REPORT ON THE 2022-2025 STABILITY PROGRAMME UPDATE

REPORT 21/22

Independent Authority for Fiscal Responsibility

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for Fiscal Responsibility

The mission of the Independent Authority for Fiscal Responsibility (AIReF) is to ensure strict compliance with the principles of budgetary stability and financial sustainability enshrined in Article 135 of the Spanish Constitution.

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EXECUTIVE SUMMARY

The Independent Authority for Fiscal Responsibility, AAI (AIReF) has to report on the content of the 2022-2025 Stability Programme Update (SPU), in terms of both the macroeconomic forecasts and its fiscal scenario, in compliance with the mandate of Articles 14 and 16 of Organic Law 6/2013 on the establishment of AIReF. Previously, on April 29th, AIReF endorsed the macroeconomic forecasts of the SPU, warning of the existence of significant downside risks arising from the current economic context.

The SPU is, in theory, the medium-term national fiscal plan required by European regulations. However, once again, the SPU sent to the European institutions is far from being the medium-term fiscal strategy that AIReF has recommended that the Government should draw up on numerous occasions.

On the one hand, in 2025 the structural deficit stands at around 4%, 0.6 points above the pre-pandemic level. Furthermore, it is noted that at the end of the period the margin to reduce the deficit without adopting additional measures is exhausted, with the deficit stabilising at around 3% in 2024 and 2025, which is the limit set by the Stability and Growth Pact. This stagnation in the reduction of the deficit will put a brake on the reduction of public debt, which in 2025 will still be at very high levels - 108.8% of GDP. This places Spain in a very vulnerable position in view of the likely tightening of monetary conditions.

On the other hand, the Recovery, Transformation and Resilience Plan (RTRP) is still not integrated into the SPU. Firstly, no realistic path of execution of the investments in national accounting terms or their potential impact on structural spending is presented. Secondly, although the RTRP lists various measures aimed, in principle, at reducing the structural deficit, such as the tax ad pension reform, among others, the SPU does not integrate them into its budget scenario or quantify their potential impacts.

The absence of a medium-term fiscal strategy that encompasses all the key elements of fiscal and economic policy is of particular concern in the current macroeconomic scenario with significant downside risks. The situation requires the capacity to adapt economic policy to the possible materialisation of risks arising from, *inter alia*, the war in Ukraine, inflation and the pandemic. At the same time, a roadmap is required for reducing the structural deficit without hampering economic growth and allowing public debt to be brought to levels that mitigate the vulnerability of the Spanish economy to future crises.

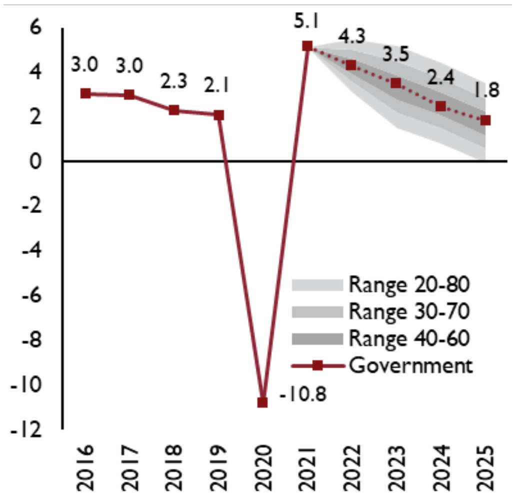
For all of these reasons, AIReF reiterates its recommendation to design a medium-term fiscal strategy with a sufficiently long-time horizon and which will need to be integrated with the RTRP.

Macroeconomic scenario 2022-2025

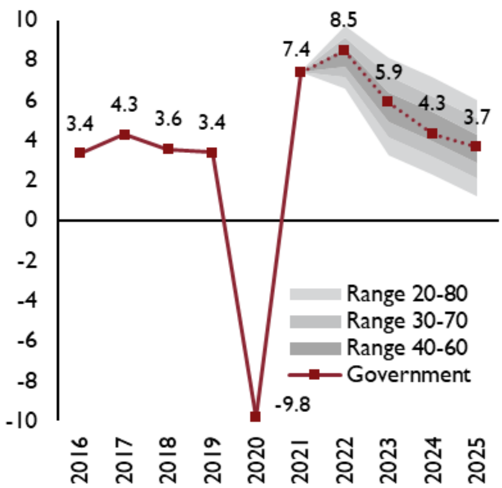
Two years after the outbreak of the COVID-19 pandemic, the Spanish economy has been hit by a succession of global supply shocks that have shifted the focus of uncertainty from the health sector to the supply side of the economy. The development and economic implications of these shocks are difficult to predict. The tensions in global value chains and in raw material markets that had emerged previously have intensified following Russia's invasion of Ukraine in February 2022, shaping a less favourable scenario for global growth. In addition, after several years at moderate levels, inflation has emerged with unexpected intensity, leading to a tightening of the economy's financing conditions. For its part, the coronavirus remains a key determining factor for the economic situation.

The SPU scenario states that in 2022 the growth of the Spanish economy's gross domestic product will continue along its path of recovery in this highly complex environment, although at a rate of 4.3%, significantly lower than the rate expected by the Government last autumn (7%). In the medium term, as the impact of the Recovery, Transformation and Resilience Plan fades, the expansion of economic activity will gradually converge with the potential growth of the economy.

GROSS DOMESTIC PRODUCT. VOLUME
(Year-on-year rate of change)



NOMINAL GDP
(Year-on-year rate of change)



Source: Ministry of Economic Affairs and Digital Transformation and AIReF

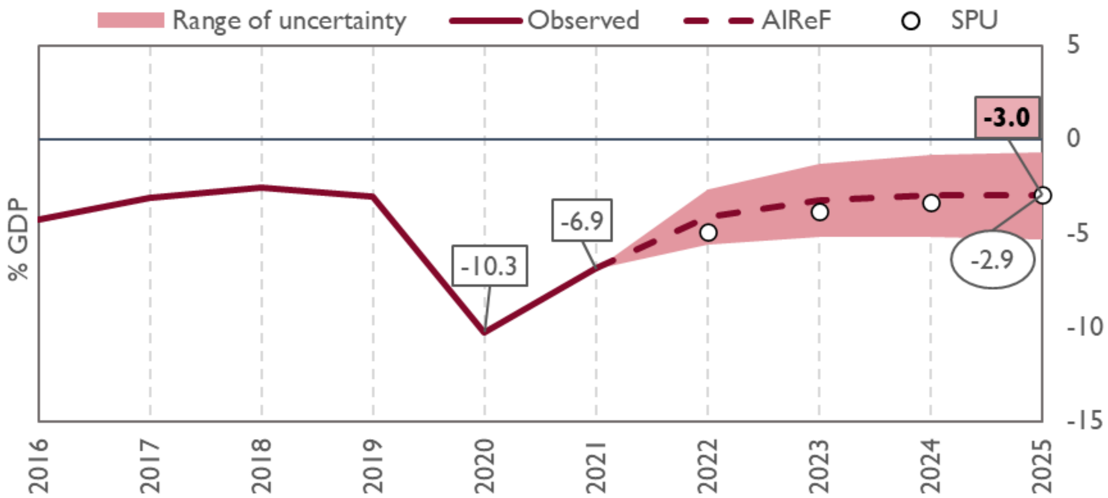
AIReF considers that the Government's macroeconomic scenario is feasible in an environment of major uncertainty. In fact, the projections of GDP growth at both constant and current prices are in the central probability band calculated by AIReF on the basis of its own scenarios. However, the risks surrounding the Government's forecasts and those of AIReF itself are higher than usual. The development of the pandemic and the war in Ukraine and, in particular, the threat of a disruption in energy supplies may lead to an energy emergency with consequences that are difficult to anticipate. Moreover, China's pandemic mitigation strategy may also accentuate problems in global value chains. These phenomena would bring greater inflationary pressures, accentuating the risk of a further tightening of the financing conditions and loss of competitiveness of the Spanish economy.

Finally, AIReF wishes to point out the lack of specificity in the Stability Programme as regards the macroeconomic impact of the RTRP, an instrument that has taken on even greater importance as a support for economic growth in this highly complex environment.

2022-2025 fiscal strategy

AIReF estimates that the General Government (GG) deficit will stand at 3% of GDP in 2025, only 0.1 points above the SPU forecast. However, the deficit reduction path forecast by AIReF has a different profile from that of the SPU. AIReF expects a greater reduction in the deficit in 2022, to 4.2% in the absence of additional measures, while the Government maintains the reference rate of 5% despite 2021 closing with a deficit 1.5 points lower than its forecast. For the other years, AIReF forecasts a smaller reduction in the deficit than the SPU, to reach 3% of GDP in 2024, a level that is maintained in 2025.

EVOLUTION OF GENERAL GOVERNMENT BALANCE



Source: IGAE, SPU and AIReF.

AIReF forecasts that the weight of revenue over GDP, excluding the RTRP, will stand at 41.3% in 2025, in line with the path of the SPU. In 2022, AIReF estimates that revenue will moderate its growth compared with 2021, in line with economic activity and the measures adopted to mitigate the effects of the energy crisis, with its weight as a proportion of GDP falling. Subsequently, in 2023, the growth in revenue would be driven by both economic activity and the reversal of the measures. This growth would moderate in the last two years of the period to an average of 3%, below nominal GDP. Following the sharp growth in taxes on production in 2021 above domestic demand, AIReF expects subsequent moderation with growth below domestic demand throughout the period, recovering the pre-crisis level of GDP. For their part, taxes on income and social contributions, although they also show more moderate growth than their underlying macroeconomic variables, will maintain a level of GDP above the pre-pandemic level, although lower than that reached in 2021. With regard to the SPU, AIReF forecasts lower revenue from taxes and social contributions and higher revenue from other sources.

The weight of expenditure as a proportion of GDP, excluding the RTRP, also falls in AIReF's central scenario, to 44.3% in 2025, in line with the figure included in the SPU. The largest reduction is concentrated in 2022 due to the lower expenditure associated with COVID-19 as a result of the improved economic and health situation, although a portion is considered to be of a structural nature. Expenditure would subsequently grow on average by a little over 3%, following its baseline evolution, although projected inflation will boost growth in 2023, especially due to the revaluation of pensions. Regarding its composition, AIReF estimates that the components of public consumption would return to levels above the pre-crisis weight over GDP, while interest, investment and other expenditure would have a weight close to that of 2019. For their part, social transfers in cash would continue to reduce their weight compared with the maximum of 2021, but without returning to 2019 levels. This is mainly due to the evolution of pensions, independent of the economic cycle, and the structural measures adopted, such as the creation of the Minimum Living Income (MLI). Compared with the SPU, AIReF expects higher expenditure on public consumption, especially at the end of the period, and lower spending on social benefits.

By sub-sector, since the Central Government (CG) has assumed most of the increase in the deficit over the crisis, AIReF also expects it to record most of its reduction. The profile of the balance of the ARs and LGs is strongly conditioned by the impact of the settlements of the financing system, which would be negative in 2022 and strongly positive in 2023 and 2024, to then return to normal in 2025. In the case of the ARs, this means ending 2025 with a deficit of 0.1% of GDP. In contrast, the LGs maintain their structural surplus at around 0.3% of GDP. For their part, the Social Security Funds (SSFs), incorporating the new transfers from the CG, would stabilise their deficit at around 0.3% of GDP as from 2024. In general terms, the SPU forecasts a higher deficit for the CG, a lower one for the SSFs and the ARs and a lower surplus for the LGs, which would end the period with a surplus of 0.2% of GDP.

EVOLUTION OF THE BALANCE BY SUB-SECTOR

	AIReF				SPU			
	2022	2023	2024	2025	2022	2023	2024	2025
GG	**-4.2**	**-3.3**	**-3.0**	**-3.0**	**-5.0**	**-3.9**	**-3.3**	**-2.9**
CG	-3.2	-3.0	-3.3	-2.9	-3.8	-3.4	-3.6	-3.2
SSFs	-0.5	-0.5	-0.3	-0.3	-0.5	-0.5	-0.3	-0.2
ARs	-0.7	-0.1	0.2	-0.1	-0.8	-0.1	0.2	0.2
LGs	0.2	0.3	0.4	0.3	0.1	0.2	0.3	0.2

These medium-term forecasts are subject to the usual uncertainty associated with the evolution of the macroeconomic scenario and the discretionary action of each administration. These factors are amplified, among other elements, by the war in Ukraine and the COVID-19 health crisis. In addition, the behaviour of the GG will also be conditioned by the fiscal framework applicable over the forecast period.

Fiscal policy stance

The fiscal policy stance over the projection horizon is crucially dependent on the RTRP. AIReF therefore considers it important to offer a separate diagnosis of the national fiscal policy stance, excluding the expansionary fiscal boost associated with the RTRP, which, in accordance with the guidelines of the European Commission, will have a neutral impact on the deficit.

In this regard, AIReF's estimates of the evolution of the structural balance over the horizon of the stability programme suggest that national fiscal policy will take on an expansive stance until the end of the projection horizon.

These estimates show some discrepancies with the contents of the SPU. Specifically, the Government estimates that, after maintaining a slightly expansive stance in 2022, the national fiscal policy will maintain a practically neutral stance in 2023 and 2024. However, according to the Government, in 2025 there would then be a structural adjustment that AIReF does not consider to be supported by measures. This improvement in the structural balance might be unrealistic, since the SPU has been drawn up on the basis of a baseline scenario based on the GSB and taking into account the usual optimism presented by the stability programmes in this projection horizon.

In addition, according to AIReF’s estimates, the medium-term structural cost of the pandemic for Spanish public finances is 0.5 percentage points of GDP higher. At the end of the projection period, the structural deficit of the Spanish economy will stand at -4% of GDP, far from the new medium-term target set by the Government of -0.4%.

Challenges foreseen from a perspective of sustainability of public finances

The significant increase in the stock of public debt places the sustainability of public finances in a highly vulnerable position in the medium term. The scars from the previous financial crisis, together with the sharp increase in borrowing caused by the pandemic, have brought the debt-to-GDP ratio to maximum values. Specifically, the debt-to-GDP ratio stood at 118.4% at the end of 2021, an increase of 20.1 points on the pre-pandemic level.

Over the next four years, under its macro-fiscal forecasts, AIReF projects a reduction in the debt-to-GDP ratio of 9.6 points, placing it at 108.8% in 2025. This projection is in line with the 8.7-point reduction presented by the Government in the SPU, which is considered feasible. The reduction in the ratio will be mainly supported by the growth in nominal GDP, where the deflator will play a very significant contribution. The public deficit will continue to contribute significantly to the increase in debt, with a financial burden that will rise in absolute terms, but will remain stable relative to GDP due to the sharp nominal increase in the latter.

The sharp upturn in inflation worldwide has led to a tightening of monetary policy, worsening financing conditions. Consequently, the significant increase in debt interest rates will result in a financial burden that is €20bn higher than forecast in the previous report on the SPU.

Beyond a certain improvement in the short-term fiscal situation, AIReF’s projections show an unfavourable debt ratio trend under a no-policy-change scenario. The simulations performed by AIReF show that maintaining a constant structural primary deficit of between 1.5 and 2.5% of GDP, in line with the estimates of the Government and AIReF, would initiate an upward trend in the path of the debt ratio, with a growing total deficit as a result of higher interest expenditure.

The high level of debt, together with higher financing rates, will require a sustained structural adjustment to place the debt at more prudent levels, contain the financial burden and generate fiscal space that will make it possible to address future risks. The simulations carried out by AIReF show that achieving balanced public accounts in the next decade will require a sustained structural fiscal adjustment of between 0.25 and 0.5 points per year. Accordingly, an annual adjustment of 0.35 points would make it possible to reduce the debt ratio to 80% by 2040, achieving budgetary balance in 2035 and maintaining a low interest expenditure of around 2.5% of GDP.

