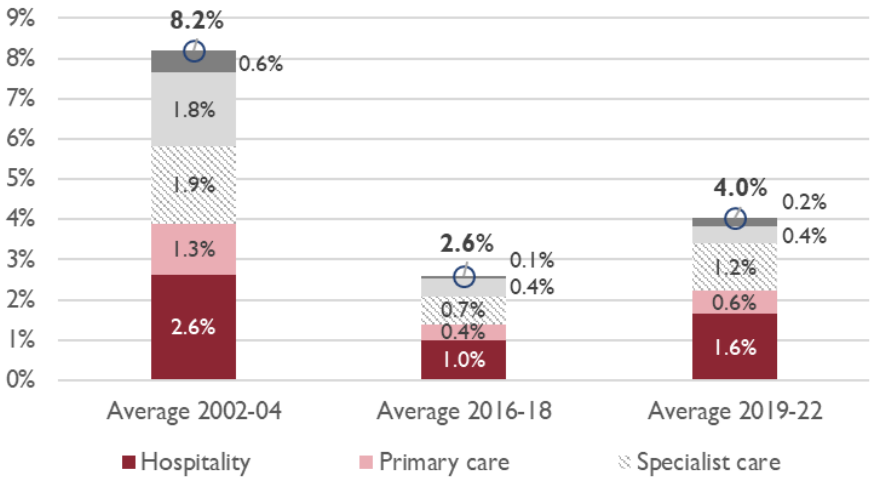
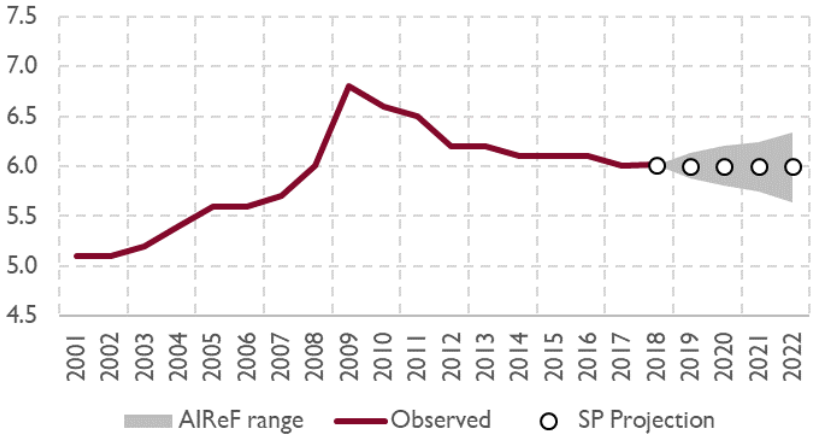


Figure 52. HEALTHCARE EXPENDITURE (% GDP)



These forecasts include the savings expected from non-hospital pharmaceutical expenditure through the application of the proposals contained in the first phase of the spending review carried out by AIReF. AIReF have submitted to the Government the results of the review of expenditure on public subsidies and grants carried out in 2018/2019, as the first phase in the comprehensive spending review process. The assessment carried out has brought to light significant room for improvement in the management and quality of some public policies, which has enabled AIReF to specify a series of recommendations that, if materialised, would obtain significant savings in the last years of the period envisaged in the SPU. Based on the foregoing, the SPU incorporated the impact of some of these recommendations that will bring about a reduction in non-hospital pharmaceutical expenditure, amongst other concepts, with respect to the scenario initially assessed by AIReF. The expected savings can be calculated by comparing the scenario initially assessed by AIReF with that contained in the SPU: expenditure in social

transfers in kind are expected to decrease by 1,500 million euros at the end of the period, particularly concentrated in the last two years.

It should be noted that there is certain inconsistency in the SPU between the overall healthcare expenditure forecasts and the expected evolution of the social transfers in kind that includes non-hospital pharmacy, amongst other expenditure items. Following the inclusion of the aforementioned savings in regard to non-hospital pharmaceutical expenditure, the SPU predicts an average growth in social transfers in kind of 0.9%. This evolution implies:

- On the one hand, that in order to obtain the average growth rate of 3.7% for total healthcare expenditure predicted in the SPU, the other items that make up healthcare expenditure, essentially compensation of employees and intermediary consumption, would have to grow far above this, which means that the total evolution expected for these items does not seem very likely.
- On the other hand, social transfers in kind not only include non-hospital pharmacy expenditure but also that associated to the provision of coordinated healthcare, educational and social services. The average evolution of the heading implies a very moderate growth rate of these expenditure items so that, in principle, a contained but upward evolution is expected.

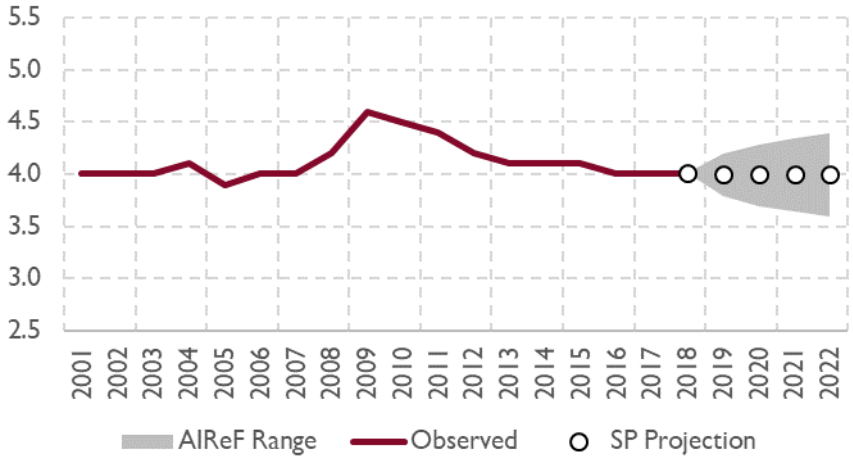
AIReF predicts higher growth to that envisaged in the SPU for social transfers in kind. Even though AIReF also predicted an average moderate growth in this item, of 1.9% during the period once the impact of the measures to reduce non-hospital pharmaceutical expenditure have materialised, said increase is greater than considered in the SPU when taking into account the existence of greater expenditure pressures in this heading, not only on healthcare but also on education and dependent care. In accordance with the series published by the *Ministerio de Hacienda* (Ministry of Finance - MINHAC)[30], in 2018 expenditure on pharmaceutical products and healthcare had grown by 4.5% as opposed to the 2.8% growth in 2017 or 1.1% in 2016. Of this growth, the expenditure related to prescriptions marks a more moderate trend but still far from the SPU's forecasts: 2.8% in 2018, compared to 2.4% and 4% in 2017 and 2016, respectively.

[30] Healthcare and pharmaceutical expenditure indicators

Education

The SPU's forecasts on the growth of education expenditure in the period are also in line with AIReF's estimates. As in the case of healthcare, the SPU keeps education expenditure constant as a percentage of GDP (according to COFOG), considering an average growth of 3.7% in the period, in which upward pressure related to the reform in the regional financing system is also noted. This growth is slightly higher than predicted by AIReF, which considers an average education expenditure growth closer to 3.5%, with more impact on the first years in the period as a result of the recently approved reversion of certain expenditure containment measures[31], whose effect will be seen in the course of 2019/2020 and that will have an impact on compensation of employees in particular.

Figure 53. EDUCATION EXPENDITURE (% GDP)

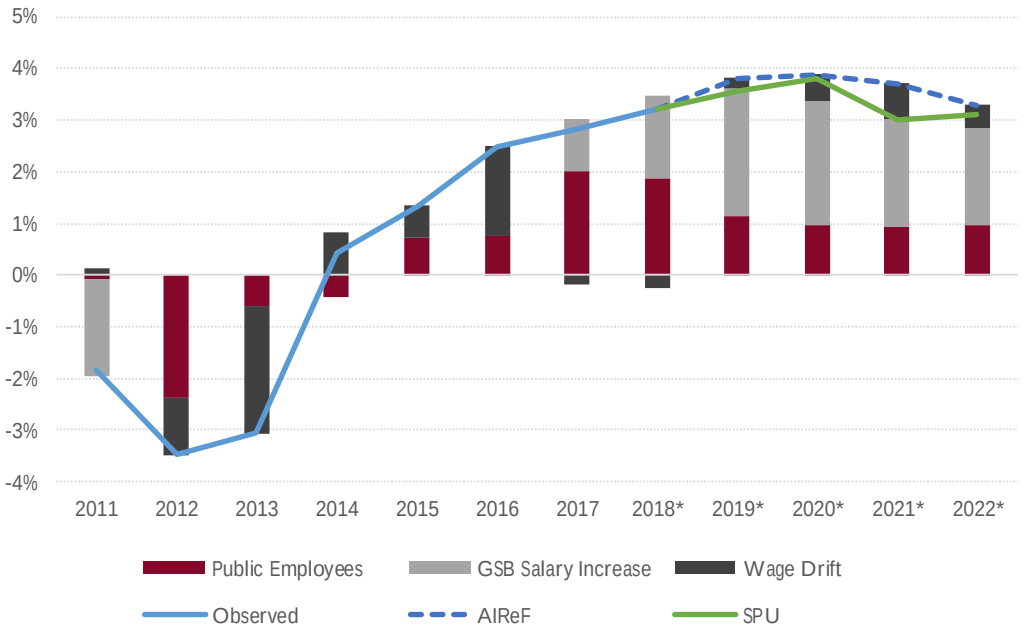


Compensation of employees

AIReF's forecasts are not substantially different to those included in the SPU for compensation of employees, even though they are higher at the end of the path. AIReF predicted an increase in compensation of employees of around 3.7% year-on-year, slightly above the Government's prediction of 3.4%. The differences identified in previous years on the impact of the agreement with Trade Unions for compensation of employees become more moderate in the application period of said agreement. However, AIReF's forecasts predict a higher increase in 2021 and 2022 than the SPU.

[31] Law 4/2019 annuls the expenditure containment measures in the educational sphere approved by Royal Decree – Law 14/2012.

Figure 54. BREAKDOWN OF THE INCREASE IN COMPENSATION OF PUBLIC EMPLOYEES (%)



Following no-policy-change criteria, once the term of the agreement has reached its conclusion, public wages will be revalued with the CPI. The application of the Agreement for the Improvement of Public Employment 2018-2020 signed on 8 March 2018 with the Trade Unions implies an increase in the average wage above CPI for the period in question. This agreement establishes a basic nominal increase per year from the beginning of the year. On the other hand, it envisages an additional increase depending on the real GDP growth of the previous year being effective on 1 July, in such a way that the increase linked to GDP of one year is spread across the following two years. These two elements make up the increase that is going to be applied to all public employees. On the other hand, a wage drift that considers the recent past has also been taken into account together with measures for the equalisation of State Law Enforcement Agencies remuneration and other measures adopted in the regional sphere.

TABLE 7. APPLICATION OF THE AGREEMENT WITH THE TRADE UNIONS ON THE WAGE INCREASE OF PUBLIC EMPLOYEES AND AIREF CRITERIA

Application of the Trade Union Agreement	2018	2019	2020	2021*	2022*
Basic	1.50	2.25	2.00	1.80	1.90
Linked to GDP previous year	0.13	0.13	0.30		
Linked to GDP two years prior		0.13	0.13	0.30	
Nominal increase	1.63	2.50	2.43	2.10	1.90
Wage bill	0.20	0.25	0.30		
Nominal increase and wage bill	1.83	2.75	2.73	2.10	1.90
Due to surplus	0.10	0.10			
Due to compliance with deficit				0.55	
Maximum increase	1.83	2.75	2.73	2.65	1.90

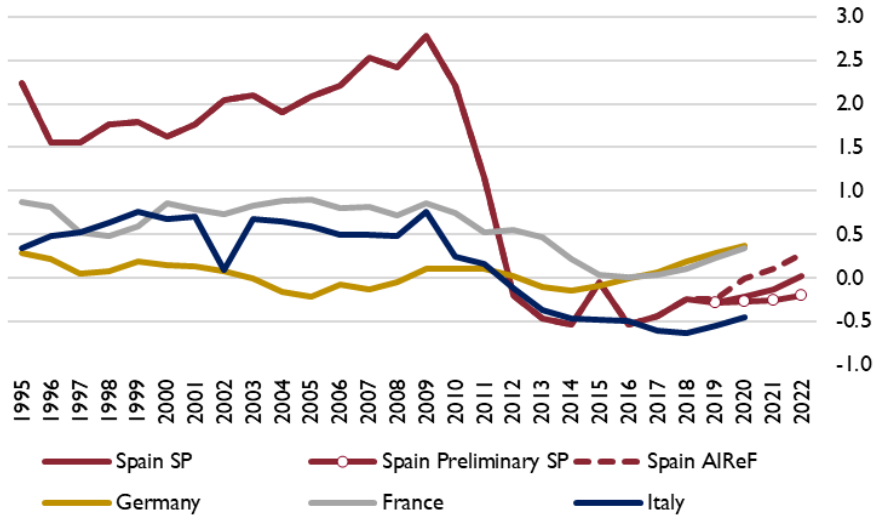
* Increase according to the CPI

AIReF considered a prudent increase in the number of civil servants of around 1%, with significant differences between sub-sectors. This estimate of the increase in the number of public employees is based on the public job offers of the different administrations, as well as on the predicted growth of GDP and the population, elements linked historically to the evolution of the number of employees. However, this estimate is prudent when considering the evolution of recent data on public employees, since it is lower than the growth experienced over the last two years. In this context, in 2018 the Labour Force Survey (LFS) registered an average increase in number of public sector employees of 4% whereas affiliation to Social Security of this group increased by 3.6%. Considering that staff contributing among civil servants falls approximately 5% per year, the growth of workforces would be around 1.9%, close to the 2% recorded in National Accounting in 2017. Therefore, in view of recent Social Security affiliation data in 2019, there is a risk of a greater increase in the number of public employees in line with the last two years.

Gross capital formation

Investments in the SPU scenario maintain their weight with respect to GDP during the entire period at the same level as the last few years. The average growth predicted in the SPU for investment is 3.5%, with especially high growth in 2022 as a result of the possible impact of certain judgements still considered to be contingent liabilities. AIReF considers this scenario to be conservative, considering that this level of investment could be incompatible with the replenishment of existing capital in infrastructures according to the findings of several studies. The following figure shows how net public investment in fixed capital consumption loses weight over GDP until 2022. In the preliminary scenario issued by the Government, net investment showed a decrease in weight over GDP even in 2022.

Figure 55. NET PUBLIC INVESTMENT (% GDP)



Source: AMECO (Annual Macro-Economic Database of the European Commission's Directorate General for Economic and Financial Affairs) and AIReF/SPU forecasts

Note: Net public investment is the difference between gross fixed capital formation and fixed capital consumption.

In its forecasts AIReF assumes a gradual recovery of the gross investment levels up to around 2.3% GDP at the end of the period. This implies growth rates above nominal GDP in line with the acceleration observed in recent years once non-recurring operations from 2018 have been removed. To reach this forecast, AIReF has taken into account multiple factors from the analysis of each of the sub-sectors.

In the case of the Central Administration the average growth over the entire period, having removed non-recurring measures, is 4.2% in AIReF's scenario. The projection takes into account the multi-year investment commitments included in the General State Budget (GSB), as well as the evolution of military investment in budgetary terms and the likely impact of the outcome of the lawsuits on toll motorways. Lastly, a risk to consider in the expenditure path is also the possible litigation arising from the bail-out process and the quantification of the State's financial liability.

In the territorial administrations an increase is estimated due to the upturn of financially sustainable investments and the higher rate at which EU-funded operational programmes are being implemented. An increase in financially sustainable investments has been predicted in those Regions for which surplus is likely. However, in the case of the LGs, the impact of the increase of this type of investment may be moderated due to the limited capacity for project management of these administrations. On the other hand, it is expected that

the increases in co-financed investments will be concentrated in the final years of the current EU-funded operating programme, 2014-2020.

Evolution of interests

AIReF expects a reduction in interests by 0.3% GDP in the 2019-2022 period, slightly higher than the SPU's forecasts. In terms of growth, the SPU estimate for interests is slightly higher than AIReF's in nominal terms as well as in terms of percentage of GDP. AIReF's estimates are based on its own primary balance forecasts for each sub-sector, the stock-flow adjustment, individual detail of the composition of debt per Region, the forward rates curve and the maturity structure with an average Internal Return Rate (IRR) related to the initial State debt portfolio. On the other hand, in 2019 and 2022 this heading was affected by two court rulings that imply an additional and non-recurrent expenditure on interest.

Subsidies and other expenditure items

Subsidies and other current expenditure items evolve in a very contained way in the SPU, decreasing by 0.1% GDP. This reduction is in line with AIReF's forecasts taking into account, on the one hand, the moderate growth predicted in contributions to the EU budget that will remain below nominal GDP growth during the entire period and, on the other, the contained evolution of expenditure on subsidies. This contained evolution of expenditure on subsidies will be sustained by the application of the recommendations contained in Project 1 of AIReF's spending review on the Evaluation of Subsidy Strategy and Procedure.

Fiscal risks

The SPU does not include sufficient information about the fiscal risks that may affect the sustainability of the PAs, limiting itself to reporting on the guarantees given by the PAs as endorsements. The section on contingent liabilities of the SPU only includes information relating to endorsements and does not provide information on any possible liability that the PAs might have to face as a result of court rulings, information relating to public-private associations, unpaid loans or any other type of risk that could affect the budgetary stability and financial sustainability targets of the PAs. In this context, AIReF has requested more information in several reports in the interest of greater transparency.

Over the last few years the implementation of court rulings have had significant impact on the balance of the PAs. Despite the existence of specific budgetary items for financing this type of expenditure in the form of contingency funds in the different PAs, the expenditure on executing judgements have had a considerable impact on the public deficit at all levels

of the administration. In this context, it is important to remember the court rulings already finalised on the invalidity of the Tax on Retail Sales of Certain Hydrocarbons (the so-called *céntimo sanitario*), the rulings considering that maternity/paternity benefits are exempt from PIT and several rulings in relation to CIT. The volume of judicial proceedings outstanding is unknown, such as the claims for abolishing the premiums on renewable energy, which could have a significant impact on public accounts in the coming years.

Furthermore, the State's Financial Liability (SFL) for resolving the toll-motorway concessions could involve a fiscal risk for the coming years. On the one hand, the claim by the concession company of the AP-7 toll road in Catalonia is in progress, which could reach significant amounts in the coming years and, on the other hand, it is unknown if there are more claims in process with risk of materialisation. In 2018 expenditure was recognised for this concept at 0.2% GDP and there remains future risk from litigation within these proceedings.

NON-RECURRENT ELEMENTS

GENERAL GOVERNMENT SECTOR	2017	2018	2019	2020	2021	2022
Toll motorways		1,800		500	500	557
Tax credits payable	512	1,073	500			
APS Payments	797	1,788	1,648	1,648	1,648	1,649
Financial aid	508	78				
Ruling on Corporate Income Tax			702			
Maternity rebate		622	725			
Estimated expenditure of interest on non-recurrent items			240			483
Non-recurrent revenues from Corporate Income Tax		-1,600				
Non-recurring expenditure in Regions (various rulings; 2018 and 2019: AND, CVA, BAL)	228	1,030	315	0	0	0
Non-recurrent revenues in Regions (2018: settlement of EU Funds PO 07-13; 2019: extraordinary rev AST and CVA)		-567	-158	-18	0	0
Non-recurring expenditure LGs (reclassification app and other)	108	35		0	0	0
Non-recurrent items	2,153	4,259	3,972	2,130	2,148	2,689
Non-recurrent items (% of GDP)	0.2	0.4	0.3	0.2	0.2	0.2

Beyond contingent liabilities, AIReF has identified a series of fiscal risks that could make the reduction of the structural deficit difficult. These risks do not derive from disruptive elements but rather are the result of political, regulatory and budgetary decisions that affect different administrations. These decisions normally happen without taking into account the repercussion on the sustainability of public finances, due to their isolated adoption without taking into account the general fiscal context or not having sufficient information on their budgetary impact. On the one hand, there are certain headings under upward pressure due to several factors. On the other hand, the weakness already identified by AIReF in the design of the Spanish fiscal framework may lead to additional pressure on the structural deficit. Lastly, a worse than expected macroeconomic evolution as the baseline scenario also poses a fiscal risk as previously mentioned.

Compensation of employees could increase above that predicted by the SPU and AIReF mainly due to a greater number of personnel. The historical relationships used by AIReF's models mark a contained evolution of 1% of the number of personnel, in line with the evolution of the population and GDP. However, the most recent data available shows a certain acceleration in social security affiliation in the public sector that, if not contained, will lead to increases closer to 2% such as in 2017 and 2018. Furthermore, some territorial administrations are also adopting personnel measures that could raise growth of this heading above expectations.

Investments are positioned at historically low levels and do not guarantee the replenishment of current stock of public capital. This situation could drive the growth of investment together with other institutional factors such as regulatory amendments on financially sustainable investments. As a result, significant increases in investment could be recorded, such as the proposal in the draft GSB for 2019 that was rejected.

There are pressures coming from EU institutions such as civil society organisations and political parties to reform the minimum income system in Spain. Since 2014, specific recommendations from the Council include strengthening the latest economic benefits network to make more progress in reducing poverty. Likewise, in February 2017 the Spanish Parliament took into consideration a Popular Legislative Initiative (PLI), proposed by the *Unión General de Trabajadores* (General Workers Union - UGT) and *Comisiones Obreras* (Workers' Commissions - CC.OO.), with the objective of establishing a minimum income benefit. AIReF, commissioned by the Government, has conducted a study on the minimum income and the PLI that underscores the high fiscal cost of this proposal, amongst other things. Even though other, more efficient alternatives are cheaper, this would imply an increase in the structural deficit that would not be offset with other measures.

Even though the surplus of the LG sub-sector complies with structural factors, it runs the risk of disappearing in the medium term. As AIReF has already mentioned in previous reports, the LG surplus is leading to a reduction in the sub-sector's debt and to the increase of bank deposits to historically high levels. At the same time, the LGs are proposing several initiatives directed at being able to have this surplus available to them, a trend that is also becoming popular in the Regions. As a result, there is a risk that the surplus will disappear, increasing the structural deficit of the PAs.