The new crisis scenario that has emerged following the invasion of Ukraine may alter the process of normalisation of monetary conditions that was expected over 2022 as a result of the sharp increase in inflation worldwide, accelerating the process of stimulus withdrawal and deteriorating financing conditions. The war in Ukraine generates new investment needs in the short and medium term associated with both defence spending and the greater urgency to increase renewable energy production capacity and reduce dependence on Russian energy. This is compounded by the well-known challenge of an ageing population and higher pension expenditure, which, if not financed with additional revenue, will lead to a very significant increase in debt from levels that are already historically very high.

Recommendations

In this context, and in view of the shortcomings identified in the SPU, AIReF once again insists on the need for a credible and realistic medium-term fiscal strategy that guarantees the sustainability of public finances.

The Government maintains a deficit forecast for 2022 for GG of 5% of GDP, 0.8 points above AIReF's forecast. Although the fiscal rules are still suspended in 2022, the Government's forecast acts as an anchor for the actions of the GG as a whole. Taking into account AIReF's central scenario, the Government's forecast is not demanding and may generate the risk that it will be viewed by the different administrations as a margin to conduct a more expansive fiscal policy than that resulting from the budgets already approved.

In addition, higher-than-expected inflation would also bring an additional increase in revenue in the short term over and above the forecast amount, which may reinforce that idea. However, as indicated in the report, medium-term inflation also deteriorates the fiscal balance through the revaluation of pensions and public wages, the rise in the operating costs of the public sector and the increase in the interest burden.

In addition, the increases in tax collection above the forecasts in the 2021 and 2022 GSB will have an impact on the regional governments in 2023 and 2024 as a result of the settlements of the financing systems. As stated in AIReF's forecasts, the ARs and LGs will have a major increase in revenue in both years in a purely circumstantial manner. There is once again the risk that this temporary revenue will be allocated to finance increases in expenditure or reductions in other revenue on a structural basis.

These risks are more evident in the absence of a medium-term fiscal strategy and in a context of suspended fiscal rules and uncertainty about the future fiscal framework.

For this reason, AIReF recommends:

- Allocating the revenue that materialises above the forecast and the temporary revenue to accelerate the necessary reduction in the structural deficit and avoid increases in expenditure or reductions in revenue of a structural nature that do not have funding that is also structural.

Persistent or aggravated tensions in energy markets may lead to the need to approve an extension of existing measures or even additional measures. In this regard, AIReF has already pointed out on several occasions that the medium-term fiscal strategy needs to be flexible in order to adapt to the current context of risks so as to allow the preservation of economic growth to be compatible with a realistic and credible path of debt reduction to sustainable levels. This means fitting the measures necessary to counteract the materialisation of the various research identified into the defined strategy.

Taking into account the vulnerable position in which the high level of public debt places the Spanish economy, these measures should be designed according to criteria of efficiency and effectiveness, as well as their impact in redistributive terms, and aimed at avoiding a structural impact on the public accounts.

For all these reasons, AIReF makes the following recommendations to the Government:

- To evaluate the impact of the measures already adopted in terms of efficiency, effectiveness and redistributive impact before deciding, where necessary, on their possible extension.

To design the new measures, where appropriate, taking into account the criteria of effectiveness, efficiency and redistributive impact and setting out in an explicit and quantified manner the objectives pursued, the time frame and the circumstances and assumptions under which they would be extended, as well as the procedure for their evaluation. Along the same lines, in the event that they involve a structural increase in the deficit, to identify their source of financing.

1. INTRODUCTION

The law establishes that the Independent Authority for Fiscal Responsibility (AIReF) must prepare a report on the Stability Programme Update (SPU). The SPU represents the Government's main medium-term budget document and includes macroeconomic and fiscal forecasts for a four-year period. AIReF must report on the macroeconomic forecasts that underpin the 2022-2025 SPU as well as its budgetary scenario, in accordance with Articles 14 and 16 of Organic Law 6/2013 on the Establishment of AIReF. Fiscal rules have been suspended since the pandemic broke out in 2020. The timing of their reinstatement is still to be decided, although they are likely to be reinstated before the end of the forecast period, either in their previous version or reformed.

AIReF gave advance notice of its endorsement of the macroeconomic framework underpinning the 2022-2025 SPU. On April 29th, AIReF endorsed the Government's macroeconomic scenario that underpins the SPU as it considers it feasible, on the basis of its own estimates, in a context of major uncertainty. The Government's macroeconomic scenario for the period 2022-2025 is in the central range of the confidence bands estimated by AIReF on the basis of its own scenarios, both at constant and current prices. However, the energy crisis, the supply problems in production chains that have been observed since mid-2021 and the persistence of the pandemic project extreme uncertainty on the economy, which has intensified with the outbreak of the war in Ukraine.

AIReF made three recommendations to the Government in its preliminary assessment. It recommended making an effort in favour of transparency and coordination between all areas of the General Government to allow access to information relating to execution of RTRP funds in national accounting terms over the horizon of the stability programme, which is extremely useful when assessing its impact**.** It repeated the call for more information on the budgetary and fiscal measures included in the macroeconomic scenario with the aim of increasing the rigour of the endorsement process. Finally, it stressed to the Government the need for the process of endorsing the macroeconomic forecasts to be regulated by an agreement between the parties.

Following approval of submission of the SPU to the Commission at the Council of Ministers, this report sets out the full macroeconomic and fiscal assessment performed by AIReF. For this purpose, the analysis is divided into six main blocks. Following this introduction, the macroeconomic scenario is evaluated first. Second, the fiscal scenario is analysed, with a breakdown of the evolution of the revenue and expenditure of the General Government and of the balance of each one of the sub-sectors. This section provides information on the measures taken by the Government and the execution of the RTRP. The third and fourth sections analyse fiscal risks and the orientation of the fiscal framework. This is followed by an analysis of debt sustainability. Finally, the analysis carried out by AIReF leads to a series of recommendations for the Government, in addition to those made in its preliminary assessment.

2. EVALUATION OF THE MACROECONOMIC SCENARIO

AIReF considers that the macroeconomic scenario of the 2022-2025 SPU is feasible and as such endorsed it on April 29th. However, the uncertainty remains extreme.

Two years after the outbreak of the COVID-19 pandemic, the Spanish economy has been hit by a succession of global supply shocks whose development and implications are difficult to predict. The global economic recovery that began in 2021 was accompanied by tensions in global value chains and in raw materials markets, especially energy markets, which have become more intense and persistent following Russia's invasion of Ukraine in February 2022. For its part, the coronavirus remains a key determining factor of the economic situation. The development of the war and the possibility that it might lead to a scenario of energy shortages has caused the main focus of uncertainty to shift from the health emergency to the energy emergency. The recent increase in cases and the "zero coronavirus" policy in the People's Republic of China might accentuate supply problems in manufacturing industry, given this country's importance in global value chains. In addition, the emergence of new variants that could slow the pace of normalisation of international tourism cannot yet be ruled out.

The combination of these shocks has led to downward revisions in global growth and a radical turnaround in the inflationary scenario, which is more intense and persistent than expected. Monetary authorities are normalising their balance sheets and raising interest rates faster than expected a few months ago. The complexity of the global environment has also led to greater volatility in financial markets and increased tension in sovereign debt risk premiums in some European economies, including Spain.

At present, the SPU scenario states that the growth of the Spanish economy's gross domestic product will continue along its path of recovery, although at a rate of 4.3%, significantly lower than the rate expected by the Government last autumn (7%). In the medium term, as the impact of the Recovery, Transformation and Resilience Plan (RTRP) fades, the expansion of economic activity will gradually converge with the economy's potential growth, which the Government raises to 2% in the long term as a result of the impact of the investments and reforms associated with the Plan. AIReF considers the Government's scenario to be feasible, although the absence of detailed information on the RTRP makes the revision of the economy's potential growth subject to a great deal of uncertainty.

AIReF would like to point out the lack of specific detail in the Stability Programme in relation to the macroeconomic impact of the RTRP. The lack of information on the speed with which funds are reaching the real economy and on the impact that the Government assigns to the Plan is surprising as this instrument is key to supporting economic growth in this highly complex environment. In addition, the Government plans to add the request for loans to the RTRP transfers, which would almost double their size.

On the price front, the Government's scenario envisages a sharp increase in inflation in 2022 and a gradual deceleration in subsequent years. AIReF considers this scenario feasible as current inflationary pressures might ease in the coming months given the degree of slack still prevailing in the labour market and the absence of signs of second round effects on wages. However, the intensity and duration of the resurgence of inflation raises the risk that price and wage spirals will be triggered in the future.

The following sections present AIReF's macroeconomic scenario and detail the assumptions and tools used to incorporate the impact of all the aforementioned shocks and the contribution of the RTRP into the scenario. The second section assesses the SPU scenario on the basis of AIReF's forecasts. The third section provides an analysis of the risks underlying these scenarios. Finally, the report contains the usual analysis on the existence of biases in the Stability Programme scenario.

2.1. AIReF's macroeconomic scenario

This section describes the main features of the medium-term macroeconomic scenario estimated by AIReF as presented in Table 1. Before Russia's invasion of Ukraine, the Spanish economy was moving along a path of solid recovery, supported by the positive performance of the labour market, which was favouring a fast deployment of the savings accumulated during the pandemic, the gradual normalisation of inbound tourism and the persistence of favourable financial conditions. The successive waves of the pandemic had a moderate impact on economic activity due, among other factors, to the success of the vaccination campaign.

TABLE 1. AIREF'S 2022-2025 MACROECONOMIC OUTLOOK

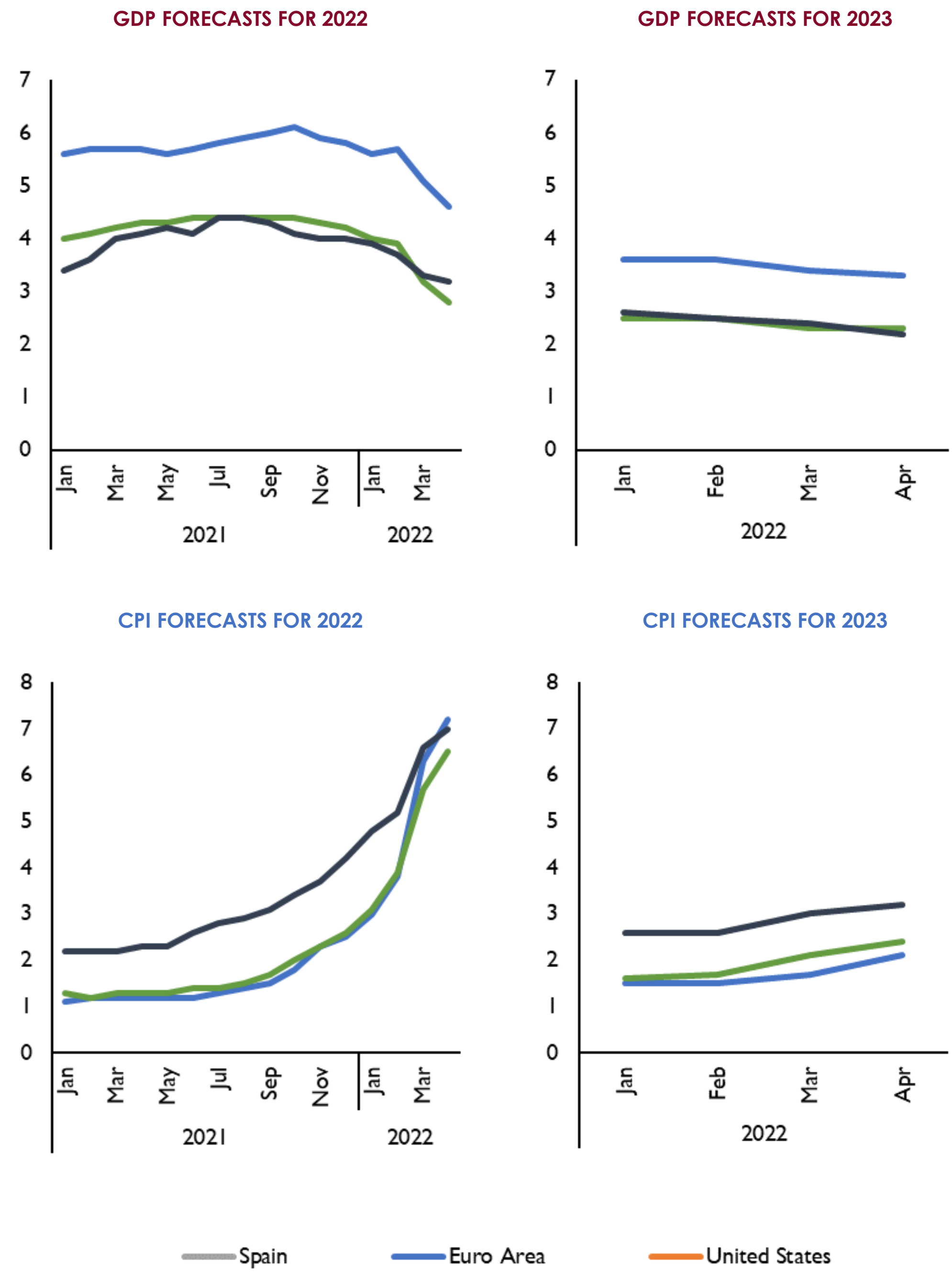
Year-on-Year Rates of Change	***2021***	***2022***	***2023***	***2024***	***2025***
Expenditure on Private Domestic Final Consumption	4,6	4,1	3,5	2,6	1,9
General Government Final Consumption Expenditure	3,1	1,3	0,9	0,9	0,5
GFCF	4,3	6,6	5,6	4,2	2,4
GFCF Equipment and Cultivated Assets	*15,7*	*7,5*	*4,7*	*3,6*	*2,3*
GFCF Construction and Intellectual Property	*-0,7*	*6,2*	*6,1*	*4,5*	*2,4*
Domestic Demand*	*4,7*	3,9	3,3	2,6	1,7
Exports of Goods and Services	14,7	7,6	5,0	2,9	1,9
Imports of Goods and Services	13,9	6,7	5,1	3,0	2,0
External Balance*	*0,5*	0,4	0,0	0,0	0,0
Gross Domestic Product	**5,1**	**4,3**	**3,3**	**2,6**	**1,7**
Nominal Gross Domestic Product	**7,4**	**8,2**	**5,7**	**4,7**	**3,6**
Gross Domestic Product Deflator	2,2	3,7	2,3	2,0	1,8
CPI	3,1	6,5	2,7	2,0	1,8
Full-Time Equivalent Employment	6,6	2,9	1,9	1,5	0,9
Unit Labour Cost	0,8	1,9	2,4	1,5	1,3
Productivity per Full-Time Employee	-1,4	1,3	1,4	1,1	0,8
Unemployment rate (% of Active Population)	14,8	13,2	12,3	11,4	11,0
Household and NPISH Savings Rate (% Gross Disposable Income)	11,4	8,7	7,9	7,2	6,6

* Contribution to GDP growth

Source: INE and AIReF forecasts.

Disruptions in the global supply of agricultural, industrial and energy raw materials that led to an energy crisis and bottlenecks in global production chains were seen throughout 2021, which have intensified significantly following the invasion of Ukraine. The major uncertainty associated with the energy crisis, the war in Ukraine and bottlenecks in global production chains have led most private analysts and international institutions to carry out a somewhat sharp downward revision of their growth forecasts, while expected inflation has been revised upwards significantly (see Figure 1).