The SPU indicates that the reform of the territorial financing system will experience an increase in expenditure on healthcare and education that, without additional measures to increase revenue or reduce other expenditure items, will have an impact on the deficit of the PAs. The forecasts by the SPU

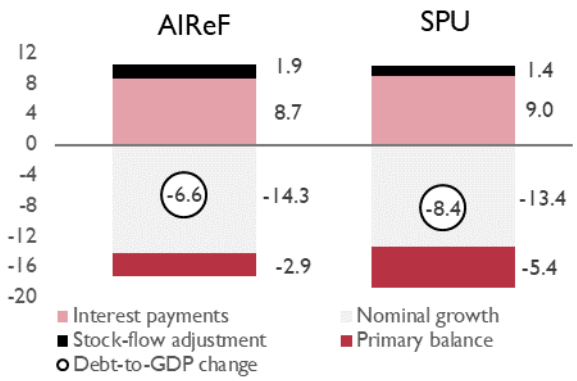
on the structure of expenditure by functions (COFOG) include an evolution of expenditure that, in general, maintains its weight with respect to GDP at 41% throughout the entire period. However, it also points out that the figures included in the healthcare and education functions are likely to increase as a consequence of the reform to the territorial financing system. In this context, it should be noted that increased expenditure related to greater financing in the territorial administrations will not have a neutral impact on the deficit of the PAs: without additional measures to increase revenue or reduce other expenditure items, the increase in financing funds in the territorial administration implies a parallel drop in revenue in the State sphere.

Debt sustainability analysis:

At the end of 2018, the debt-to-GDP ratio was around 97.1% which implies a drop of 3.3% on the maximum recorded in 2014. In a context of cyclical recovery, the growth of nominal GDP has contributed to reducing the debt-to-GDP ratio by 14.8% over the last 4 years. This impact has been offset nearly entirely by the primary deficits observed, reducing the debt ratio only 3.3% from the maximum recorded in 2014.

The 2019-2022 SPU includes a declining government debt-to-GDP ratio throughout the period, with an accumulated adjustment of 8.4%, above AIReF's regulatory scenario. The forecasts included in the 2019-2022 SPU reflect a drop in the debt-to-GDP ratio that accelerates over the period, amounting to an accumulated reduction in four years of 8.4 % GDP. This path positions debt at 88.7% GDP in 2022, below that predicted by AIReF in its regulatory scenario. The difference between both forecasts is mainly explained by the evolution of the primary balance which stands at 2.5% GDP towards the end of 2022.

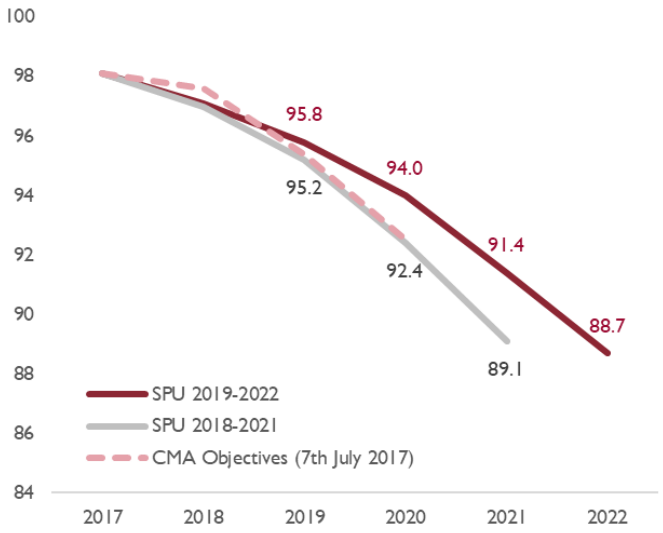
Figure 56. CONTRIBUTIONS TO THE VARIATION OF THE DEBT-TO-GDP RATIO IN THE 2019-2022 PERIOD, AIREF VS SPU COMPARISON SPU



Source: AIReF's estimates

The 2019-2022 SPU revises the projection of the debt-to-GDP ratio contained in the previous 2018-2021 SPU upwards, delaying attainment of a level below 90% until 2022. The debt-to-GDP ratio is 2.3% GDP higher than the estimate projected in the previous SPU for 2021, and does not comply with the last debt targets set by the Agreement of the Council of Ministers of 7 July 2017.

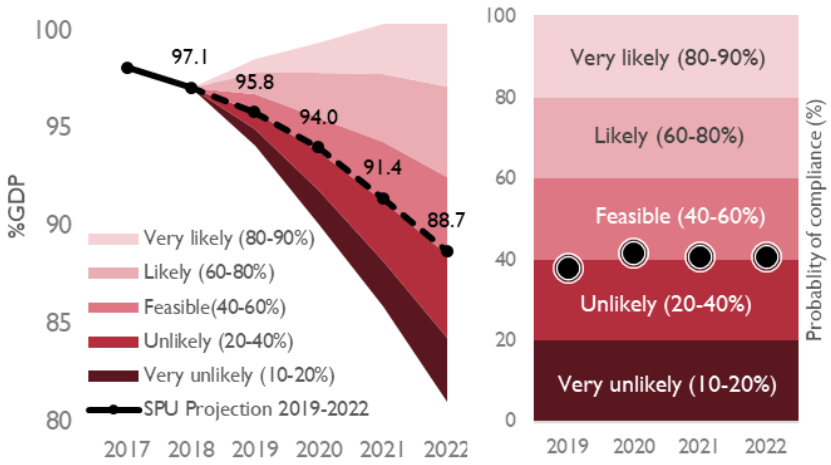
Figure 57. DEBT-TO-GDP RATIO COMPARISON WITH PREVIOUS REPORTS



Source: AIReF's estimates

AIReF considers the debt projections included in the 2019-2022 SPU to be within the limits of feasibility. In accordance with its internal projections, AIReF considers the attainment of a debt-to-GDP ratio equal or less than that projected by the Government in the 2019-2022 SPU to be within the limits of feasibility. In the medium term, AIReF expects a slow downturn in the debt-to-GDP ratio, positioning itself around 90% in 2022 in its regulatory scenario. However, the probability that it does not fall, or even goes up, in the next 4 months is estimated at around 20%.

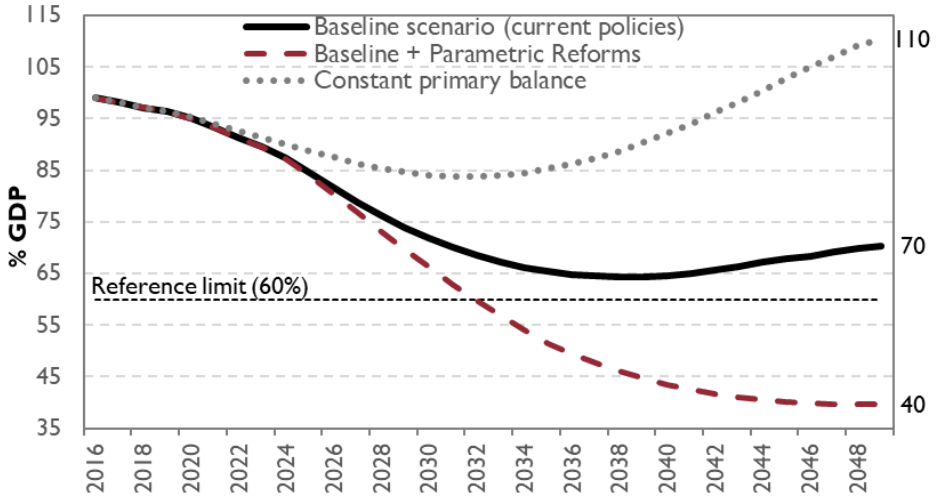
Figure 58. 2019-2022 SPU DEBT FORECASTS AND STOCHASTIC ANALYSIS



Source: AIReF's estimates

According to AIReF's sustainability analysis, in the regulatory scenario a fiscal policy aimed at driving the debt-to-GDP ratio to the reference level and that assumes the maintenance of purchasing power of the pensions should stabilise the debt-to-GDP ratio at around 70%. According to AIReF's sustainability analysis carried, if the purchasing power of the pensions and the rest of the sub-sectors of the PAs maintain primary balances similar to those projected for 2019, the debt-to-GDP ratio of the PAs will start going up again, getting close to 110% towards 2050. In addition, if all the sub-sectors of the PAs except Social Security implement a fiscal policy aimed at driving the debt-to-GDP ratio to its legal reference level in the long term, the same could stabilise around 70%. This type of policy would require a fiscal effort unprecedented in recent history. In particular, the *Central* Administration would have to maintain a primary surplus in the order of 2% GDP. Lastly, if parametric reforms are implemented (such as those recommended in Opinion 1/2019) that mitigate the increase in pension expenditure derived from an ageing population, it would be possible to reach the debt reference level of 60% for the GG in the first few years of the 2030 decade. In this scenario the debt would end up stabilising at around 40% in the long term.

Figure 59. EVOLUTION OF THE DEBT-TO-GDP RATIO OF THE PUBLIC ADMINISTRATIONS UNDER DIFFERENT SCENARIOS



Source: AIReF's estimates

However, towards 2050 the debt ratio would still be around nearly 80% GDP if the projections for pension expenditure included in the SPU are used and they are linked to the CPI. Due to the relative great weight that pension expenditure has on the total expenditure of the PAs, the assumptions used in their projection are key in determining the dynamic of government debt. Therefore, a simulation exercise was performed to estimate the impact in terms of debt accumulation that the pension expenditure forecasts included in the 2019-2022 SPU would have (corresponding to the scenario of the Ageing Report 2018).[32] [33] As mentioned in the previous sections, based on the assumed year-on-year update of 0.25%, the long-term pension expenditure forecasts contained in the 2019-2022 SPU differ from the medium-term budgetary projections, since the former imply maintaining their purchasing power. Furthermore, the assumption of updating with the PRI does not fulfil the feasibility, credibility and inter-temporal consistency requirements necessary.[34] Therefore, and for the purposes of comparison with AIReF's regulatory scenario, the impact on debt resulting from adding together the long-term

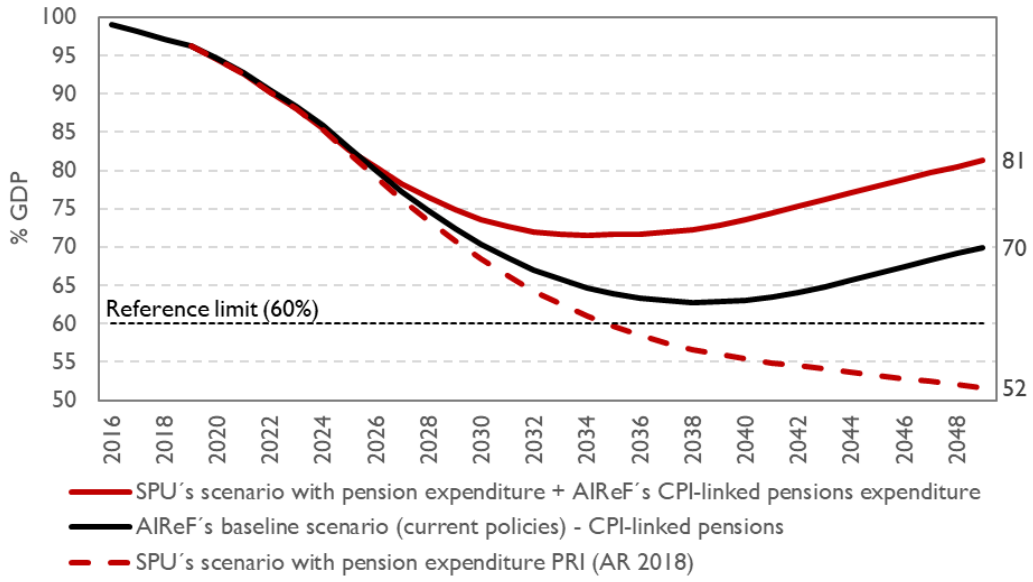
[32] For more details, see the section on long-term pension expenditure.