FIGURE 1. CONSENSUS GDP GROWTH FORECASTS (%)



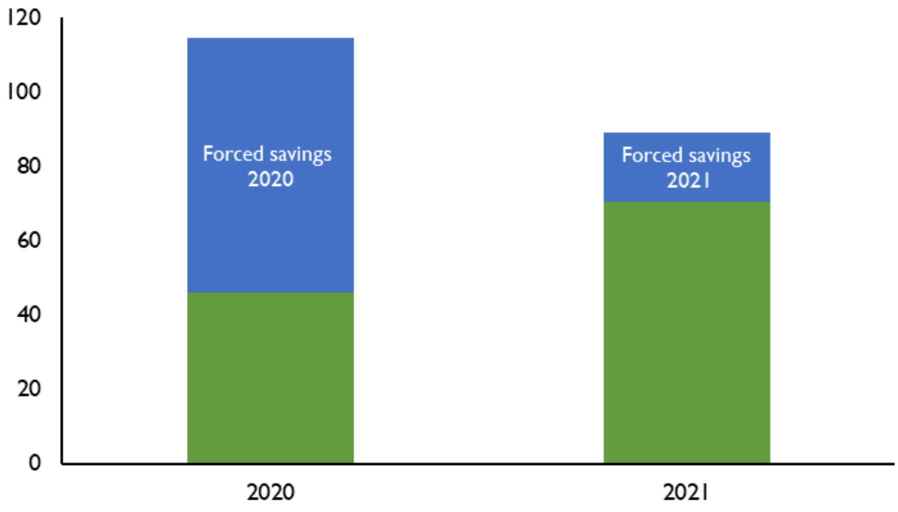
Source: Consensus Forecasts

In this context, AIReF has also revised expected growth downwards, while inflation is revised upwards, particularly in 2022. Regarding growth, it is estimated that GDP could grow by 4.3% on average in 2022 (Table 1). A major part of this increase is due to the so-called "carry-over effects" of the previous year and the boost that AIReF assigns to the RTRP in this year (which is discussed below). In the following years, as the boost of the Plan and the savings accumulated during the pandemic fade, GDP growth is expected to gradually return to its potential growth - which AIReF places at 1.3% in 2025.

As regards prices, AIReF has revised expected inflation in 2022 upwards and projects a gradual deceleration in the following years. In particular, the consumer price index would rise by 6.5% in 2022, to then converge with monetary policy reference rates. These estimates take into account the package of measures introduced by the Government to mitigate the impact of the increase in energy prices, but not the implications of the agreement reached with the European Commission to decouple the price of gas and the price of electricity, as there are still no details on its implementation. The moderation in inflation expected from 2023 is explained, among other factors, by the degree of slack still prevailing in the labour market and the absence of signs of second round effects on wages (see Box 1). However, the intensity of the current upturn in inflation means that the risks surrounding these assumptions are high.

With regard to the composition of growth, the dynamism of private consumption and, to a lesser extent, of investment is revised downwards with respect to AIReF's previous forecasts. In particular, the growth in private consumption will be affected by lower household purchasing power as a result of the increase in inflation and the increase in uncertainty. The increase in energy prices has a greater impact on lower-income households, since energy spending accounts for a higher proportion of their income. It should also be remembered that the percentage of lower-income households that were able to accumulate savings over the pandemic is smaller and, therefore, they have less margin to cushion the impact of the increase in inflation. Consequently, the downward revisions made to private consumption with respect to the estimates at the start of the year are significant, amounting to 1.5 percentage points. AIReF assumes that the forced savings accumulated over the two-year period 2020-2021, according to its estimates, will be evenly distributed up to 2024 and they would therefore contribute 0.5 points of growth in 2022.

FIGURE 2. SAVINGS OF HOUSEHOLDS AND NPISHS (BILLION EUROS)



Source: INE and AIReF estimates

Business investment and construction will also be affected by heightened uncertainty and rising supply chain tensions, although their growth may be high if the effects of the RTRP start to roll out.

The contribution of external demand will be positive in 2022 and neutral in the following years. The dynamism of exports of goods will suffer in a context of lower growth of our trading partners. However, the assumption of gradual normalisation of international tourism (in 2022 international tourism is assumed to reach a level close to 80% of 2019 levels and a full recovery is expected for 2023) contributes to sustaining the growth in foreign sales. For their part, imports will grow at a much slower rate than that observed in 2021, in a context of slower growth in private consumption and investment.

Finally, employment maintains high growth rates over the forecast horizon and the unemployment rate falls to 11%. Unlike in 2021, employment growth will be somewhat more moderate than that of GDP, although it remains remarkably dynamic, allowing the unemployment rate to gradually fall to 11% in 2025, a level not observed since the start of 2008.

AIReF has used different tools to quantify the impact associated with supply shocks in its macroeconomic scenarios[1]. In particular, a breakdown is offered of the assumptions and calculations for the following aspects:

1. **Supply problems in value chains.** The impact has been estimated using the OECD global input-output tables through which a calibrated shock

[1] These estimates are updated with respect to those included in the REPORT ON THE INITIAL BUDGETS OF THE GENERAL GOVERNMENT FOR 2022 (airef.es)

is simulated by analysing the relationship between the percentage of European companies reporting supply shortages in European Commission surveys and the observed fall in industrial production. An indicator of China's production bottlenecks has been taken into account in projecting the possible evolution of the factors limiting production in 2022. A breakdown of the estimates is shown in Box 2. Overall, the results suggest that the negative impact on GDP growth in the Spanish economy could amount to approximately 0.4 percentage points in 2022. No effect is incorporated for 2023, although surveys conducted by the Bank of Spain suggest that a not inconsiderable percentage of companies consider that these difficulties might extend beyond 2022[2].

2. **Impact of the energy crisis.** Russia's war has intensified the increase in oil, gas and coal prices that had already been recorded over 2021. Box 3 describes the factors behind the energy crisis and the determinants of the quick and intense pass-through of the prices of these raw materials to electricity prices in the Spanish economy. As explained in the table, the total impact associated with the observed and expected increase in energy prices in the futures markets stands at -0.6 percentage points in 2022 and - 0.5 percentage points in 2023.

3. **War in Ukraine: trade channel.** In addition to the increase in energy prices mentioned in the previous section, the application of sanctions on Russia and the tragic situation in Ukraine have caused exports to these economies to contract, which may have implications for economic growth. In this regard, although Spain's direct trade exposure to Russia and Ukraine is relatively small, a large part of the effects could come indirectly through the exposure to these economies of our main trading partners, especially Germany. The calculations made using the input-output tables suggest that the impact associated with the disappearance of trade flows in goods with Russia might amount to 0.5 percentage points of Spain's GDP, practically half that

[2] According to the survey of companies conducted by the Bank of Spain, almost 45% of manufacturing companies state that they are experiencing adverse effects on their activity as a result of these difficulties. Supply difficulties are spreading to other branches, such as retail and construction, where 36.4% and 34.9%, respectively, of the surveyed companies report that their activity is being hampered for this reason. Regarding its duration, 42% of the companies affected by these factors expect these problems to last until the end of this year and 33% predict that they will persist until 2023. Survey of Spanish companies on the evolution of their activity: first quarter of 2022. Economic notes. Economic Bulletin 1/2022. (bde.es)

estimated for Germany and much lower than the impact on the Baltic economies. The details of this simulation can be found in Box 4.

As for the RTRP, AIReF has revised downwards its estimates on the contribution to growth of this instrument over the forecast horizon. In particular, in order to estimate the impact of the RTRP, AIReF assumes that the funds of this instrument will reach the real economy at a rate of about €25bn in 2022 and 2023, about €15bn in 2024, about €700m in 2025 and just under €300m in 2026, similar to the budgeted amounts. However, the macroeconomic impact assigned to the RTRP over the forecast horizon is reduced as the multiplier effect of these funds is deemed to be lower. The initial estimates on the impact of the RTRP that AIReF made last year were based on the assumption of full execution of the budgeted funds and a high multiplier impact of 1.2. This multiplier was based both on the nature of the instrument, which entails a coordinated fiscal boost in euro area countries financed by common transfers, and on the macroeconomic context in which the investments would materialise, with interest rates at all-time lows and the existence of idle resources after the crisis caused by the health emergency. In addition, empirical evidence indicates that the multiplier of the investments included in the plan (infrastructure, digitalisation, climate transition) is usually higher than one, since they generate positive externalities on private productivity.

At present, a multiplier of 0.9 is assumed. Therefore, the impact of the Plan estimated by AIReF stands at 1.8% of the level of GDP in 2022, 2.2% in 2023 and then falls in the following years to 0.8% in 2025. This downward revision is due to the fact that the funds will reach the economy in a substantially more adverse context, characterised by higher production costs, supply bottlenecks and labour shortages in some sectors essential for the development of the RTRP such as the automotive, construction and digitalisation sectors, which will make the associated multiplier lower, specifically, 0.9.

However, events over 2021 suggest that the rate at which funds reach the real economy may differ significantly from budget execution. In Box 5, AIReF has carried out a detailed analysis of the milestones associated with each of the investments in the Plan to try to infer the possible profile of investment materialisation in line with the commitments made. This analysis suggests that the arrival of funds to the real economy would peak in 2023, and decline less sharply in 2024 and 2025 in comparison with the baseline scenario. Should this distribution of RTRP funds materialise, the impact on growth in 2022 could be lower, although this would be offset in subsequent years as the overall impact is similar with both distributions.

FIGURE 3. ASSUMPTIONS FOR THE EXECUTION OF RTRP FUNDS (€BN)

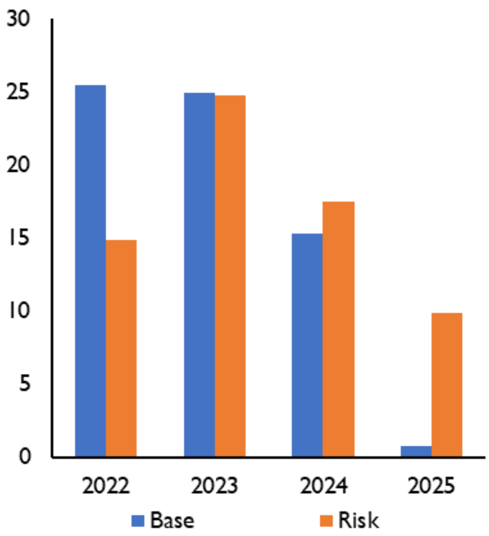
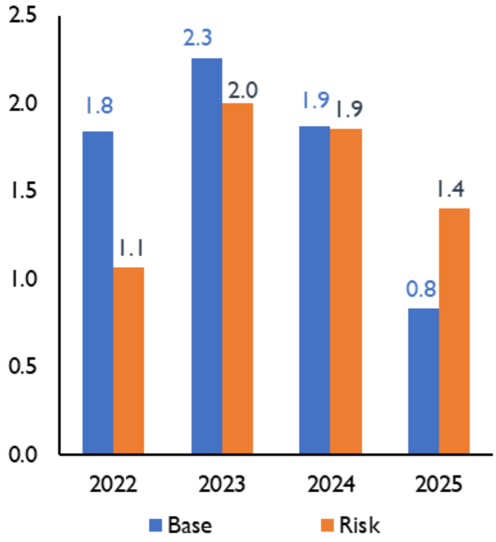


FIGURE 4. IMPACT OF THE RTRP ON THE LEVEL OF GDP (% DEVIATION OVER SCENARIO WITHOUT RTRP)



Source: AIReF

The risks associated with the execution of the RTRP and the difficulties in predicting the development of the war in Ukraine or the pandemic and their interrelationships with the energy crisis and supply problems in value chains make these forecasts subject to higher-than-usual uncertainty. The third section provides greater detail of the balance of risks around the Government's scenario and AIReF's own scenario.

2.2. The macroeconomic scenario of the 2022-2025 Stability Programme

2.2.1. Assessment of the technical assumptions

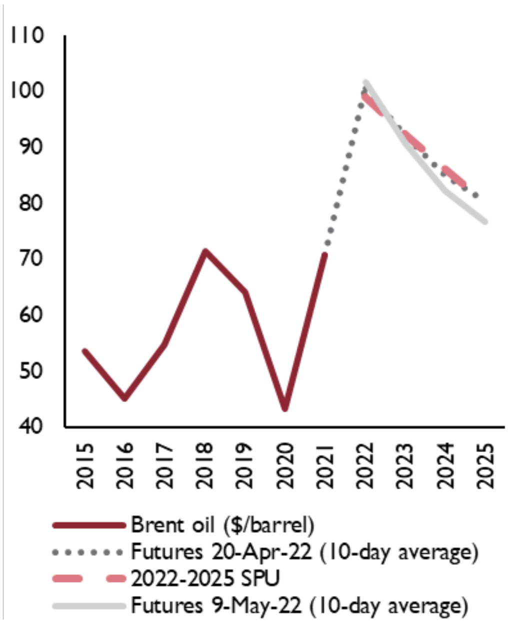
The Government's macro-outlook is based on technical assumptions about the growth of our main partners and world trade, financial conditions and raw material prices which, in such a changing global context, are subject to a great deal of uncertainty and downside risks. In particular, the euro area GDP growth scenario coincides with the baseline scenario formulated by the European Central Bank in March. However, the complexity of the current context points to the existence of downside risks. As previously stated, most international organisations and private institutions are making downward revisions to their growth forecasts and the most recent growth figures in the United States point to a contraction in US GDP in the early months of the year.

In Europe, growth was very moderate, with a contraction in Italy, stagnation in France and modest growth in Germany and Spain. The high prices of energy and agricultural products are also having adverse effects on emerging economies.

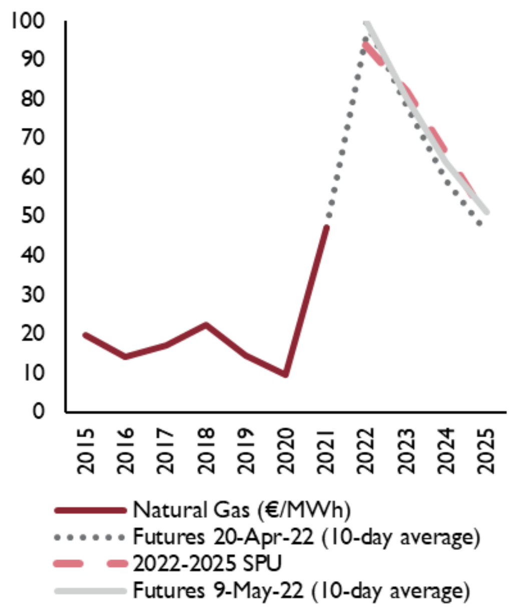
The technical assumptions for the evolution of energy raw material prices used by the Government to draw up the macroeconomic scenario reflected in the SPU are in line with the expected evolution in futures markets. The assumptions on oil and gas prices used by the Government are in line with price expectations in the international futures markets for these raw materials, which over the entire forecast horizon place them above the average of the last five years. However, the recent evolution has been marked by high volatility, which makes it difficult to predict the evolution of this variable. The prolongation of the war in Ukraine and tensions with Russia, the agreement on the embargo on Russian oil and its potential extension to gas could have a significant impact on the future evolution of the prices of these raw materials.

FIGURE 5. EVOLUTION OF ENERGY RAW MATERIAL PRICES

BRENT OIL ($/BARREL)



NATURAL GAS (€/MWh)



Source: Refinitiv

The assumptions about the financing conditions of the Spanish economy are optimistic according to the most recent evolution of financial markets. The intensity of inflationary pressures observed globally and in the euro area is causing monetary authorities to move forward with the withdrawal of monetary stimulus measures more quickly than expected a few months ago. In the euro area, the normalisation process is more gradual than in the United

States. However, this has not prevented an increase in interest rates in all terms and an increase in the yields on the public debt of the sovereign issuers of the euro area, including Spain (see Section 6 of this report). This fact is barely reflected in the technical assumptions of SPU's macroeconomic scenario, which place the average interest rate of the Spanish ten-year government bond at 0.8% in 2022, when this yield currently stands at around 2.2% (at the date of preparation of the endorsement, it was around 1.8%).

2.2.2. Other determining factors of the macroeconomic scenario

In addition to the usual technical assumptions, on this occasion, when assessing the Government's macroeconomic outlook, it is particularly important to know the assumptions and methodology used for incorporating the impact of the war in Ukraine, the energy crisis, value chain bottlenecks and, especially, the RTRP, into the macroeconomic scenario. The stability programme does not provide specific information on most of these aspects. Particularly surprising is the lack of detail on the macroeconomic impact of the RTRP, given that this instrument is the key factor for supporting growth in the short and medium term in such an adverse global context. With regard to the other assumptions, information is provided on the assumption of the return to normal tourism activity, where it is stated that 2022 would record 80% of the activity recorded in this sector in 2019. AIReF considers this to be reasonable given the favourable performance of tourism over recent months.

The Stability Programme Update does not provide any information on the macroeconomic impact of the RTRP, despite the RTRP's central role in supporting economic growth and the structural transformation of the economy over the SPU horizon. The 2021 Stability Programme Update indicated that the Plan could result in an additional 2 points of GDP growth over the period 2021-2023 and the creation of more than 800,000 jobs over the same period. The 2022-2025 SPU is even less explicit about the impact of the RTRP: it only notes that the estimates have been recalibrated and that the impact of the Plan is now expected to become more intense from the second quarter of 2022 and distributed until 2025 on the basis of an estimate of the awarding of tenders and announcement of support measures presented in the report.

AIReF considers that there should be more transparency from the General Government on the implementation, monitoring and evaluation of the investments and reforms associated with the RTRP given the importance of this instrument. This is particularly the case when, according to the execution report published in April[3], the Government's objective is not only to mobilise 80% of the €70bn of transfers assigned in 2021-2023, but also to add the mobilisation of the loans as from 2022, which would double the Plan's size. The economic dimension of this instrument contrasts with the lack of detailed information.

The Government, however, does quantify the impact on potential growth and structural unemployment associated with the RTRP. Specifically, the SPU assumes that the reforms and investments associated with the RTRP will allow the potential growth of the economy to rise to 2%. In addition, it is estimated that the reforms included in the Plan could reduce structural unemployment by 280,000 in the medium and long term, which will reduce the structural fiscal deficit by 0.31 percentage points of GDP. AIReF considers that these estimates should be viewed with due caution, particularly when drawing budgetary implications that might be premature[4].

2.2.3. Comparison of the Government's macroeconomic scenario with AIReF's scenario

The differences between the Government's macroeconomic scenario and AIReF's macroeconomic scenario are very small. The Government sets out a scenario in which the Spanish economy continues to recover pre-pandemic levels of activity in the short term, supported by the favourable performance of the job market, the normalisation of inbound tourism and the dynamism of investment linked to the implementation of the RTRP, which will contribute to mitigate the impact of Russia's invasion of Ukraine. Accordingly, the SPU scenario assumes GDP growth in volume terms of 4.3% in 2022, almost 3 percentage points lower than the 7% growth with which the General State Budget for 2022 was drawn up. This growth is in line with AIReF's most recent estimates and with the most recent forecasts made by other public organisations and private institutions.

[3] Report on the execution of the Recovery Plan | Recovery, Transformation and Resilience Plan Government of Spain. (planderecuperacion.gob.es)

[4] The Bank of Spain agrees with the Government in estimating that the potential growth of the Spanish economy could receive a strong boost, to reach around 2% per year, as a result of the RTRP. However, it specifies that this would happen in a scenario of adequate selection of NGEU projects, accompanied by structural reforms aimed at promoting both synergies between public investment and private investment and the reallocation of resources between sectors and companies. For the time being, not enough details are known in the case of Spain to accurately assess these factors. El crecimiento potencial de la economía española tras la pandemia [The potential growth of the Spanish economy after the pandemic]. Occasional Paper No. 2208. (bde.es)

In the medium term (2023-2025), the Government expects a gradual moderation of GDP growth. Specifically, the Government forecasts GDP growth of 3.5%, 2.4% and 1.8% for 2023, 2024 and 2025, respectively. This scenario of convergence at real growth rates close to the potential growth of the economy is also considered feasible, as it is in the central range of AIReF's probabilistic bands (Figure 6).

FIGURE 6. GROSS DOMESTIC PRODUCT. VOLUME (YEAR-ON-YEAR RATE OF CHANGE)

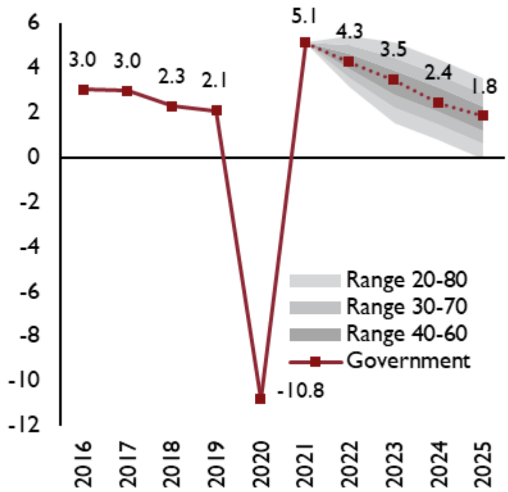
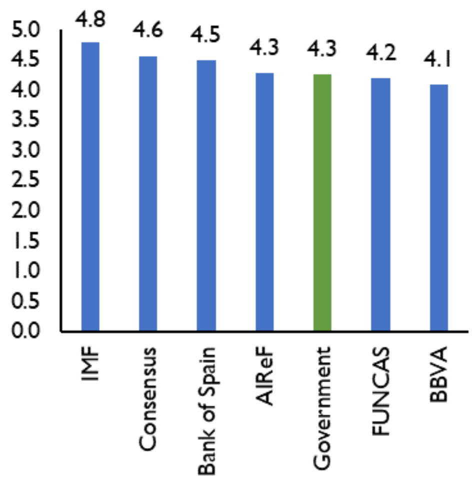


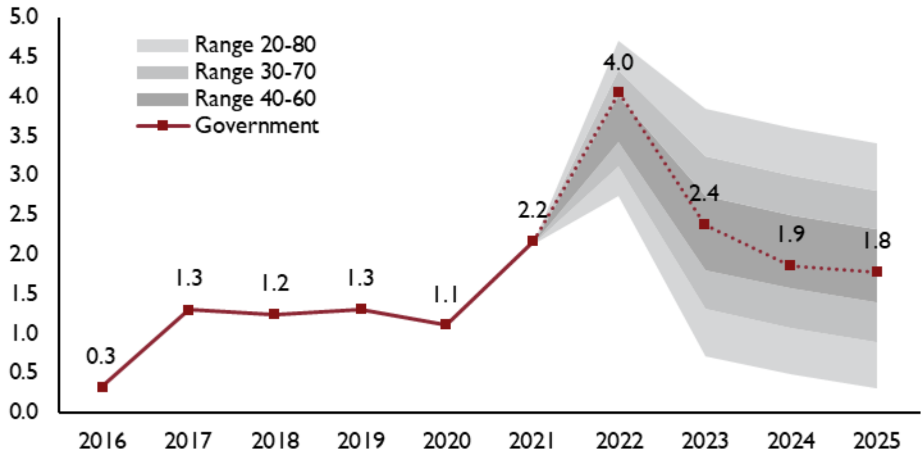
FIGURE 7. COMPARISON OF GDP FORECASTS IN 2022. VOLUME (YEAR-ON-YEAR RATE OF CHANGE)



Source: Ministry of Economic Affairs and Digital Transformation, Consensus and AIReF.

This growth scenario will be accompanied by strong inflationary tensions in the short term. The Government's forecasts suggest a sharp increase in the GDP deflator in 2022, to 4%, in line with the central confidence interval of AIReF's scenario. The rate of change of the GDP deflator would gradually moderate its growth rate over the forecast horizon, with the rates of change expected by the Government falling within the central probability range estimated by AIReF based on its own scenario.

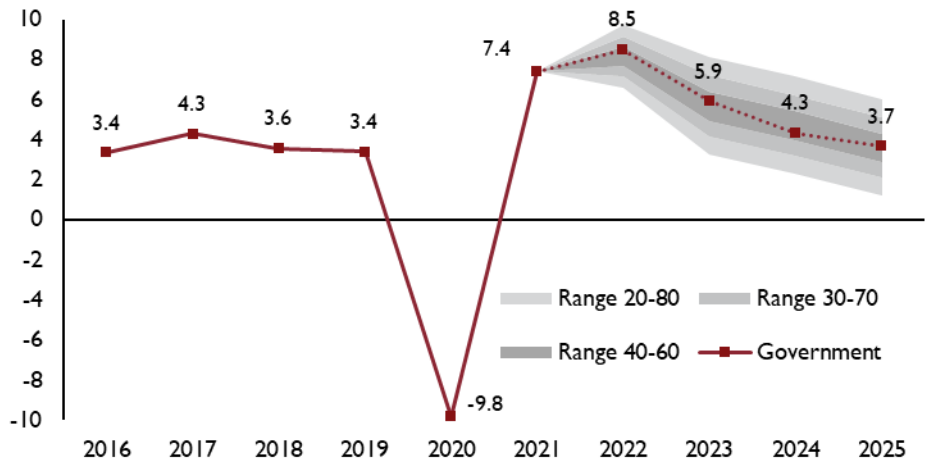
FIGURE 8. IMPLICIT GDP DEFLATOR (YEAR-ON-YEAR RATE OF CHANGE)



Source: AIReF estimates and Ministry of Economic Affairs and Digital Transformation

Consequently, forecasts of nominal GDP growth are considered feasible as they are in the central range of the bands calculated by AIReF for the entire forecast horizon (2022-2025). The macroeconomic scenario contained in the SPU considers that nominal GDP will grow at a rate of 8.5% in year-on-year terms in 2022, moderating its growth in the following years, in line with AIReF's own forecast.

FIGURE 9. NOMINAL GDP (YEAR-ON-YEAR RATE OF CHANGE)



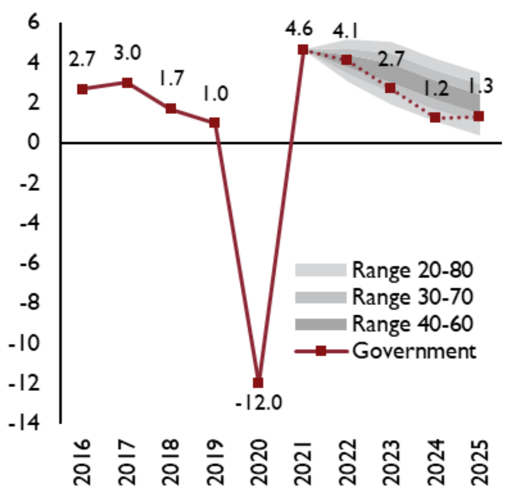
Source: AIReF estimates and Ministry of Economic Affairs and Digital Transformation

With regard to the composition of growth, the macroeconomic scenario of the SPU bears similarities with the AIReF scenario, although it differs in the intensity of growth for some aggregates. Specifically, AIReF's scenario incorporates higher growth in private consumption in the medium term, while the macroeconomic scenario of the SPU presents greater dynamism in gross fixed capital formation and exports. The Government's and AIReF's employment forecasts are similar, although AIReF estimates a smaller decrease in the unemployment rate due to the expected increase in the active population.

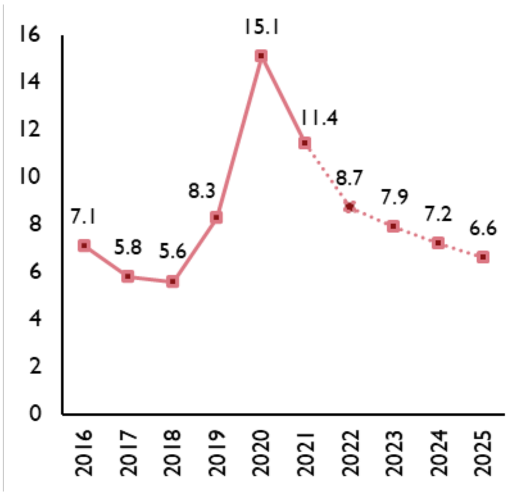
Private consumption in the SPU macroeconomic scenario shows a growth pattern that matches AIReF's in the short term, but lower rates between 2023 and 2025. According to the SPU report, the Government considers that the accumulated excess savings would be channelled towards the purchase of housing and financial assets, although in the future it might also be channelled towards consumption to mitigate the effects of inflation on real income. In contrast, AIReF believes that private consumption will maintain greater dynamism supported by the favourable performance of the job market, the elimination of restrictions on mobility and the existence of favourable financial conditions, despite the recent deterioration, which will allow the savings accumulated during the most acute periods of the pandemic to materialise. In the absence of the Government's forecast of the savings rate, the underlying assumptions in relation to the rate of disbursement of the accumulated forced savings in 2020 and 2021 cannot be compared.

FIGURE 10. PRIVATE CONSUMPTION AND PRIVATE SAVINGS RATE

CONSUMPTION (RATE OF CHANGE)



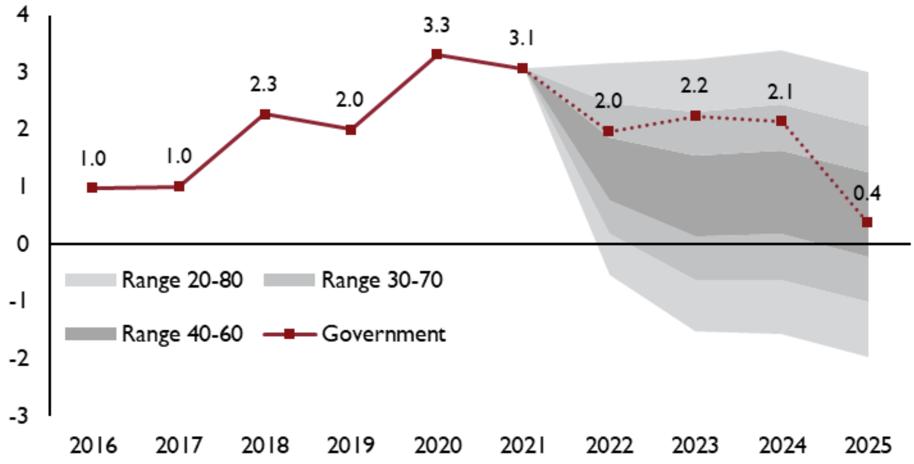
AIREF's SAVINGS RATE FORECAST (% RBD)



Source: AIReF estimates and Ministry of Economic Affairs and Digital Transformation

Real public consumption in the Government's scenario shows higher growth than in AIReF forecasts up to 2024. Specifically, this aggregate is located in the upper band of the 30-70 confidence interval, except in 2025 when the growth expected by AIReF is similar to that estimated by the Government. In nominal terms, the path indicated by the Government shows higher growth than that presented for the main components of public consumption in its fiscal roadmap, which are more aligned with AIReF's path.

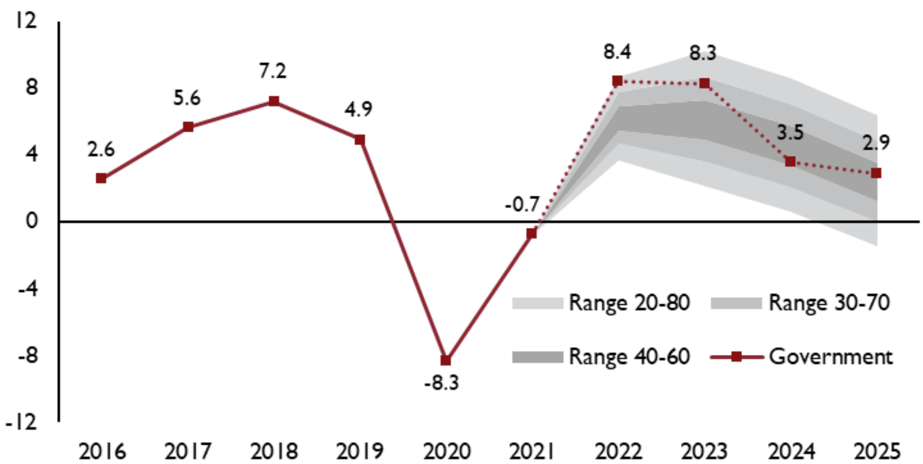
FIGURE 11. FINAL CONSUMPTION EXPENDITURE OF THE GG IN TERMS OF VOLUME (RATE OF CHANGE)



Source: AIReF estimates and Ministry of Economic Affairs and Digital Transformation

The Government expects that investment in construction and intellectual property will record significant growth in 2022 and 2023 as it is one of the aggregates most closely linked to the RTRP. In comparison with AIReF, the Government's forecast for this aggregate would be optimistic in 2022 and 2023, and feasible in 2024 and 2025. The lack of information on how the macroeconomic impact of the RTRP is incorporated over the forecast horizon makes it difficult to assess these discrepancies.