[33] Using AIReF's regulatory scenario as a reference point (that implies that all sub-sectors of the PAs implement a fiscal policy aimed at converging to the reference debt level in the long term), firstly a debt path is projected consistent with the pension expenditure projected in the SPU that assumes a year-on-year revaluation of the pensions by 0.25% (AR 2018). Secondly, and due to the reasons explained in the section on long-term pension expenditure, pension expenditure resulting from linking the purchasing power of pensions to the CPI is added. This calculation includes the cost of any additional interest associated to the increase in financing needs of Social Security.

[34] AIReF Opinion 1/19 on the sustainability of the Social Security System

pension expenditure presented in the 2019-2022 SPU to the amount derived from its connection to the CPI has been analysed. In the absence of official estimates in this regard, AIReF's impact estimates are used. Based on the results obtained, it is concluded that, even if the rest of the sub-sectors maintained the historically demanding primary surpluses, linking pensions to the CPI would result in a return to an upward debt dynamic. In this scenario, the debt-to-GDP ratio would reach up to 80% GDP up to 2050, approximately 10% above that projected in AIReF's regulatory scenario (see figure 60). In both scenarios, and in the absence of measures that mitigate the impact of an ageing population, linking the pensions to the CPI hinders reaching the reference value of a debt-to-GDP ratio of 60% GDP in the next 30 years.

Figure 60. EVOLUTION OF THE DEBT-TO-GDP RATIO OF THE PUBLIC ADMINISTRATIONS USING THE PENSION EXPENDITURE FORECAST IN THE 2019-2022 SPU



Source: SPU and AIReF's estimates

Furthermore, margins are needed as buffers against the vulnerability derived from contingent liabilities, geopolitical risks, financial crises or macroeconomic shocks. The creation of sufficient fiscal space to respond to future pressures derived from contingent liabilities, geopolitical risks, financial crises or macroeconomic shocks requires a more intense reduction in debt, that not only rests on the denominator effect, but rather is backed by a more improved and sustained structural fiscal position. The stock of existing debt is very high and remains close to its historical peak of the last 100 years. In these circumstances, the action margin of fiscal policy is very limited compared to negative shocks or greater expenditure pressures and therefore is a risk for sustainability in the medium-to-long term.

3.1. Fiscal policy stance

Regulatory context

After a decade in the Excessive Deficit Procedure (EDP), in 2019, Spain will now be subject to a new one; the so-called Preventive arm of the Stability and Growth Pact (SGP). The government deficit observed in 2018 was below 3% for the first time in the last 10 years and with an outlook of remaining below said benchmark long term. This evolution enables the Spanish economy to finally exit the EDP in 2019 and operate under the preventative arm of the SGP.

In the national sphere, the authorities remain subject to the domestic regulation defined in the Organic Law on Budgetary Stability and Financial Sustainability (LOEPySF for its Spanish acronym), while, at the EU level, passing to the preventative arm implies some changes to fiscal supervision. After the 2011 and 2013 reforms, the preventative arm of the SGP was reinforced to assure that the countries respected the deficit and government debt thresholds[35]. In practice, passing to the preventative arm means double supervision for Spain. On the one hand, the convergence to the budgetary balance in structural terms[36] and, on the other, the progress of debt at a suitable pace towards the threshold of 60% GDP (see table for more details on the supervision rules under the preventative arm).

The Independent Fiscal Institutions have a reinforced role in this context, having to perform an ex-post assessment of the circumstances for activating the corrective mechanisms. The adoption of the Fiscal Compact in 2013 and the subsequent approval of the so-called Two-Pack establishes that the Independent Fiscal Institutions have to assess their national budgetary rules ex-post, with the objective of assessing whether the conditions for activating the corrective mechanisms are met faced with a significant deviation observed with respect to the structural balance (or MTO), according to the definitions in EU regulations.

Assessment of the SPU

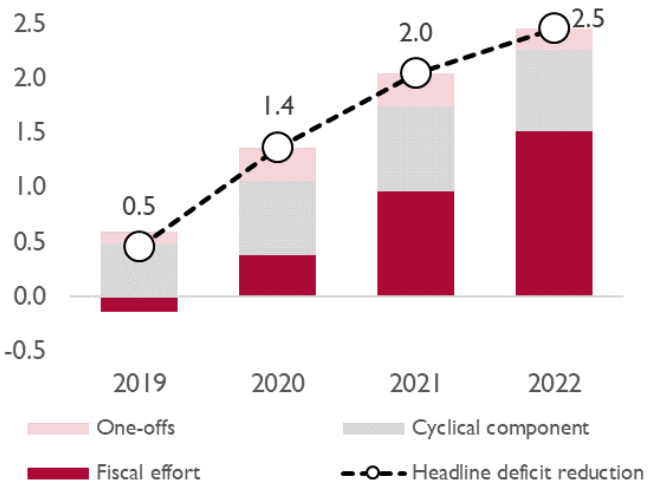
The fiscal strategy established in the SPU does not envisage any fiscal effort in 2019 and spreads the effort evenly over the 2020-2022 period. The deficit path foreseen in the SPU corrects the deficit by 2.5 percentage points in the next 4 years. The contribution of economic activity to this deficit reduction is scarce and is consolidated in 2019, since the cycle forecasted by the Government

[35] Deficit threshold of 3% GDP and debt threshold of 60% GDP.

[36] Medium-Term Objective (MTO), in EU terminology.

reaches its maturity in 2020 and scarcely contributes gains from that point on, predicting the arrival of the cyclical peak earlier than AIReF's estimates in which the cyclical evolution continues to contribute to closing the deficit throughout the entire forecasting period. The bulk of the correction (1.7 percentage points) therefore relies on structural effort, that is, new measures that are uniformly spread out over the 2020-2022 period, with a year-on-year average of 0.6% GDP.

Figure 61. CONTRIBUTIONS TO DEFICIT CORRECTION FORECASTED IN THE SPU

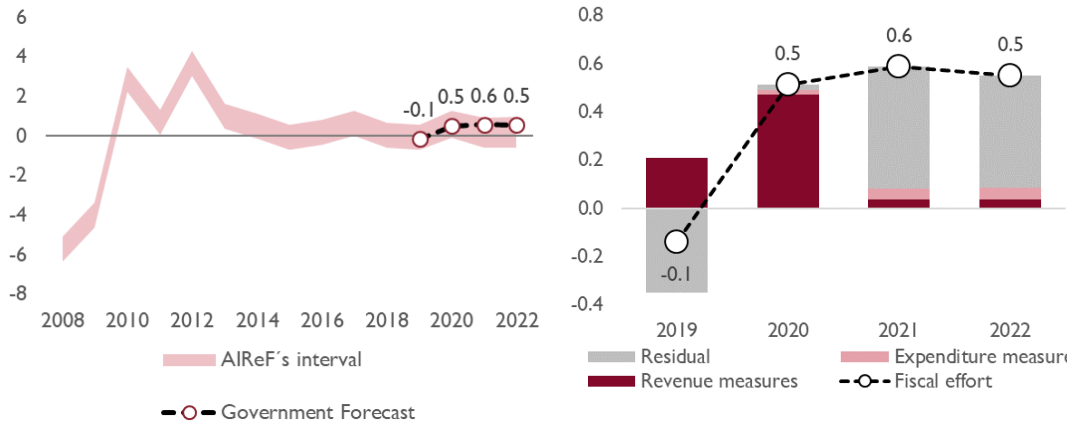


Source: SPU and AIReF estimates

AIReF's assessment, albeit coinciding with that forecasted by the SPU in 2019 and 2020, differs in the predicted effort in 2021 and 2022. With all the uncertainty and limitations to which the estimation of the structural balance is subjected, according to AIReF's estimates[37] the bulk of the fiscal adjustment is concentrated in 2020, considered feasible in both 2019 and 2020. However, for 2021 and 2022, AIReF considers, a priori, that there are no sufficient measures that justify the effort estimated by the Government, remaining in the upper part of the interval estimated by AIReF, as can be seen in figure 62, that includes both new revenue measures with differential impact concentrated in 2020, such as the implementation of expenditure measures related to spending review performed by AIReF.

[37] AIReF has made an ex-ante estimates of said structural effort according to the estimation by the Commission, using its own set of non-recurrent measures for 2019-2022; its own output gap estimate; and the inclusion of the uncertainty related to the cyclical position as well as the evolution of public finance, key point for ex ante estimates.

Figure 62. FISCAL EFFORT AND CONTRIBUTION OF THE MEASURES (%GDP)



Source: SPU and AIReF estimates

This aggregated approximation to the estimate of the effort has important methodological limitations, and for this reason it is necessary to complement it with a more granular approach, covering the evolution of expenditure and exploiting the information available on discretionary measures. When assessing the evolution of the structural budgetary balance, there are significant limitations in the methodology mainly relating to the estimate of the impact of the cycle. Furthermore, the uncertainty that exists surrounding the evolution of the cyclical position as well as the dynamic of public finance should be included in the analysis.[38] To do this, in practice, a more granular complementary approximation is carried out (bottom-up) by exploiting the information contained in the budgetary documents with respect to the evolution of expenditure as well as the discretionary revenue measures. The comparison of the evolution of expenditure with respect to the potential medium-term growth rate (reference rate) facilitates a disaggregated assessment of the fiscal policy stance.