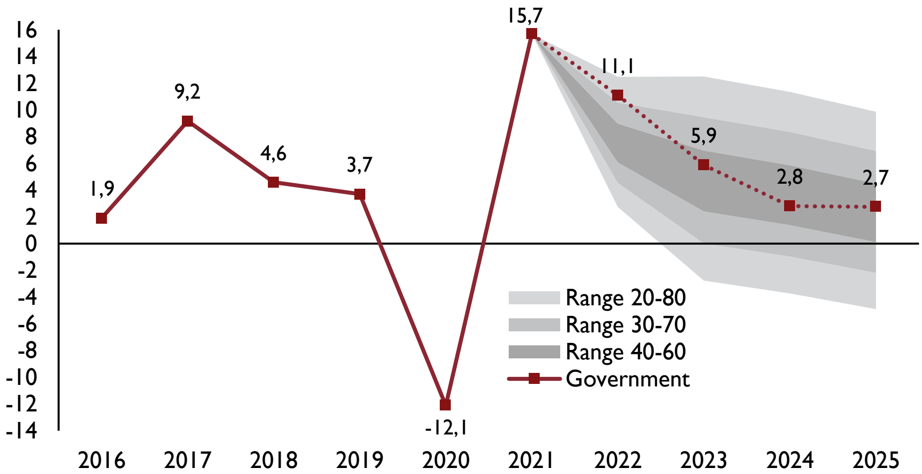
FIGURE 12. GFCF IN CONSTRUCTION AND INTELLECTUAL PROPERTY. TERMS OF VOLUME (RATE OF CHANGE)



Source: AIReF estimates and Ministry of Economic Affairs and Digital Transformation

Along the same lines, the SPU formulates a scenario for gross capital formation in capital goods and cultivated assets that is remarkably expansive in relation to that of AIReF. The Government's forecast for the evolution of this aggregate is considered optimistic for 2022, but feasible in the remaining years.

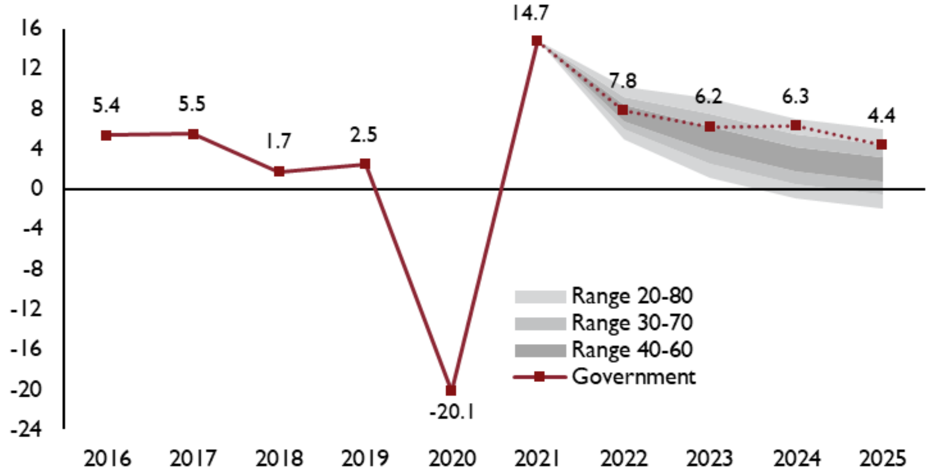
FIGURE 13. GFCF IN CAPITAL GOODS AND CULTIVATED ASSETS IN TERMS OF VOLUME (RATE OF CHANGE)



Source: AIReF estimates and Ministry of Economic Affairs and Digital Transformation

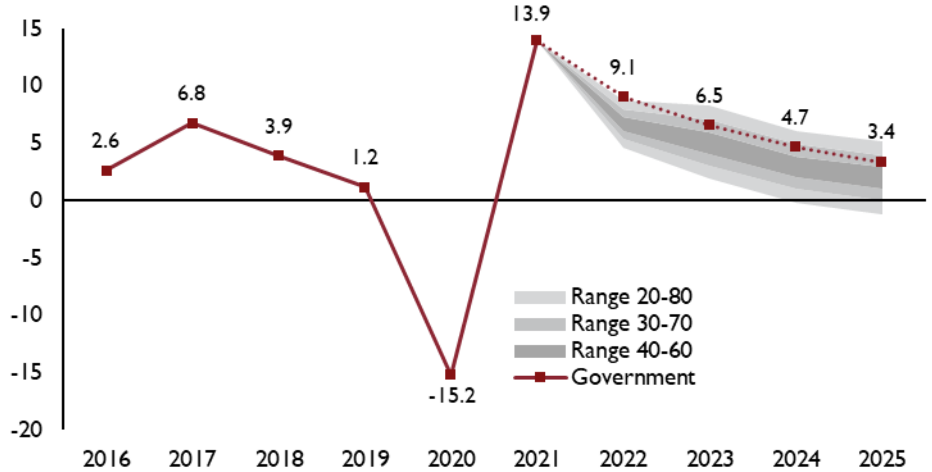
For its part, the SPU scenario considers that in 2022 and 2023 foreign demand would contribute negatively to GDP growth, to then contribute positively in subsequent years. This contrasts with the positive contribution forecast by AIReF in 2022, which is cancelled out in the following years. This discrepancy is mainly due to the higher growth in exports expected by the Government. In contrast, exports of goods and services maintain feasible growth, in relation to AIReF's scenarios, but are more optimistic in the last two years, when they grow above export markets. Within this last aggregate, AIReF considers the assumption relating to the normalisation of inbound tourism contained in the SPU, which assumes that in 2022, 80% of the tourist activity recorded in 2019 will have recovered, to be reasonable.

FIGURE 14. EXPORTS OF GOODS AND SERVICES IN TERMS OF VOLUME (RATE OF CHANGE)



Source: AIReF estimates and Ministry of Economic Affairs and Digital Transformation

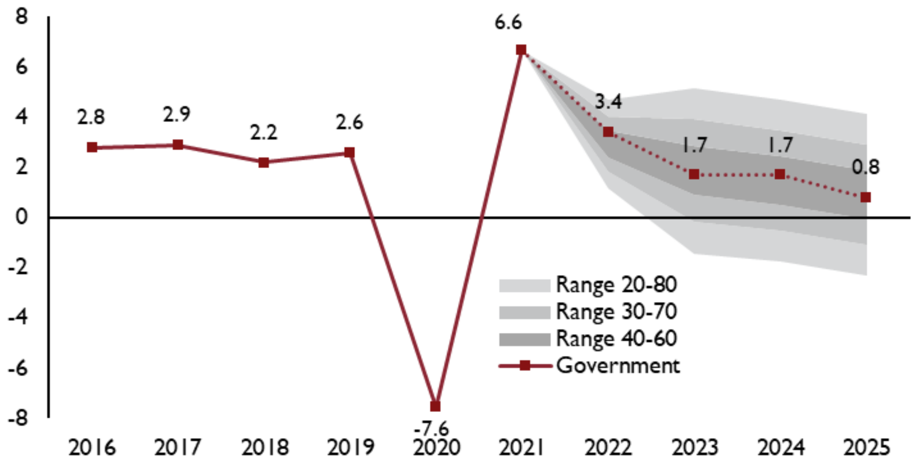
FIGURE 15. IMPORTS OF GOODS AND SERVICES IN TERMS OF VOLUME (RATE OF CHANGE)



Source: AIReF estimates and Ministry of Economic Affairs and Digital Transformation

Full-time equivalent employment shows a very similar growth pattern in both scenarios. The favourable performance of the labour market is one of the pillars of the recovery and both the figures of the Labour Force Survey and those of Social Security affiliations confirm that the notable dynamism in employment is maintained. However, unlike what was observed in 2021, both the Government and AIReF believe that employment growth will be somewhat lower than that of real gross domestic product over the forecast horizon.

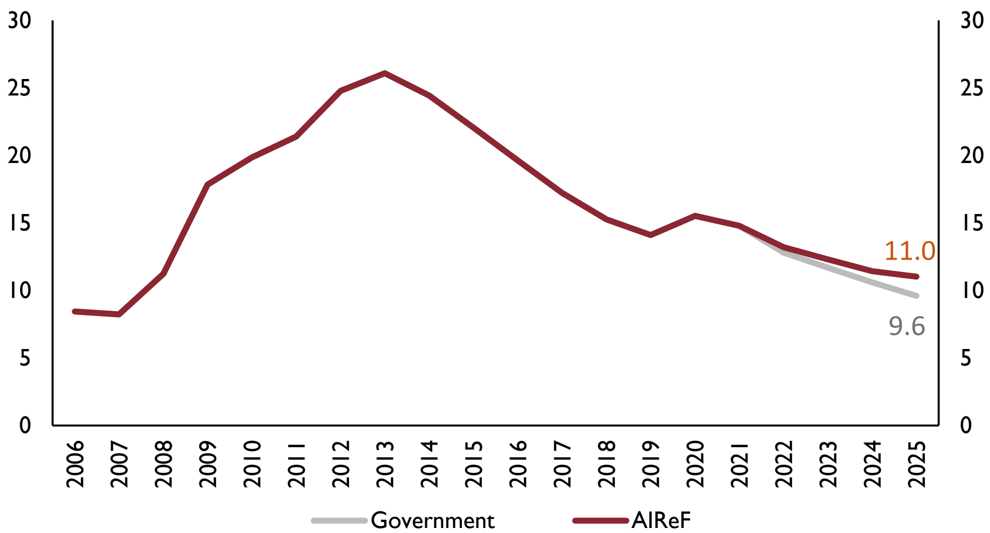
FIGURE 16. FULL-TIME EQUIVALENT EMPLOYMENT (RATE OF CHANGE)



Source: AIReF estimates and Ministry of Economic Affairs and Digital Transformation

Although the scenario of equivalent employment growth is similar, the unemployment rate of the Government's macroeconomic scenario would end the four-year period at below 10% of the active population, while in the case of AIReF it would stand at around 11%. Behind this disparate evolution, there seems to be different expected growth of the active population in each scenario.

FIGURE 17. UNEMPLOYMENT RATE (% OF ACTIVE POPULATION).



Source: INE, Ministry of Economic Affairs and Digital Transformation and AIReF.

2.3. Balance of risks

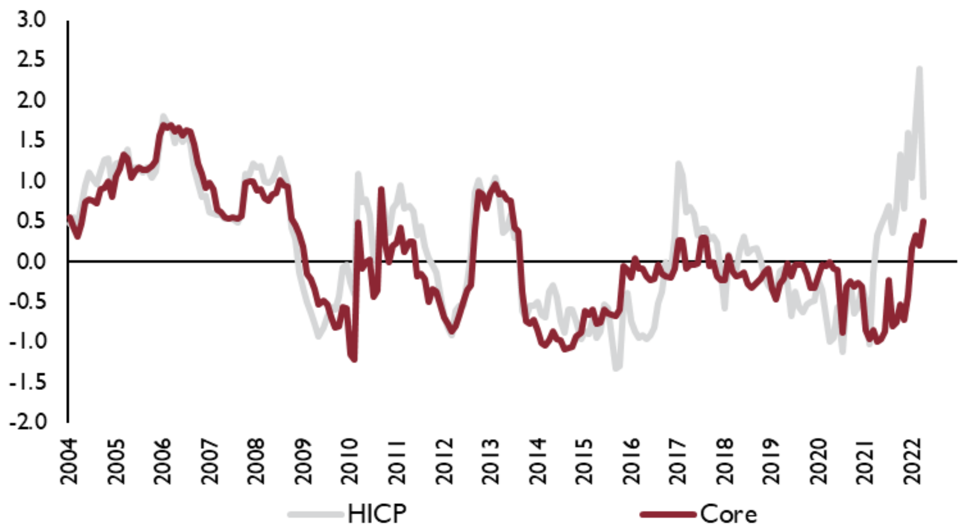
The balance of risks around the SPU's growth scenario, and AIReF's own scenario, is clearly on the downside. First of all, the pandemic remains a major factor whose evolution is difficult to predict. Low vaccination rates in developing countries and the possible emergence of new variants pose risks to the recovery and normalisation of international tourism. The mobility restrictions maintained by the Chinese economy as part of its zero-COVID strategy may cause bottlenecks to intensify and last longer than expected. In turn, the global supply of some industrial and agricultural raw materials (such as steel and fertilisers) has been affected by the export restrictions introduced in China to prioritise the domestic market. The implications of this scenario of heightened stress in value chains could be significant as China supplies over one third of the intermediate inputs used in global production.

Secondly, difficulties in energy raw material markets may persist over time. The war in Ukraine and the scenario of tensions in relations with Russia might lead to an energy emergency if there are cuts in the supply of oil and natural gas and cause an increase in the prices of these raw materials that intensifies and continues over time. Beyond the war, current energy prices may persist beyond expectations if sufficient progress is not made in renewable energy production to meet the shortfall of the supply of clean fossil fuels.

The inflationary tensions could intensify and make the growth-inflation combination more adverse than expected by the Government and most analysts, including AIReF. After a long period of stability, the increase in price levels has exceeded expectations both in size and in persistence, thus increasing the risk posed by inflation for economic activity and for maintaining favourable financial conditions. In fact, the main central banks have announced their intention to adopt a less accommodative monetary policy to contain this rise in inflation, which is reflected in an increase in long-term interest rates, greater volatility in financial markets and an increase in the sovereign risk premiums of the Spanish economy.

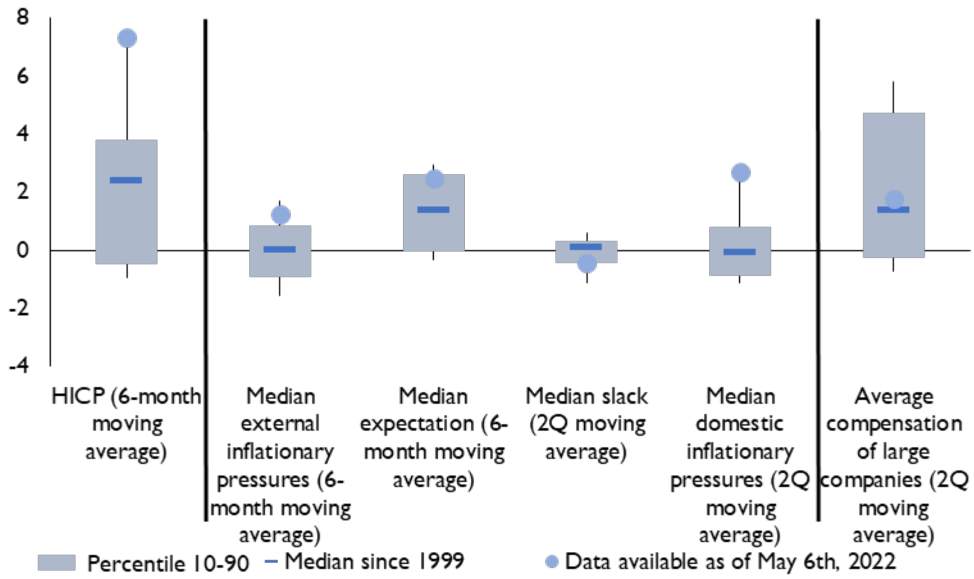
The intensity of the increase in inflation in the Spanish economy raises the risk of possible second-round effects and loss of competitiveness *vis-à-vis* the outside world. There is still no transfer of inflation to wage negotiations, which might be due to the existence of greater slack in the labour market relative to other economies (see Box 1, which assesses the degree of slack in the labour market and describes the evolution of wages). However, the persistence and intensity of price increases might lead to a de-anchoring of inflation expectations and higher wage demands and increases in corporate margins, causing a price-wage spiral. Furthermore, the greater energy intensity of the Spanish economy and the high pass-through of energy raw material prices to household prices and business costs has led to the re-emergence of a positive inflation differential *vis-à-vis* EMU countries. Should this differential persist, it might lead to a loss of competitiveness *vis-à-vis* the outside world with the consequent deterioration of exports.

FIGURE 18. HEADLINE AND CORE INFLATION DIFFERENTIAL WITH RESPECT TO THE EMU (IN PP)



Source: INE and EUROSTAT.