Evolution of GG computable expenditure, extending the coverage of the national expenditure rule, confirms a neutral tone of fiscal policy in 2019 and contractionary in 2020. The national regulations exclude the FSS from the application of the expenditure rule, therefore its expenditure is not subject to the reference rate. However, in an approximation exercise to the growth of computable expenditure, AIReF has analysed, similar to that in the Report on the Initial Budgets of the Public Administrations, the computable expenditure including FSS except for the expenditure on unemployment benefits that are excluded from the calculation and without considering the impact of the one-off measures that are not excluded from the national expenditure rule. This

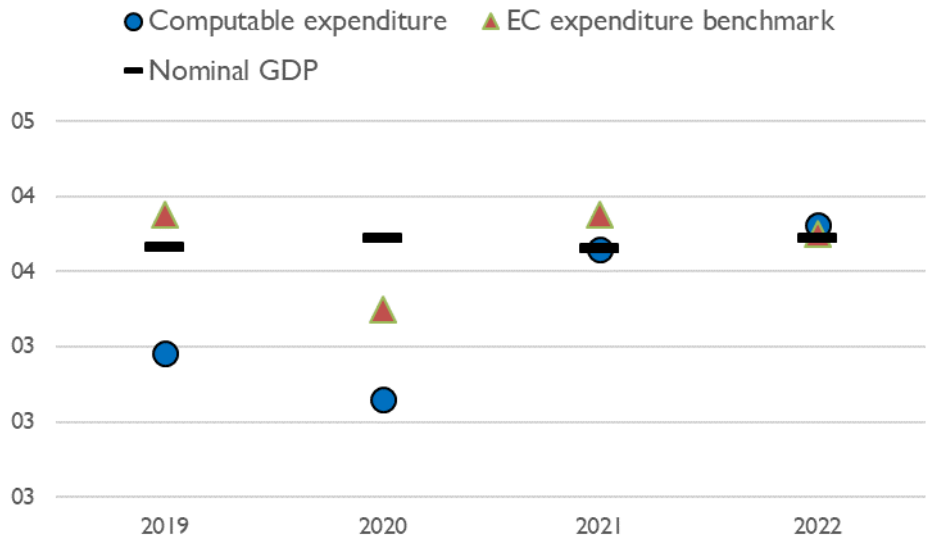
[38] AIReF. Report 45/18. "Report on the main budgetary lines of the Public Administrations 2019".

exercise estimates a growth of computable expenditure of 3.3% in 2019 and 3% in 2020. For 2019 and 2020 this growth is slightly below nominal GDP, contributing to the reduction of the structural deficit, whilst in 2021 and 2022 growth is expected to be in line with the economy, in keeping with a more neutral fiscal policy stance.

Considering the methodology of the more restrictive European Commission, the evolution of computable expenditure is above the requirements set forth in the recommendation of ECOFIN (Economic and Financial Affairs Council) of June 2018 and exceeds the requirement of the debt rule, as detailed in the SPU. The calculation of the expenditure benchmark or European expenditure rule refers to the GG and presents some differences in the methodology to that of national methodology, making the European one more restrictive. The European rule requires an additional effort when a country is not in its structural budgetary balance value (MTO) and excludes one-off measures. The application of EU methodology points to growth of the expenditure subject to the expenditure benchmark of 4% in 2019, above the requirements detailed in the ECOFIN recommendation of June 2018, of 0.6% in 2019.[39] AIReF estimates a similar situation in 2020 and in both years, beyond , the tolerance margins of European regulations, which could result in the Commission identifying significant risk of deviation ex-ante , as it did already in the assessment of the 2019 Budgetary Plan.

[39] Faced with the perspective of passing over to the preventative arm, in July 2018 ECOFIN approved the fiscal adjustment to be made by Spain in 2019: a reduction in the public deficit with respect to GDP of the GG, in structural terms, by 0.65% GDP and that, according to the Commission's calculations, would be consistent with a growth in the GG computable expenditure of0.6%.

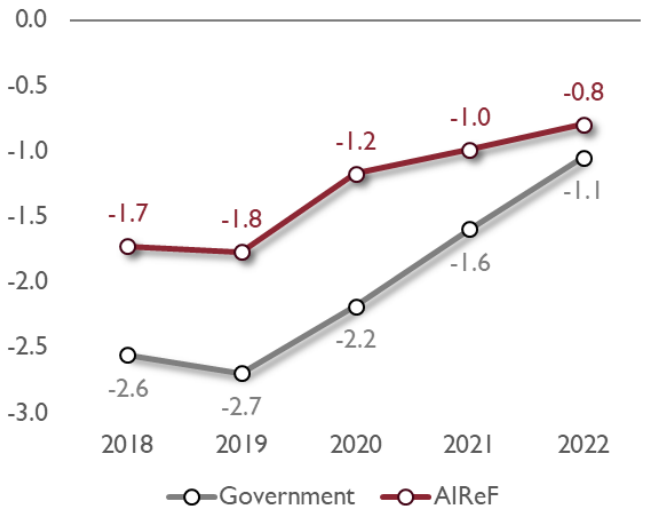
Figure 63. GROWTH OF EXPENDITURE AND OF NOMINAL GDP



Source: AIReF estimates

To summarise the fiscal policy stance in the next 4 years, AIReF estimates a reduction in the structural deficit by nearly 1% GDP, mainly attributable to revenue measures. According to AIReF's estimates, the structural deficit would be reduced by practically half in the 2019-2022 forecasting horizon. This reduction would be mainly attributed to the new revenue measures and, to a lesser extent, to possible savings derived from the measures as a result of the implementation of the proposals from the spending review carried out by AIReF.

Figure 64. STRUCTURAL BALANCE FORECASTS



Source: SPU and AIReF estimates

BOX EUROPEAN FISCAL RULES IN THE PREVENTATIVE ARM OF THE STABILITY AND GROWTH PACT

Countries in the preventative arm of the Pact who have not yet attained their MTO (budgetary structural balance, in the case of the Spanish economy) and with a debt above 60% GDP are subject to two rules.

Rule of convergence towards the MTO that determines the year-on-year effort to achieve said target:

- Convergence to the MTO is assessed based on two indicators; variations in the structural balance and the so-called expenditure benchmark.
- Variations of the structural balance are the first difference of the adjusted balance of the cycle without taking into account temporary measures. The expenditure benchmark is the rate of growth of public expenditure compatible with said structural adjustment.
- Each year ECOFIN makes some recommendations on both indicators for the following year known as "requirements". The requirement in force at the moment for Spain was adopted in July 2018 and recommended making a structural adjustment of 0.65% GDP consistent with a maximum computable expenditure growth of 0.60% in 2019.
- After the assessment of the Stability Programme, ECOFIN shall make the recommendation relative to the efforts to be made in 2020. To facilitate their determination a modulated effort matrix is considered depending on the cyclical position of the economy and the sustainability of government debt. Given the high uncertainty for estimating the cyclical position, the Commission may propose deviations from the matrix as was done last year. Taking into account the forecasts of the Commission on the cyclical position, it is likely that the Commission will assess a cyclical position that qualifies as "normal times", which could lead to requiring a structural adjustment of 0.65% again in 2020.

Ex post, non-compliance with this rule may lead to financial sanctions, with an interest-earning deposit of 0.2% GDP. In any case, this is a long and slow process that is triggered when a significant deviation from the data of a closed fiscal period is identified by the Commission, which needs a recommendation from ECOFIN to correct said deviation.

In the assessment of a significant deviation, the Commission does not perform a mechanical exercise of mere quantification of the two aforementioned indicators. Rather they take into account some tolerance margins: deviation with respect to the indicator of 0.50% GDP in one year or 0.25% GDP in two consecutive years.

The convergence rule or sufficient progress towards the debt threshold of 60% GDP whose non-compliance ex post may give rise to opening an EDP. This rule presents two variants: one general rule and one transitional rule that applies to the countries that, like Spain, in November 2011 found themselves to be in an EDP situation.

The objective of the transitional rule is to facilitate the country in the transition towards the general rule and avoid falling back into an EDP after their exit. This transitional rule applies for three years (2019-2021 in the case of Spain) and what it does is to identify the Minimum Linear Structural Adjustment (MLSA) to be made to assure that the country complies with the general rule at the end of the transition period. The determination by the Commission of said structural effort is based on complex calculations that take into account three sub-criteria that make up the general rule. Said criteria include the impact of the cycle on the debt-to-GDP ratio and seek sufficient progress in the debt towards 60% in previous and future years. In the last estimates by the Commission, those in autumn 2018 for 2019 and 2020, the MLSA identified were 0.6% GDP and 1.1% GDP, respectively.

If the rule is not complied with when observing ex post data, the Commission prepares a report (known as the 126.3) to assess the opening of an EDP. This ex-post assessment shall be applied for the first time in Spain in April 2020 with closed data from 2019 and must respect two conditions:

1) The year-on-year structural adjustment must not deviate more than 0.25% GDP from that required in the MLSA to assure compliance with the debt rule at the end of the transition period.

2) In any moment of the transition period, the remaining year-on-year structural adjustment must not be greater than 0.75% GDP. This condition does not apply if the former involves a year-on-year effort above 0.75% GDP.

Of course, the threshold of 3% GDP deficit remains in place, whose non-compliance could also give rise to opening an EDP.

Source: Vade Mecum on the Stability and Growth Pact, 2018 Edition. Institutional Paper 075/March 2018

4 RECOMMENDATIONS

1. Monitoring of the recommendations prepared in advance in the process of drafting the SPU

One of the characteristics that singles out and differentiates AIReF from the activity that other supervisory bodies carry out is the ex ante approach to its assessments. This means that the different pronouncements that it makes throughout the budgetary cycle are at specific moments when its recommendations may be included in the documents that are finally approved. Precisely for this purpose, AIReF's regulatory standard establishes the obligation that the it must prepare reports on the draft Budgets, draft Economic Financial Plans and the draft Stability Programme Update.

In this context, on 15 April, AIReF received preliminary information on the 2019-2022 SPU from the Government, including the macroeconomic and fiscal scenario for the whole period. This information allowed it to carry out an initial assessment that was sent to the Government along with a series of recommendations so that they could be taken into account before the submission of the SPU to EU institutions.

These recommendations were:

1. *The final version of the SPU must ensure coherence between the macroeconomic scenario and fiscal projections.*

2. *The processing of the planned tax measures must be sped up so that they are effective at the beginning of 2020, as estimated by the Government.*

3. *Additional measures should be adopted for 2021 and 2022 that support the forecasted fiscal path. In this respect, AIReF has sent the*

Government the results of the evaluation of expenditure on subsidies and public grants carried out in 2018-2019, as the first phase of the comprehensive spending review committed by Spain. The assessment performed has brought to light significant room for improvement in the management and quality of subsidies and public policies in general, which has enabled AIReF to specify a series of proposals that, if materialised, would mean significant savings in the last few years of the period covered in the SPU. In addition, AIReF is conducting the second phase of the spending review, which affects certain fiscal benefits, recruitment incentives, transport infrastructures and hospital expenditure on pharmacy and capital goods. In this case, as is standard practice in countries that carry out these types of reviews, and although the work is in its preliminary phases, quantitative targets could be set out, subject to the final results that are to be obtained from the evaluations in progress.

Following this last recommendation, the final scenario of the SPU includes the impact of the implementation of some of the proposals made by AIReF in the comprehensive spending review committed by Spain that, in its first phase (2018-2019), focused on subsidies and public grants. Likewise, it includes the saving that could be obtained with some of the projects in the second phase of the review process that AIReF is carrying out at this time.

AIReF, recognising the impact of the political context in which this report has been prepared, considers that there is a lack of accuracy in the definition of these measures and their link with the budgetary scenario.

For this reason, *AIReF recommends that*:

1. The measures that are going to be adopted within the scope of the comprehensive spending review institutions and whose implementation, in several phases and in specific expenditure areas, was commissioned to AIReF by Agreement of the Council of Ministers, should be specified to the EU.

To close the successive reviews commissioned, the Agreement of the Council of Ministers that specifies these measures must include the specific commitments assumed, with a clear implementation horizon and defined procedure for assessment and follow-up.

With respect to the coherence between the macroeconomic scenario and the fiscal projections, the Government has not followed the recommendation made. However, AIReF stresses how important it is that this coherence is guaranteed, taking into account the risks and assessment difficulties that, from the perspective of compliance with the fiscal targets, are associated to this lack of coherence.

For this reason, *AIReF recommends that*:

2. *Coherence between the macroeconomic scenario and fiscal projections should be assured in the different milestones of the budgetary cycle.*

Lastly, the recommendation on speeding up the processing of the planned measures is still effective which means that they could be in force at the beginning of 2020.

2. Other new recommendations

The main pension expenditure forecast contained in the SPU is that published in the Ageing Report of 2018 in May last year. This forecast is based on demographic forecasts by Eurostat, macroeconomic assumptions agreed by the Member States and the Commission and the model for forecasting pension expenditure of the *Ministerio de Economía*, supervised by the European Commission. Therefore, the underlying assumptions and the methodology used are known, public and accessible to experts and the general public.

For the first time the SPU includes two alternative forecasts: those of the *Ministerio de Trabajo, Migraciones y Seguridad Social* and those by AIReF. In January 2019 AIReF published its Opinion on the Sustainability of the Social Security System[40]. The projections published in the Opinion are supported by a methodology and some assumptions that are also known, public and accessible together with all the detailed results through an interactive section on AIReF's web page.[41] Likewise, AIReF's population forecasts underlying its pension expenditure forecasts were published and all results were made available together with the corresponding working papers on AIReF's web page.[42]

In turn, it is the first time that the forecasts of the *Ministerio de Trabajo* are published, which is an important step towards transparency in line with the suggestion for best practice made in AIReF's Opinion on the Sustainability of the Social Security System. However, in contrast to that presented for the other two forecasts in the SPU, neither the underlying assumptions nor the methodology followed are explained. Furthermore, the results of the estimates are considerably different to those in the Ageing Report and those of AIReF

[40] AIReF (2019), Opinion on the Sustainability of the Social Security system, Opinion 1/19, http://www.airef.es/es/centro-documental/opiniones/opinion-sobre-la-sostenibilidad-de-la-seguridad-social/

[41] AIReF Datalab: Pension expenditure: http://www.airef.es/es/gasto-en-pensiones/

[42] AIReF Datalab: Population figures: http://www.airef.es/es/cifras-de-poblacion/

and it would be particularly useful to gain further insight into the data, assumptions and methodology underlying these forecasts, especially considering the advantages of having access to the information of this Ministry.

For this reason, *AIReF recommends:*

3. That the Ministerio de Trabajo, Migraciones y Seguridad Social make the results, data, assumptions and methodology underlying its pension expenditure forecasts public and accessible, making it possible to replicate its estimates.

3. Reiterated recommendations

In the interest of making the endorsement process of the macroeconomic scenario more transparent and efficient, AIReF makes the following recommendations to the Government:

4. The flow and schedule of sharing information should be regulated with an Agreement or Memorandum of Understanding, in line with standard practice of peer countries.

As underscored in the Report on the Macroeconomic Forecasts of the 2019 General State Budgets (GSB) and based on experience preparing this report, AIReF stresses once again the need to regulate the flow of information, the procedures and the schedule related to the endorsement process of the macroeconomic scenario.

The institutional relationship between the Government and AIReF in the assessment of the macro-budgetary forecasts requires more detail than that provided for in the general standards that govern the obligations of both within the scope of the LOEPySF. For this purpose and in line with current international best practice, further progress needs to be made through an Agreement between both parties, in which such important aspects as those related to the sending of information or schedules for the same are specified with sufficient granularity.

4. Live recommendations

4.1. On setting the stability targets (made in the Report on the Initial Budgets of the Public Administrations published on 5 April)

Currently the conditions are in place to carry out one of the main challenges of our budgetary framework; the need to establish an accurate medium-term budgetary planning tool linked to budgetary forecasts. The feasibility of the fiscal path detailed in the SPU, the start of a new legislature and Spain leaving the Excessive Deficit Procedure, subsequently passing to developing its fiscal

policy under the Preventative arm of the Stability and Growth Pact, present the opportunity to define a realistic medium-term strategy for 2019-2022.

On a number of occasions AIReF has recommended the need to design a strategy that considers a medium-term view underpinned by a realistic debt reduction path, that enables pre-empting future expenditure pressures that, in turn, improves financial sustainability. The basis for the credibility of this medium-term scenario is the setting of consistent targets with sufficient backing that facilitates the monitoring of the budgets at the different levels of administration. At the same time effort needs to be made to ensure that the budgets of each administration are prepared in National Accounting terms as an additional budgetary classification to existing ones. In doing this, it may be said that the SPU reflects a true Medium-Term Budgetary Framework, fulfilling its purpose as a planning tool.

On the other hand, the return to the preventative arm of the Stability and Growth Pact means that special attention needs to be paid to the path of convergence towards the MTO set for Spain; a path that must be clearly identified in the medium-term fiscal strategy. The Organic Law on Budgetary Stability and Financial Sustainability (LOEPySF for its Spanish acronym) also places limitations on the structural deficit that should be verified in the information published on stability targets and their distribution by sub-sectors.

For this reason, *AIReF recommends that*:

5. The setting of budgetary stability targets for the 2020-2022 period should be underpinned by a government debt reduction path, which translates into a fiscal strategy that includes an analysis of the evolution of the structural balance in the medium term.

6. The analysis and information that serves as a basis for determining the path of the stability targets and debt for the GG and for each of the sub-sectors should be published.

7. The fiscal strategy should consider the European framework and offer information relating to compliance.

4.2. Other live recommendations related to the SPU

Since the start of its activity AIReF has been emphasising the importance of coordination between the fiscal scenario in the SPU and the annual budgets through which the different administrations, analysed as a whole, would be able to comply with the path set. Furthermore, the SPU is considered to be the national medium-term fiscal plan, in accordance with Article 4 of the Regulation (EU) 473/2013, and therefore has to comply with the requirement

of Article 29 of the LOEPySF and Directive 2011/85/EU. However, the 2019-2022 SPU, like previous versions, continues to omit the information required to assess to what extent it complies with the stability target, debt target and expenditure rule and the adequacy of the commitments adopted by each administration. AIReF considers that in a decentralised state such as Spain, a medium-term national fiscal framework should include information broken down by sub-sectors, consistent with the aggregated information for the GG. For this reason, AIReF maintains the recommendation made in relation to SPU in previous years, namely:

8. Include the following information in the Stability Programme Update (SPU):

✓ Budgetary projections for the GG and for each of the sub-sectors that incorporate the measures, showing their contribution to the envisaged deficit reduction.

✓ Government debt targets distributed by sub-sectors.

✓ Detailed information for the analysis of the expenditure rule for each sub-sector (computable expenditure and reference rate for all years covered in the SPU).

✓ Greater information on risks that may affect the budgetary stability or debt targets, if they materialise.

Likewise, as previously pointed out, the preparation in budgetary terms, as well as in terms of some national accounting budgets would facilitate its analysis and monitoring and would bind it to the medium-term fiscal scenario included in the SPU. For this reason, AIReF maintains the recommendation made in previous reports, namely:

9. Prepare an initial budget in national accounting terms for Central Administration and FSS

The President of AIReF

José Luis Escrivá

APPENDIX I. TABLES AND FIGURES

C.1. Basic assumptions of the Macroeconomic Scenario of the 2019-2022 Stability Programme Update

(annual % change unless otherwise noted)

	2018	Δ SPU 19-22	2019	Δ SPU 19-22	2020	Δ SPU 19-22	2021	Δ SPU 19-22	2022
Short-term interest rates (three-month Euribor)	-0.3	*0.0*	-0.3	*-0.1*	-0.2	*-0.9*	0.0	*-0.7*	0.2
Long-term interest rates (10-year government debt, Spain)	1.4	*-0.2*	1.3	*-0.7*	1.4	*-1.2*	1.5	*-1.1*	1.6
Exchange rate (USD / EUR)	1.2	*0.0*	1.13	*-0.1*	1.13	*-0.1*	1.13	*-0.1*	1.13
World GDP growth, excluding the EU	3.9	*-0.3*	3.6	*-0.6*	3.8	*-0.2*	3.8	*-0.2*	3.8
GDP growth of the eurozone	1.8	*-0.6*	1.2	*-0.8*	1.6	*-0.2*	1.5	*-0.3*	1.4
Spanish export markets	3.0	*-1.5*	2.8	*-1.4*	3.3	*-0.2*	3.1	*-0.4*	3.0
Oil price (Brent, USD/Barrel)	71.5	*3.8*	65.5	*1.6*	65.0	*1.0*	64.4	*0.5*	64.4

Note: 2019-2022 forecast.

Source: European Commission and *Ministerio de Economía y Empresa*.

C.2. Macroeconomic Scenario underlying the 2019-2022 Stability Programme Update

(annual % change unless otherwise noted)

	2018	Δ SPU 19-22	2019	Δ SPU 19-22	2020	Δ SPU 19-22	2021	Δ SPU 19-22	2022
GDP (percent change, real terms)	2.6		2.2		1.9		1.8		1.7
GDP at current prices: billions of euros	1,208.2		1,255.2		1,300.7		1,348.1		1,395.7
GDP at current prices: percent change	3.6		3.9		3.6		3.6		3.5
DEMAND COMPONENTS (percent change, real terms)									
Domestic final consumption expenditure	2.3		1.9		1.5		1.4		1.3
- Domestic private final consumption expenditure (a)	2.3		1.9		1.6		1.5		1.3
- Final consumption expenditure of general government	2.1		1.9		1.5		1.4		1.3
Gross capital formation	5.6		3.9		3.4		3.2		3.0
- Gross fixed capital formation	5.3		4.0		3.5		3.3		3.1
Tangible fixed assets	5.8		4.2		3.8		3.5		3.4
Construction	6.2		4.5		3.8		3.4		3.2
Capital goods and cultivated assets	5.2		3.7		3.9		3.7		3.6
- Change in inventories (contribution in p.p.)	0.1		0.0		0.0		0.0		0.0
Domestic demand (contribution to GDP growth)	2.9		2.3		1.9		1.8		1.7
Export of goods and services	2.3		2.7		2.8		2.7		2.6
Import of goods and services	3.5		3.1		2.9		2.8		2.7
External balance (contribution to GDP growth)	-0.3		-0.1		0.0		0.0		0.0
PRICES (percent change))									
GDP deflator	1.0		1.6		1.7		1.8		1.8
Deflator of private final consumption expenditure	1.6		1.2		1.4		1.5		1.5
EMPLOYMENT AND WAGES (percent change)									
Remuneration (labor cost) per employee (c)	0.8		2.1		2.2		2.3		2.3
Total employment (b)	2.5		2.1		1.8		1.7		1.6
Productivity per worker (b) (c)	0.1		0.1		0.1		0.1		0.1
Unitary Labor Cost (ULC) (c)	0.8		1.9		2.0		2.1		2.2
Memorandum (LFS data)									
Unemployment rate: % labor force	15.3		13.8		12.3		11.0		9.9
EXTERNAL SECTOR (% GDP)									
Current account	0.9		0.7		0.7		0.6		0.5
Net lending (+) / net borrowing (-) to the Rest of the World	1.5		1.2		1.1		1.1		1.0

Note: 2019-2022 Forecast (a) Households and NPISH (Non-Profit Institutions Serving Households) (b) Employment (full-time equivalent) 2019-2022 forecast.