FIGURE 19. SPAIN: INFLATION INDICATORS



Source: Refinitiv, Haver Analytics and Funcas

The rate of absorption and the effectiveness of the use of NGEU funds is another element of risk in the medium-term growth scenario. The estimates made by AIReF about the rate at which RTRP resources can reach the economy suggest the existence of downside risks in the impact assigned to this Short-Term Plan in AIReF's scenarios, as explained in Section 2.1.

2.4. Ex-post evaluation of Stability Programme forecasts

This section sets out an ex-post analysis of the Government's macroeconomic projections, according to European rules. In particular, Directive 2011/85/EU on requirements for budgetary frameworks of the Member States promotes regular assessments of projections on the basis of objective criteria. Its transposition into Organic Law 6/2013 on the establishment of an Independent Authority for Fiscal Responsibility indicates, in Article 14, that the report on macroeconomic forecasts will include an assessment of the existence of significant biases in the forecasts over a period of four consecutive years.

In particular, the existence of systematic errors and significant biases in the Government's forecasts is analysed and a comparison is made between different institutions. For this purpose, the forecast error for the purposes of the analysis is defined as the difference between the expected value for the current year and the following year, at two points in time: the update of the Stability Programme, published between March and May of each year, and the General State Budget, which is generally drawn up between September and October of each year, and the observed value, for which the first performance of the Quarterly National Accounts is taken.

There are no significant biases in the forecasts made by the Government over the last four years. A bias is considered significant if the Government's forecast error is large, unjustified and systematic over four consecutive years. An error is considered large when it falls outside the interquartile range of the panel of agencies. It is also deemed to be unjustified when the forecast does not result in a better approximation to the performance of the variable than the forecast of the panel of institutions and is not supported by the principal of prudence. Table 2 of ANNEX I shows detailed information on the mistakes made over the last five years by the Government and the panel of agencies and Table 3 classifies the Government's mistakes as large or important, with the latter constituting large errors that are, in turn, unjustified. The greatest concentration of important errors occurs in the estimation of exports for the following year. However, as this has not occurred for four consecutive years, it is not considered a systematic error.

The Government tends to underestimate public consumption, especially in estimates for the following year. Figure 1 of Annex I shows the forecasting errors and the evolution of the bias of the Government's estimates over the last 11 years, as well as a comparison with other agencies in Table 1 of that annex. The Government commits a negative and statistically non-zero bias in the estimates of public consumption for both the current year and the following year. However, this bias is of a sign and magnitude similar to that of other agencies, with the exception of AIReF, which presents a mean positive and non-significant error. Thus, the Government's bias is not statistically different[5] from that of other agencies at the 5% level of significance.

There is also an optimistic trend in the Government's forecasts of private consumption for the current year. The average error of the Government in estimating private consumption is systematically in positive territory, although at values that are similar to other agencies, except for the European Commission, which has an almost zero bias (see Figure 1 and Table 1 in Annex I). It also tends to overestimate the growth in the next year's estimates of all the variables, except for the aforementioned public consumption. However, these results may be distorted by the large error occurring in the estimates made in 2019 for 2020, due to the impossibility of predicting the onset of COVID-19 by all the agencies.

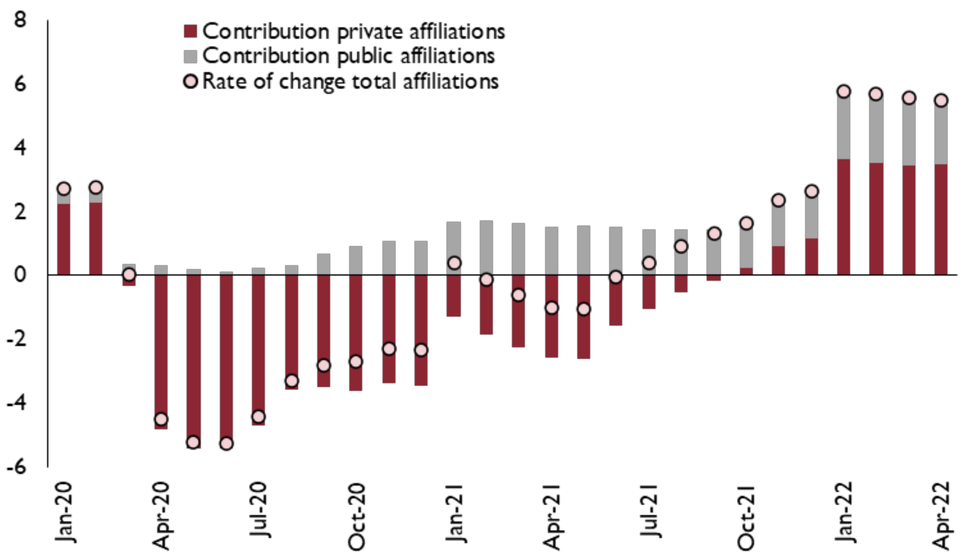
[5] To determine whether the differences observed between the biases of the different institutions are significant, the equality of means test is used in two populations that are considered not independent, with the null hypothesis being that the differences in prediction errors between two institutions are zero.

BOX 1. THE LABOUR MARKET AFTER THE PANDEMIC

The outbreak of the Covid-19 pandemic in March 2020 and the lockdown measures to contain the spread caused an unprecedented negative shock to activity. The intensity of the contraction in economic activity and the high sensitivity of employment to GDP in the Spanish economy made a profound impact on the labour market likely. However, the economic policy measures, with the strengthening of job-retention schemes (ERTEs), made it possible to cushion the effects of the health crisis on employment.

Once the lockdown measures were relaxed from the summer of 2020, the reinstatement of workers on ERTEs was quick in the sectors not affected by activity restrictions. Employment, measured through Social Security affiliations, recovered pre-pandemic levels in June 2021 and the unemployment rate has progressively decreased from a high of 16.3% in the last quarter of 2020 to 13.6% in the first quarter of 2022, falling below its pre-pandemic value. Job creation has been intense both in the public sector and in the private sector.

CONTRIBUTIONS TO GROWTH IN SOCIAL SECURITY AFFILIATION (COMPARED WITH 2019 %)



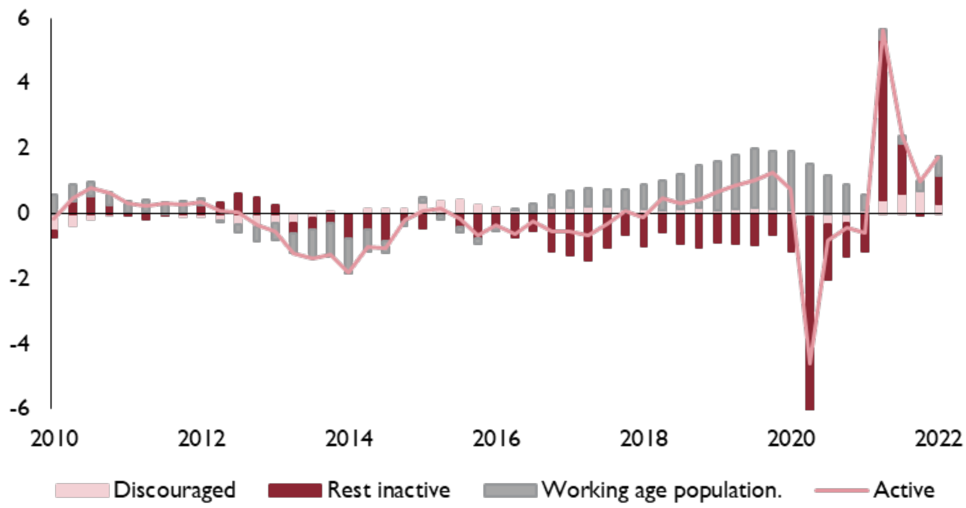
Source: Ministry of Inclusion, Social Security and Migration

The quick recovery in employment and the fall in the unemployment rate could allow inflationary tensions to shift more rapidly to wages. It is therefore advisable to assess the degree of slack in the labour market.

The fall in the unemployment rate in the Spanish economy is taking place against a backdrop of a growing active population. In Spain, unlike in other countries, the size of the active population has been gradually recovering over 2021, following the contraction observed during the pandemic. Thus, the activity rate stands at 58.49%, almost one point above its 2021Q4 value, but still below pre-pandemic levels (58.74% in 2019Q4).

This evolution contrasts with the fall in labour participation observed in the United States after the pandemic. The Great Resignation, as this phenomenon is known, is the result of various reasons, such as the reluctance to return to face-to-face work, early retirement and the desire to balance personal and family life. The IMF[6] shows how these factors have led to a tightening in the labour market that would have led to stronger growth in nominal wages, especially in lower-wage jobs.

CONTRIBUTIONS TO THE RATE OF CHANGE IN THE ACTIVE POPULATION

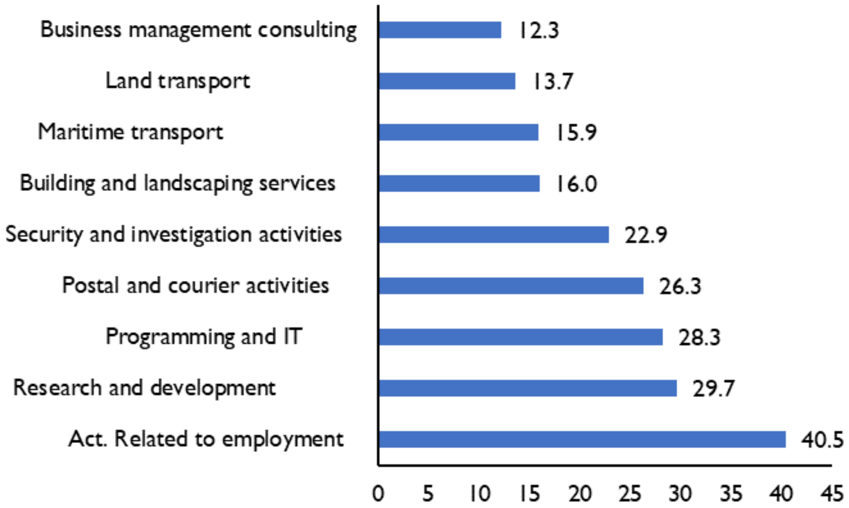


Source: INE

In Europe, European Commission surveys of supply-side limiting factors suggest that labour shortages have become a limiting factor in production for around 25% of EU companies in the industry and service sectors. However, in Spain, labour shortages do not seem to be a problem in industry or in the service sector (only 6% and 12% of companies in the two sectors show problems of labour shortages in the first quarter of 2022). In services, the limiting factors are concentrated in specific branches, such as employment-related activities and other high-skilled activities, such as R&D and Programming and IT.

[6] FMI (2022). World Economic Outlook. April. Box 1.1

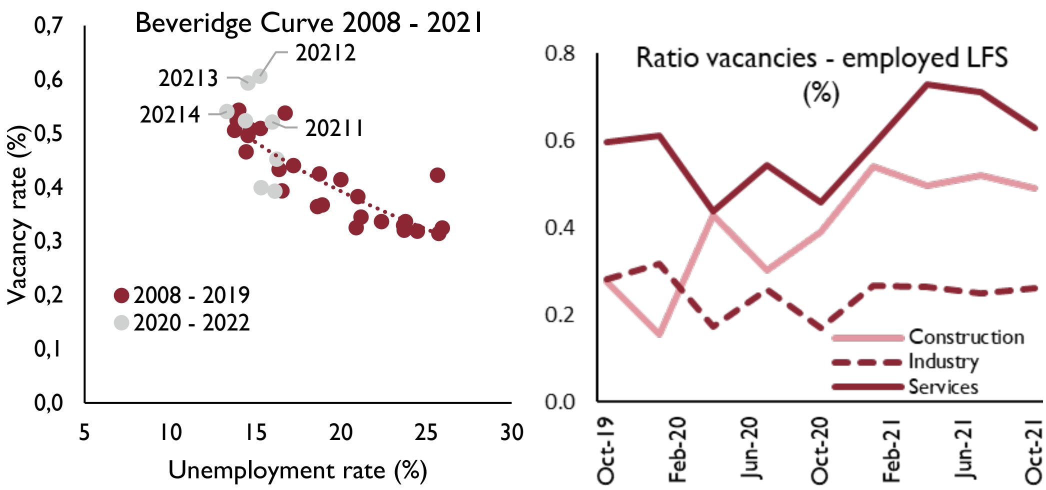
LABOUR SHORTAGE AS A LIMITING FACTOR 2022Q1 (% COMPANIES)



Source: European Commission.

For its part, the Beveridge curve shows that since 2019Q4, vacancies and unemployment have been falling simultaneously, prolonging the trend that was recorded during the previous expansionary phase that started in 2014. The evolution of vacancies at the aggregate level does not, therefore, reflect major tensions in the labour market. However, at a sectoral level, a higher vacancy-employment ratio is observed in services and, to a lesser extent, in construction.

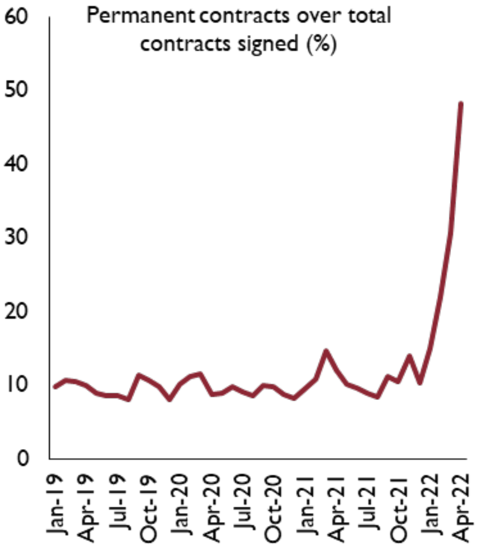
VACANCIES – EMPLOYED-UNEMPLOYED RELATIONSHIPS

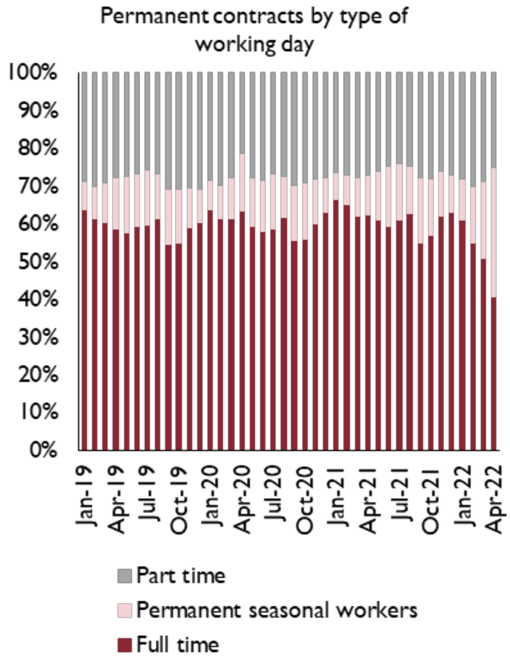


Source: Haver Analytics, INE and Ministry of Inclusion, Social Security and Migration

An additional factor that may affect the degree of tension in the labour market is the impact of the labour reform approved at the end of 2021. Since the beginning of 2022, significant changes have been observed in the composition of contract flows. On the one hand, the percentage of permanent contracts as a percentage of the total has risen sharply. On the other hand, there was a fall in the relative weight of full-time permanent contracts, while the relative weight of permanent seasonal contracts rose. The impact of these compositional changes in permanent employment on the degree of tension in the labour market is difficult to quantify.