Source: European Commission and *Ministerio de Economía y Empresa*.

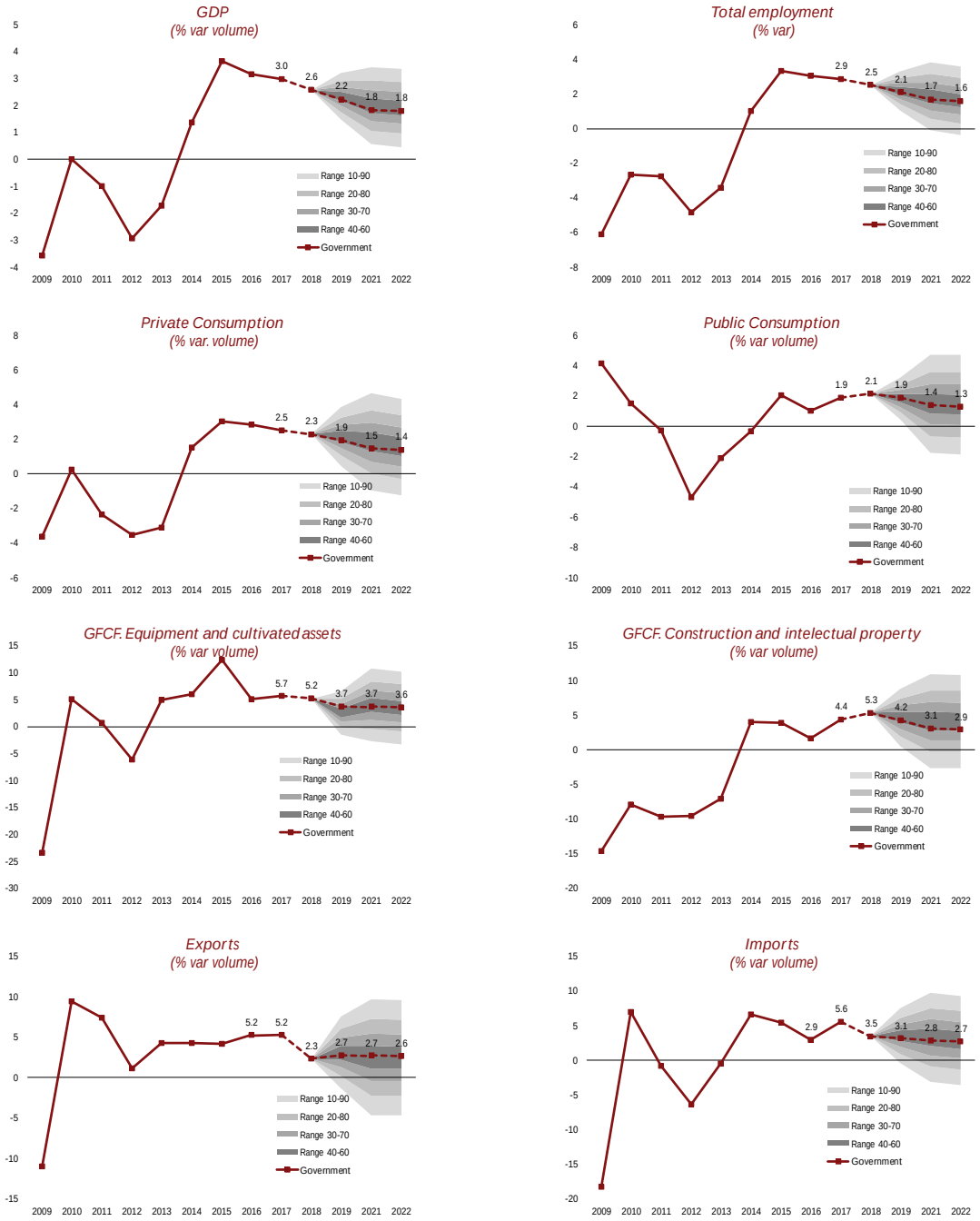
C.3. Forecasts by International Organisations (annual % change unless otherwise noted)

(annual % change unless otherwise noted)

		2018	Δ SPU 19-22	2019	Δ SPU 19-22	2020	Δ SPU 19-22	2021	Δ SPU 19-22	2022
ECB (March 2019)	World GDP (ex euro area)	3.7	*-0.4*	3.5	*-0.4*	3.6	*-0.1*	3.6	-	-
	Euro area GDP	1.9	*-0.5*	1.1	*-0.8*	1.6	*-0.1*	1.5	-	-
	Imports of good and services (ex. euro area)	4.9	*0.2*	2.4	*-1.7*	3.4	*-0.2*	3.6	-	-
	Brent oil price (USD per barrel)	71.1	*6.1*	61.7	*0.5*	61.3	*3.0*	60.6	-	-
	Euribor three months (%)	-0.3	*0.0*	-0.3	*-0.2*	-0.2	*-0.6*	0.0	-	-
	Interest rates of euro-area 10-year public debt (%)	1.1	*-0.2*	1.0	*-0.6*	1.3	*-0.6*	1.5	-	-
	USD/EUR exchange rate (level)	1.18	*-0.05*	1.14	*-0.10*	1.14	*-0.10*	1.14	-	-
	Euro effective exchange rate	5.2	*0.7*	-0.9	*-1.0*	0.0	*0.0*	0.0	-	-
IMF (WEO April 2019)	World GDP	3.6	*-0.3*	3.3	*-0.6*	3.6	*-0.2*	3.6	*-0.1*	3.6
	Euro area GDP	1.8	*-0.6*	1.3	*-0.7*	1.5	*-0.1*	1.5	*0.0*	1.4
	Trade of goods and services	3.8	*-1.3*	3.4	*-1.3*	3.9	*-0.4*	3.9	*0.0*	3.9
	Brent oil price (USD per barrel)	71.1	*6.4*	61.8	*1.0*	61.5	*3.5*	60.8	*4.2*	60.4
	Libor three months (%)	-0.3	*0.0*	-0.3	*-0.3*	-0.2	-	-	-	-
European Commission (May 2019)	World GDP	3.6	*-0.3*	3.2	*-0.7*	3.5	-	-	-	-
	Euro area GDP	1.9	*-0.4*	1.2	*-0.8*	1.5	-	-	-	-
OCDE (November 2018)	Euro area GDP	1.8	*0.2*	1.0	*-0.6*	1.2	-	-	-	-
	Trade of goods and services	3.9	*-0.2*	3.7	*-0.3*	3.7	-	-	-	-
Market Expectations (April 2019)	Interest rates of Spanish 10-year public debt (%)	-	-	1.3	*-0.2*	1.5	*-0.2*	1.8	*-0.2*	2.1
	Brent oil price (USD per barrel)	-	-	67.2	*9.0*	65.1	*10.6*	63.2	*10.9*	61.6

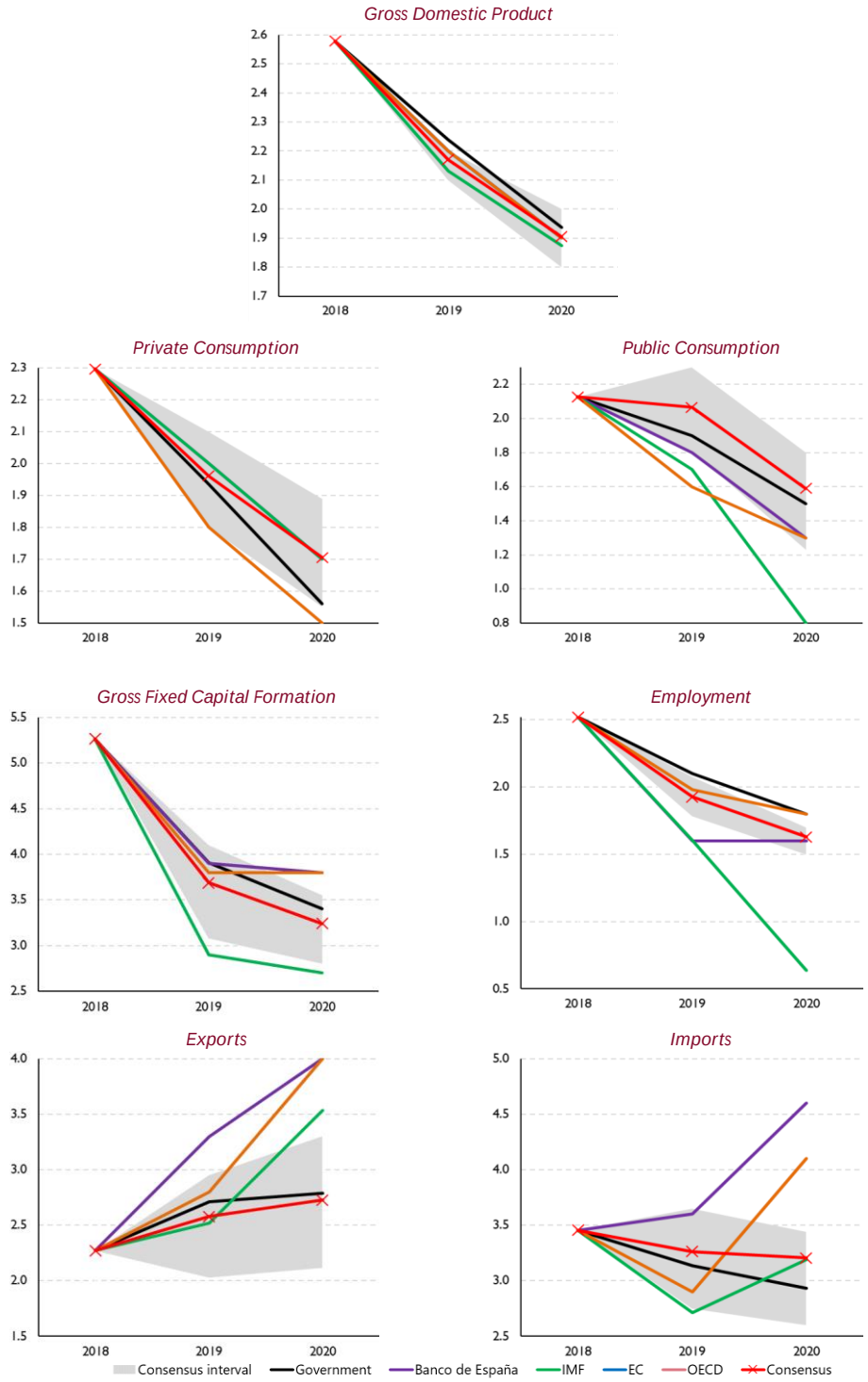
Note: 2019-2022 Forecast

G.1. 2019-2022 SPU economic forecasts and AIReF confidence intervals



Source: *Ministerio de Economía y Empresa*

G.2. 2019-2022 SPU economic forecasts and interquartile range of the panel of private and institutional forecasters.



Source: *Ministerio de Economía y Empresa*, Bank of Spain, IMF, EC, OECD and Spanish forecast panel (FUNCAS) and Consensus Forecast.

APPENDIX II. METHODOLOGICAL NOTES

For a Report on Macroeconomic Forecasts, a range of econometric tools have been used, covering a relatively broad methodological spectrum. This note provides a summary of their main characteristics with the aim of describing the methodology supporting the report.

The first section presents the single-equation structural models and their design methods. These models have served as a basis on which to examine the consistency of official forecasts for the behaviour of their macroeconomic determinants. The technique applied uses quarterly data and error correction models.

The second section describes the employee reduced-form multivariate model. This model shows the dynamics for the main aggregates for real activity in the macroeconomic outlook and allows quarterly confidence intervals for the envisaged trends in these aggregates, with very little a priori conditioning. The methodology is included in the autoregressive vector models with exogenous variables and also uses quarterly data.

The third and last section briefly details the dynamic factorial models used for short-term (2 quarters) forecasts of GDP and its components, that permit the impact of the present time information on said aggregates to be reflected.

A2.1 Single-equation structural models

For a quantitative assessment founded on a structural formula suggested by economic theory, several behavioural equations have been used based on the representation of error correction. A simplified presentation using Excel spreadsheets is available on the AIReF website for use by analysts.

The general principle of this approach is, first, to define a behavioural relationship between a given variable and its determinants, as suggested in economic theory. This theoretical relationship is quantified by means of a linear relationship characterising the long-term behaviour between the variable that is being described and its conditioning factors. This equation defines what is known as the "equilibrium relationship", acting as a point of attraction toward which the variable under analysis should converge, but this is not always the case period-on-period. This deviation or error between the value compatible with the theoretical and the observed fundamentals mainly reflect shocks that distort long-term relations between the variable and its fundamental properties.

The short-term dynamic, usually characterised by the trend in the quarterly growth rate, results from combining two elements. The first of these is the partial correction of the error arising in the long-term relationship. This adjustment quantifies the rhythm in which the variable closes the gap with the level compatible with its fundamentals in the long term. The second is a purely statistical, short-term dynamic that is complementary to the first and that defines the empirical relationship between the growth rates for the variable being described and the rates that apply to its determinants.

This equation, known as error correction, is supported by the econometric method known as co-integration analysis, that conducts comparative checks on any stable, well-defined long-term relationships for the quantification, in a second step, of the short-term dynamic.

Below is a brief description of the equations used herein: in all the equations, the frequency of observation was quarterly, the data were adjusted to seasonality and the calendar, and the sampling interval ranged from 1995:TI to to the most recent quarter observed.

Final household consumption

The equation describing the demand for final household expenditure considers that the trend depends on the gross real income available to households, their financial and real estate (taken separately) wealth, compensation per employee, the unemployment rate, and the value of real credit available for consumer goods.

Investment in fixed capital: capital assets

Companies are expected to determine their investment in capital goods according to the evolution of the aggregate demand, the envisaged profitability of their investment projects, the price of the labour factor, the user cost of capital and the use of the productive capacity. Aggregate demand is approximated in volume by means of the Gross Domestic Product. The expected profitability measure is determined from Tobin's Q, estimated as the quotient of the IBEX-35 over the productive capital stock. The price for the work factor will be given by the compensation per employee.

Fixed capital investment in construction

The determinants of gross fixed capital formation in construction included in this equation are the real available gross income, financial wealth and real estate wealth in the household sector, the flow of credit for housing purchase and refurbishing in real terms, relative prices of freehold property, deflated by

the price index for expenditure in final household consumption and the construction sector confidence indicator.

Exports of goods and services.

The volume of exports in goods and services is set to depend on a variable that approximates external demand for goods and services, and on prices relative to exports of products that are substitutes for said goods, produced and exported by the rest of OECD countries.

The variable that approximates the external demand for goods and services is global trade in goods by volume, provided by the Dutch Central Planning Bureau (CPB). In addition, as a variable for relative prices, the competitiveness trend index is taken, calculated through a comparison of domestic consumer price indices with those of the OECD, adjusted for changes in nominal exchange rates.

Imports of goods and services

Demand for imports of goods and services is set to depend on the capacity for expenditure by the units residing within the economic domain, and on prices of imported goods in relation to their domestic substitutes. Thus imported goods and services compete with those produced internally in the overall expenditure.

As the variable representing the demand for imported goods and services, an index is designed that ponders each component in the final demand (Consumption, Investment and Exports) according to the share of imports. The indicator applied for relative prices is the quotient of the deflator of imports and goods and services over the deflator of domestic demand.

Private-sector employees

Activity level, represented by GDP in volume, the active population and private capital stock are considered determinants of private employees.

Compensation per private-sector employee

The evolution of the compensation per private-sector employee will be conditioned by the trend of the price levels, reflected in Overall CPI, the productivity per employee, obtained as the ratio between GDP in volume and total full-time equivalent employment and the compensation per public-sector employee.

Underlying inflation

Underlying inflation will depend on unit labour costs, GDP in volume, the unemployment rate, the effective VAT rate and a dummy variable introduced as of the fourth quarter of 2012 that reflects the impact of the labour reform.

A2.2 Reduced-form multivariate model

The Bayesian Vector of Autoregressions (BVAR) with exogenous variables was used for the assessment of the projections given in the macroeconomic outlook.

This type of models offers both flexibility and objectivity. Flexibility is achieved through allowing a high degree of adaptability to the dynamic observed. Objectivity is assured since, having determined the set of variables to model, estimates for the model parameters are conducted according to statistical, objective and replicable criteria.

The Bayesian component in the model has been incorporated to improve its predictive performance, and captures purely statistical interactions of the variables with the dynamics, in part or in whole of the series analysed. Likewise, specifically included in this extra-sample information component are behavioural traits of the economy in the medium term.

In the BVAR model with exogenous variables, the level of any variable at a given moment is expressed by the linear combination of four parameters: lagged values of the variable itself (dynamic), offset values for the remaining variables involved in the model (crossed dynamic), contemporary values of exogenous variables, and a purely random innovation that captures any other aspect that is not attributable to the variables taken into account in the system.

The weight of each component is determined empirically by finding the best sampling fit and the Bayesian elements offset the effects of over-rating that may exist due to the high number of parameters being estimated.

Projecting the aforementioned BVAR model forward gives both specific prediction values and their associated confidence intervals. In particular, the confidence intervals quantify the degree of uncertainty attributable to the predictions of different variables for different horizons.

The endogenous variables included in this model are: the GDP deflator, the GDP volume index, the full-time employment equivalent, real credit (financing to business and households deflated by the core CPI) and net incomes with cyclical sensitivity (defined as the sum of taxes on production and imports, current taxes on income and wealth and social contributions, from which

unemployment benefits are deducted) as a percentage of GDP. The exogenous variables considered are: the exchange rate of the euro, the dollar price of oil, the EU GDP, interest rates (loans requested by companies of up to 1 million euros) and a constant term.

A secondary BVAR model is also used to represent the joint dynamic of five series that describe the breakdown of GDP from the viewpoint of demand. The variables studied are: final consumption by households and not-for-profit institutions at the service of households (ISFLSH); consumption by Public Administrations; gross fixed capital formation; exports of gross fixed capital formation and imports of goods and services.

A2.3 Dynamic Factor Models

For short-term (2 quarters) predictions of GDP and its main components of demand (private consumption, public consumption, investment in equipment, investment in construction, exports and imports of goods and services), dynamic factorial models are used, synthesized on the model known as MIPReD. The joint estimates for GDP and its components provides a more comprehensive and detailed perspective of the economy, allowing the composition of growth to be identified, its external and domestic origins. These in turn lead to determining the composition of Final Consumption and Investment in Domestic Demand.

Technically, estimates are made in two stages:

In the first, GDP and each of its components are predicted independently, following the dynamic factorial model methodology for real time forecasting. Forecasts are based on a combination of short-term information, issued at different frequencies (quarterly and monthly), using the respective dynamic factorial models. This combination allows forecasts to be updated as new information becomes available for the indicators in the model, providing a real-time or permanently updated vision of the aggregate status of Spanish economy.

The methodology used in each of the models consists of the following stages:

1. Seasonal and calendar adjustments for all indicators in the system.

2. For quantitative indicators, the variation rates are calculated for the immediately preceding period, in order to obtain a short-term growth signal. Qualitative indicators are not transformed, as these offer an immediate (directional) interpretation of growth.

3. All the indicators, whether qualitative or quantitative, are typified rendering their mean as zero and their variance as one.

4. The series thus obtained are combined into a dynamic factorial model, breaking down its temporal evolution into a part attributed to elements that are common to all and another part that is specific to each.

5. The dynamic factorial model is represented in the space of states, combining a transition equation (that describes the system dynamic) and a measure equation (that defines the connection between the observed series and their underlying factors).

6. Estimates for the parameters in the model are made maximising their feasibility. Such maximisation takes into account both the presence of series with a different sampling frequency (monthly or quarterly) and asymmetrical series lengths among those included in the panel of data, either because they do not all commence at the same time or because they do not all end in the same period.

7. Having estimated the dynamic factorial model, its representation in the space of states permits, by means of Kalman filtering, both the forward projection of the series comprised in the model and the calculation of the typical deviations from said projections, thus obtaining a measure of the uncertainty surrounding them.

8. One of the series making up the set of series used is the aggregate, for which forecasts are obtained simultaneously with those of the remainder of indicators. In this manner, the internal consistency of forecasts is assured.

9. Whenever new data becomes available for any of the indicators in the model, the above steps are repeated, reviewing all forecasts depending on the sign and magnitude of the innovation. This continuous updating process defines the real-time nature of the system.

In the second stage, individual forecasts are reconciled with those for GDP, by means of the balancing method proposed by Van Der Ploeg (1982), in which individual forecasts are combined with the accounting restriction that establishes that GDP growth should be equal to the aggregation of contributions to its growth from its components. Final forecasts are the result of adjustments to the individual forecasts according to the discrepancies observed between the sum of the corresponding contributions to GDP growth, and GDP growth foreseen in its own model, bearing in mind the historical correlation among the series for contributions to growth. The initial forecasts are thus modified, taking into account their discrepancies when incorporating accounting restrictions. These discrepancies are weighted according to their precision, that is, inversely to the uncertainty associated with initial estimates.

This procedure has several desirable properties:

1. The greater the variance in the initial forecast, the greater the magnitude of the revisions, as an absolute value. In other words, the greater the uncertainty regarding the initial forecast, the greater the amount in the modification it may be subject to.

2. If a given preliminary estimate is considered to be known with absolute precision, no adjustments are made in the corresponding forecast.

3. When the historical correlation between two components is positive, their revisions are made in the same direction: both upward or both downward. If, on the contrary, they correlate negatively, adjustments will take opposite directions: one upward and the other downward, or vice-versa.

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