EVOLUTION OF PERMANENT CONTRACTS

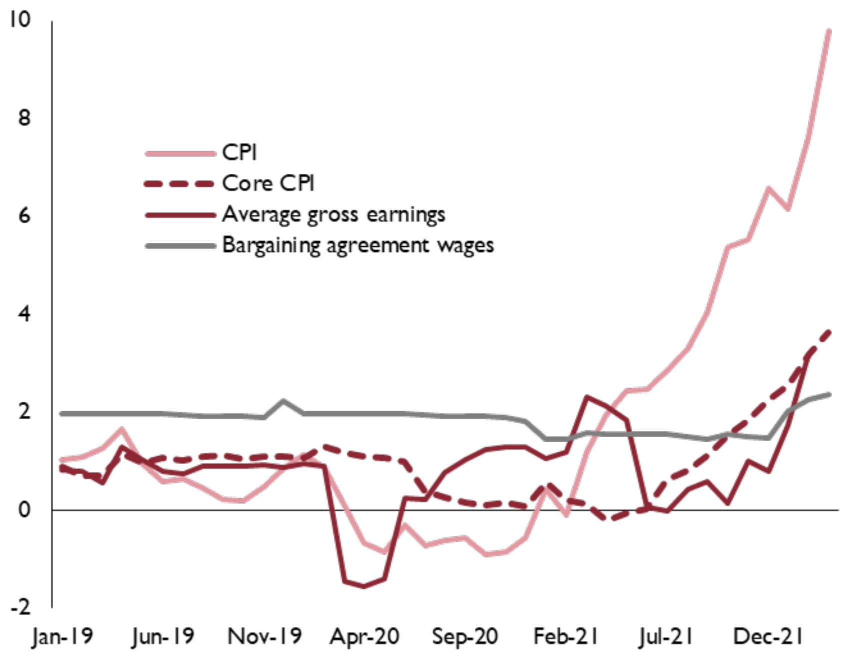




Source: Ministry of Economic Affairs and Digital Transformation

Available information points to a slight acceleration in wage growth. For the time being, however, strong price growth is not being passed on to wages. Thus, the average remuneration of large companies according to the Tax Agency's statistics of large company sales rose by 3.1% in February 2022 compared with the previous year, while wages agreed through collective bargaining rose by 2.3% in March 2022.

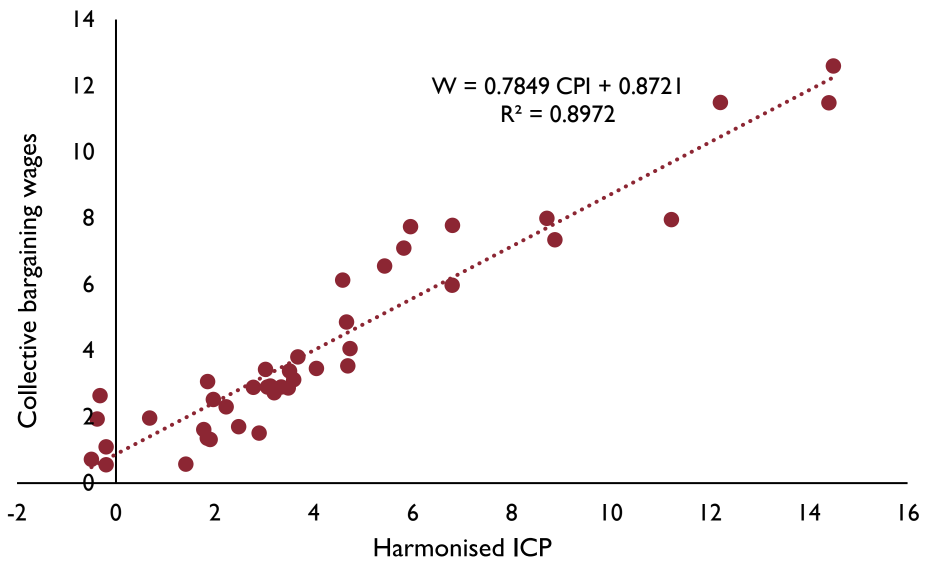
RECENT EVOLUTION OF PRICES AND WAGES (YEAR-ON-YEAR RATE OF CHANGE, %)



Source: Ministry of Economic Affairs and Digital Transformation, AEAT and Haver Analytics

However, it is important to bear in mind that the wage adjustment process in collective bargaining is slow and, therefore, wages agreed through collective bargaining tend to adjust to economic shocks with some delay. Thus, the 2.36% increase would mainly reflect wage increases for 2022 agreed in multi-year agreements signed prior to 2022. In fact, between January and March 2022, only 104 agreements were signed with coverage of 113,000 workers. The total number of workers affected by the increase of 2.36% is 4 million, as opposed to the usual coverage of about 10 million. As new agreements are negotiated and coverage is extended, the degree of transfer of inflationary pressures to wages and the possible emergence of second-round effects can be assessed. In the long term, there appears to be a robust relationship between the growth of collective bargaining agreement wages and the rate of growth of the CPI.

LONG-TERM RELATIONSHIP 1981-2021 PRICES AND WAGES (% RATE OF CHANGE)



Source: AMECO and Haver Analytics

BOX 2. THE IMPACT ON THE GROWTH OF THE SPANISH ECONOMY OF THE BOTTLENECKS IN THE MANUFACTURING INDUSTRY

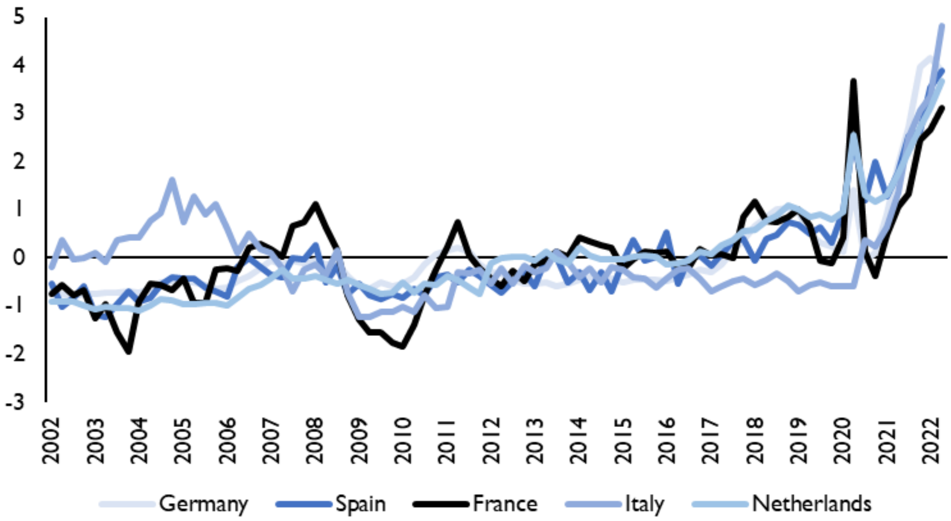
Since the beginning of 2021, there has been a shortage of supply of some materials, which has generated bottlenecks in global value chains. According to the available evidence (IMF, 2022)[7], this supply shortage is linked to cyclical factors related to the speed of the global recovery after the pandemic and to other factors of more uncertain duration, such as the lockdown measures implemented in some countries to address the pandemic, which have generated logistical problems in the transport of goods and a shortage of raw materials and equipment. The zero-COVID strategy in the Chinese economy might intensify these tensions in the coming months and, in fact, the surveys carried out on companies suggest these bottlenecks will continue until 2023. In addition, the pandemic and other demographic and sociological factors have led to labour shortages in specific countries and sectors.

The uncertainty about the impact of this phenomenon, which has no historical precedent as a result of the development of global production chains over recent years, has given rise to abundant empirical literature that seeks to estimate it from global input-output tables or alternative macroeconomic models (IMF, 2022). This box presents the approach used by AIReF to quantify the economic impact of observed bottlenecks in manufacturing industries in Germany, Spain, France, Italy and the Netherlands, which together account for almost 81% of euro area GDP. It also seeks to approximate the impact on the Spanish economy associated with the bottlenecks recorded in China.

For the determination of the impact resulting from industry bottlenecks, the European Commission's indicators on the factors that limit production, corrected for seasonality, have been used. This survey refers exclusively to the manufacturing industry and European economies. Thus, for each of the countries mentioned, the percentage of companies that indicate having factors that limit their production related to the shortage of labour, raw materials and equipment, financial and other factors is taken as an indicator (hence, the shortage of demand is excluded). The following figure shows the sharp increase in this composite indicator to values never before observed in the manufacturing industry.

LIMITING FACTORS TO MANUFACTURING PRODUCTION. STANDARDISED INDICES.

[7] See for example IMF (2022). [Supply Bottlenecks: Where, Why, How Much, and What Next? (imf.org)]



Source: European Commission and AIReF

Note: The composite indicator for each country includes the percentage of companies reporting problems of shortages of labour, raw materials and equipment, access to financing and other factors, therefore excluding the percentage of companies with demand problems.

To assess the impact of these factors on production, univariate distributed lag models have been estimated for each of the branches of the manufacturing industry in the countries considered, using the information available from the first quarter of 2002 to the first quarter of 2022. Specifically, the following equation is estimated for each branch:

$$T_{ti} = \alpha FL_t \Delta FL + \beta PMI_t + ARDL(T_{ti}) + \gamma ATIP_i + \varepsilon_t \quad \forall i = 10, \dots, 33$$

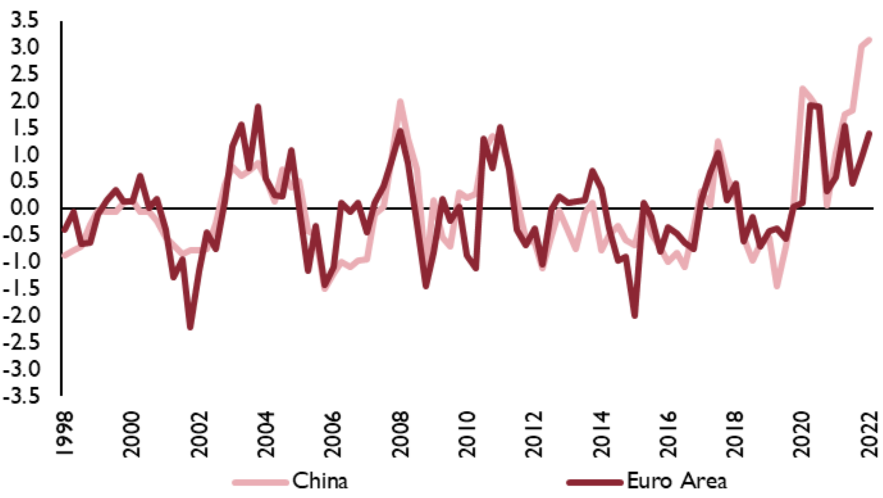
Where T_i is the quarter-on-quarter rate of the IPI for each of the manufacturing branches (10 to 33); FL the limiting factors indicator constructed from European Commission data and ΔFL the same indicator in first differences so that the effects may depend on both the level of the constraints and their variation; PMI is the Purchasing Managers' Index for each country; ARDL($_{Ti}$) a distributed lag structure - with sufficient length to capture possible significant lags; and ATIP a vector of outliers specific to each industry/country.

Once this exercise of modelling the impact of limiting factors on industrial production in the past has been performed, it is necessary to make a hypothesis on the evolution of the factors limiting production in the projection scenario. For this purpose, two alternative paths are established: i) in the first path, it is assumed that the limiting factors remain at the levels reached at the start of 2022 throughout the year and disappear thereafter;

and ii) in the second case, the possible effect linked to an intensification of bottlenecks as a result of the zero COVID-19 policy followed by the People's Republic of China is also included.

Specifically, given the growing importance of the People's Republic of China in the trade flows of many euro area countries, the indicator developed by the New York Federal Reserve on pressures in global value chains has been used to measure the possible intensification of supply disruptions in this country. This indicator allows for the differentiation of certain geographical areas. In particular, its evolution reflects how the People's Republic of China has been affected by severe supply problems and bottlenecks since early 2021 that seem to be far beyond those experienced in the euro area as a whole.

INDICATOR OF GLOBAL PRESSURES IN VALUE CHAINS FOR CHINA AND THE EURO AREA

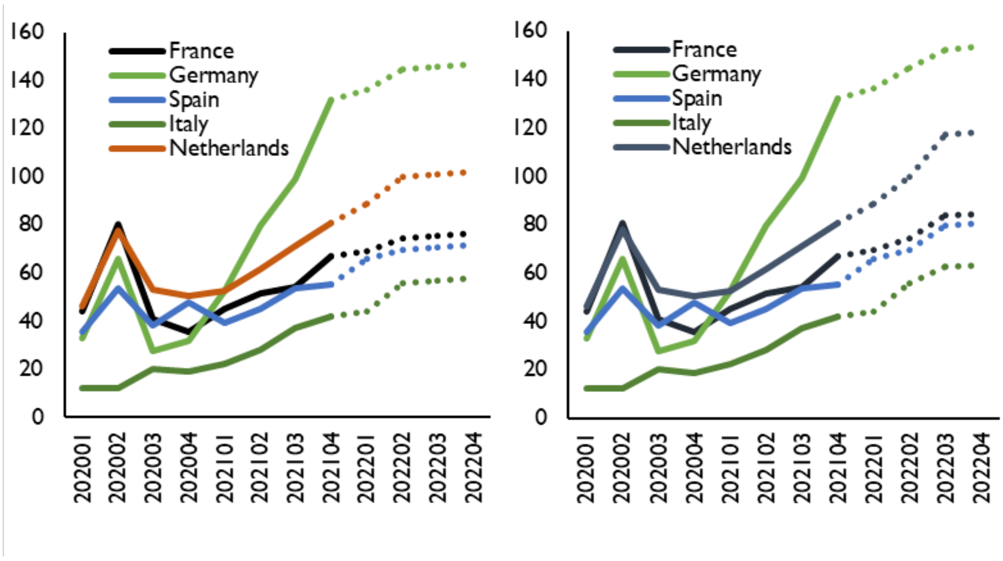


Source: New York FED and AIReF

Based on this information, alternative paths are presented that suggest a possible worsening of the bottlenecks in euro area countries in the second and third quarters of 2022, with the limiting factors remaining practically stable in the fourth quarter. This explicitly assumes that part of the situation in China will improve from the third quarter onwards as the number of coronavirus cases falls and restrictions are lifted. However, more adverse situations lasting even through 2023 could be imagined.

SIMULATED PATHS OF THE LIMITING FACTORS INDICATOR

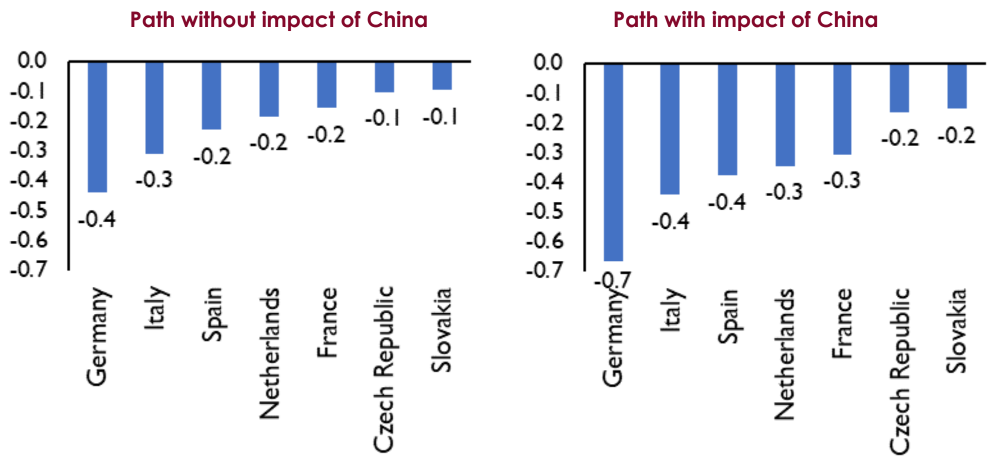
Path without impact of China **Path with impact of China**



Source: European Commission and AIReF

The effects linked to the two paths of the evolution of the limiting factors are applied to each of the branches of manufacturing industry through the estimated coefficients, aggregating the resulting shocks following the structure of the most recent OECD world input-output tables, so as to apply them to the final demand of the five countries considered. The quantification suggests that the impact on the Spanish economy could range from -0.2 percentage points to -0.4 percentage points in 2022.

IMPACTS ON GVA



Source: Prepared by AIReF on the basis of ICIO-2021 tables

BOX 3. IMPACT OF ENERGY PRICES ON ECONOMIC ACTIVITY

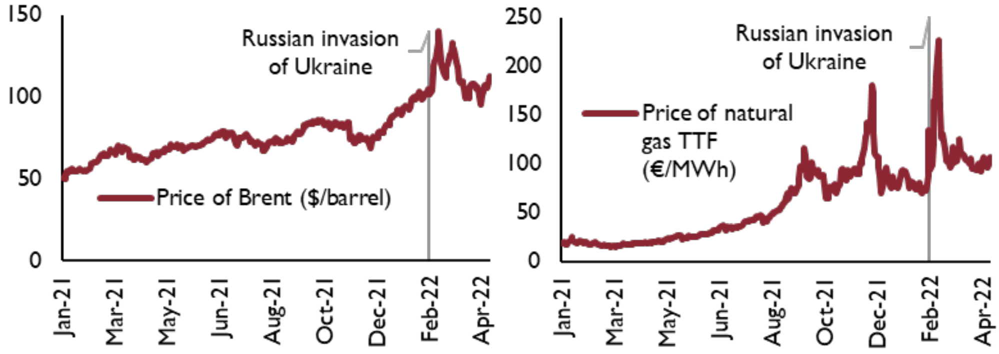
Energy prices have recorded sharp growth over the past year due to supply and demand factors. Noteworthy among the supply factors are lower gas production in Russia and Norway, low replenishment of gas stocks in the summer and delays in investments to increase power production capacity due to the pandemic and uncertainty. Demand factors include the rapid recovery in most post-pandemic economies and some climatic factors. In Europe, moreover, the cost of emission allowances has risen as a result of the increased importance attached to the fight against climate change.

The war in Ukraine and the imposition of sanctions have intensified tensions in energy markets as Russia is the world's second largest producer of oil and the second largest producer of natural gas. In the case of the European Union, Russia is the main supplier of natural gas and for some Eastern European countries, Russian imports account for almost all natural gas imports. In the case of Spain, its direct dependence on Russian oil and gas supplies is small, given the importance of gas from Algeria.

IMPORTS OF RUSSIAN NATURAL GAS AS A PROPORTION OF TOTAL GAS IMPORTS

Source: EUROSTAT

EVOLUTION OF OIL AND NATURAL GAS PRICES



Source: Ministry of Economic Affairs and Digital Transformation

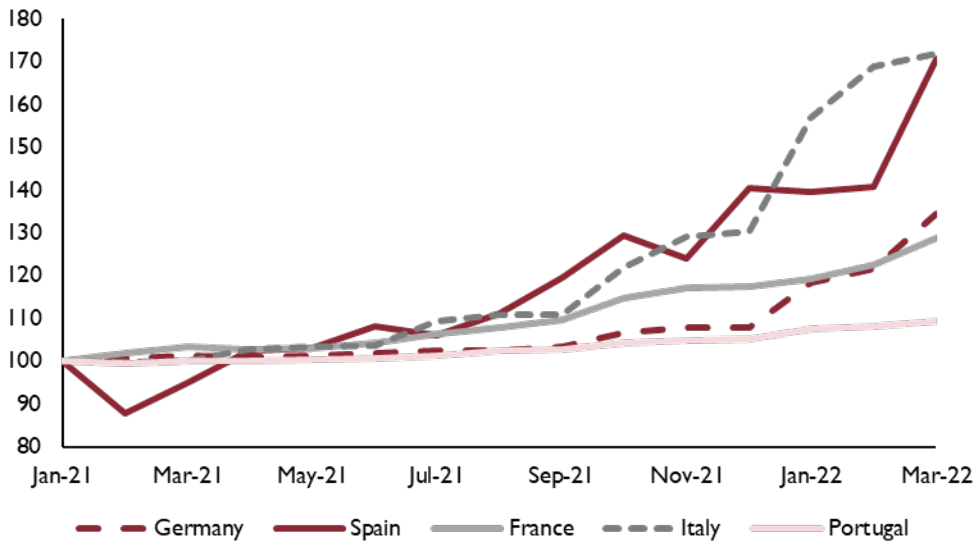
In Spain, the increase in oil and natural gas prices has been passed on with particular intensity to wholesale electricity prices, which reached over €548/MWh in March, although this price escalation was subsequently corrected, with the wholesale price stabilising at around 200 €/MWh.

EVOLUTION OF WHOLESALE ELECTRICITY PRICE (€/MWh)

Source: Ministry of Economic Affairs and Digital Transformation

Electricity prices have risen more sharply in the Spanish economy than in other EU countries due to a number of factors including the mechanism for setting the Voluntary Price for Small Consumers (Spanish acronym: PVPC), which is linked to the evolution of prices in wholesale markets. The increase in energy prices in Spain contrasts with the case of Portugal, which, despite sharing a wholesale market with Spain, has recorded a much more moderate rise in energy prices since the regulated price is determined each year by the market regulator.

EVOLUTION OF THE HARMONISED ICP: ELECTRICITY, GAS AND FUELS (JAN 2021 =100)



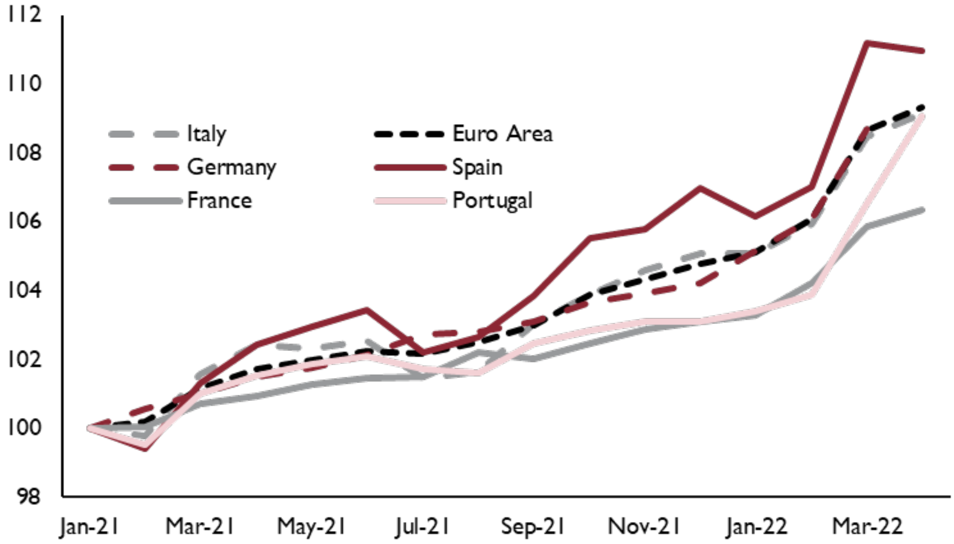
Source: EUROSTAT

The increase in energy prices has significant economic implications for the Spanish economy from the perspective of equity, price stability, household purchasing power and business competitiveness.

From a socio-economic point of view, 10.9% of the Spanish population was unable to warm their homes adequately in 2020, a higher proportion than the European average, according to Eurostat's "*European Union Statistics on Income and Living Conditions*". The lowest-income households spend almost 9% of their income on electricity consumption, which is much higher than the proportion for the highest-income households (3-4%). The intensity and persistence of electricity price rises is passed on to the entire production sector and to other prices in the economy. In this regard, it should be noted that, although the energy intensity of the Spanish economy has improved over recent years, it is higher than the average for the euro area and the main European economies.

Thus, in April 2022, the increase in the inflation rate reached 8.3% year-on-year, 0.8 percentage points above the average for the euro area. For its part, core inflation in March 2022 rose to 3.4%, above that observed for the EMU average. This permanent inflation differential with respect to the main trading partners might lead to a loss of price competitiveness in the foreign sector.

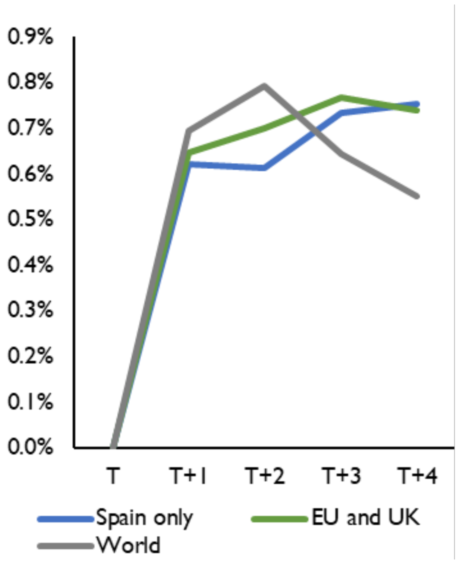
EVOLUTION OF THE HARMONISED ICP: (JAN 2021 =100)

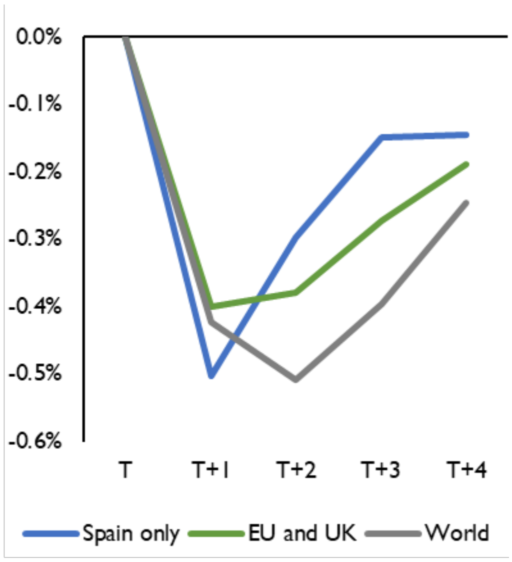


Source: EUROSTAT

Finally, the impact of the price increases on the Spanish economy can be analysed using the Oxford Economics macroeconomic model, which, as it takes into consideration numerous economies, makes it possible to incorporate the global nature of the shock. The results suggest that the GDP growth of the Spanish economy might fall by 0.4 percentage points in 2022 and 0.5 percentage points in 2023 as a result of the price increase caused by the war. In this scenario, no embargoes or other restrictions on trade in energy products are considered. It should be noted that in addition to the impact of the war in Ukraine, AIReF's forecasts incorporate the impact of the rise in energy prices observed in the period before the outbreak of the war, estimated at -0.2 percentage points. Therefore, the total impact on GDP associated with rising energy prices since last autumn stands at -0.6 percentage points in 2022 and -0.5 percentage points in 2023.

IMPACT ON SPAIN'S GDP OF A 15% INCREASE IN ENERGY PRICES





Source: Prepared by AIReF based on the Oxford Economics model

BOX 4. THE ECONOMIC IMPACT OF THE RUSSIAN INVASION OF UKRAINE. THE TRADE CHANNEL

Following the invasion of Ukraine by the Russian Federation, there has been a significant increase in tensions in the markets for energy and industrial raw materials, as well as food products. The Russian Federation is not only one of the main trading partners of many Eastern European countries, but it is also of enormous importance as an energy supplier for countries such as Germany, Sweden, France and the Netherlands.

WEIGHT OF GROSS ADDED VALUE GENERATED IN THE RUSSIAN FEDERATION OVER TOTAL FINAL DEMAND. BY TYPE OF PRODUCT (%)

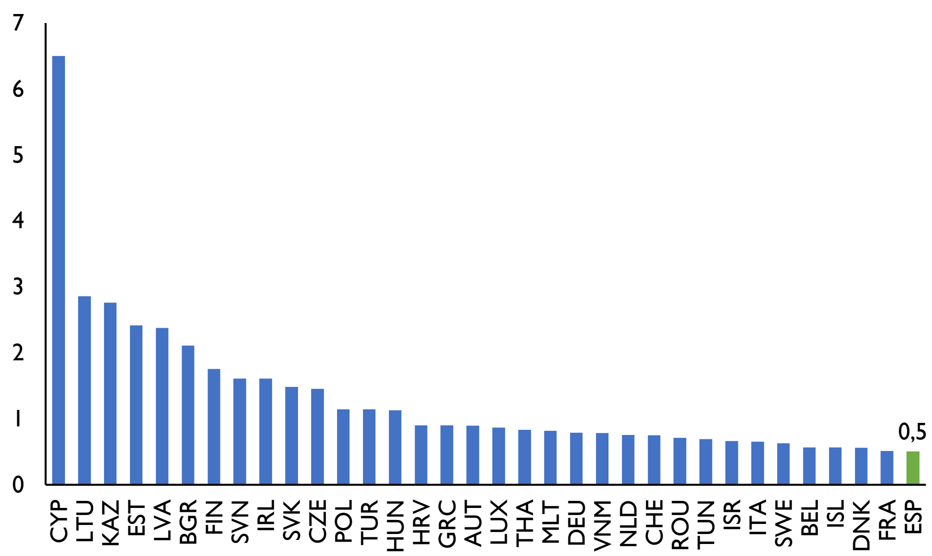
Country	Agriculture, Forestry, Fishing	Mining and Quarrying	Manufacturing	Market Services	Non-Market Services
Lithuania	4.7	46.7	9.6	5.1	1.5
Cyprus	3.1	8.6	5.1	6.2	1.5
Latvia	7.2	49.8	6.3	3.3	1.7
Estonia	4.7	37.7	5.7	3.9	1.5
Hungary	2.3	27.8	4.6	1.6	1.1
Poland	2.4	14.0	3.9	1.6	0.8
Finland	2.8	42.5	5.2	1.5	0.9
Czech Republic	1.7	19.6	2.7	1.4	0.7
Croatia	0.9	6.8	2.1	0.8	0.4
Germany	1.2	17.4	1.9	0.6	0.3
Sweden	1.6	19.1	2.2	0.8	0.3
Denmark	1.5	12.8	2.4	0.9	0.3
Netherlands	1.0	18.5	2.1	0.6	0.3
Austria	0.9	4.2	1.5	0.9	0.3
Italy	0.9	13.5	1.9	0.5	0.4
Belgium	1.4	5.7	1.7	0.6	0.3
Norway	2.4	1.5	1.8	0.7	0.3
France	0.7	20.1	1.7	0.4	0.2
UK	1.1	14.4	1.6	0.4	0.2
Spain	0.6	11.1	1.2	0.3	0.1
United States	0.3	0.4	0.5	0.1	0.1

Source: Prepared by AIReF based on OECD

Ukraine is also a major producer of many agricultural products whose export would have been paralysed as a result of the hostilities. However, given that the input-output tables available at this date do not contain details of the flows with Ukraine, the analysis is limited to the impact linked to the Russian Federation.

In order to approximate the relative importance of the Russian Federation to each country, it is possible to perform an exercise to extract the matrices of intermediate inputs and final Russian demand - with the exception of that performed for the People's Republic of China and India. This simulation is a simplification of the one carried out by E. Dietzenbacher *et al*. (2019), which also does not take into account the possibility of import substitution or the potential price effect of said import substitution. It must therefore be understood as a minimum impact in relation to what would be observed over a full year.

ESTIMATED IMPACT ON GVA (% REDUCTION IN GVA)



Source: Prepared by AIReF based on OECD.

Other estimates support these results, which point to a high impact. For example, the analysis carried out by the Bundesbank (2022)[8] estimates that the impact of the shock for the euro area as a whole could total approximately 1.6 percentage points of GDP in 2022 and 1.9 percentage points in the case of Germany. In the event of an embargo on Russian gas,

[8] See https://www.bundesbank.de/en/tasks/topics/war-against-ukraine-energy-embargo-could-significantly-weaken-german-economy-889696

this institution considers that the initial shock to the German economy might be amplified by up to 5.1 percentage points, which would imply a contraction in GDP of approximately 2% compared with that observed in 2021.

IMPACT OF THE INVASION OF UKRAINE ON GDP IN GERMANY AND THE EURO AREA ESTIMATED BY THE BUNDESBANK

	Bundesbank (2022)					
	War shock vs. baseline scenario			War shock vs. baseline scenario + Gas embargo		
	2022	2023	2024	2022	2023	2024
GDP Germany	-1,9	-3,4	-3,4	-5,1	-3,5	-3,4
GDP Euro Area	-1,6	-1,7	-1,4			

Source: Bundesbank

Finally, beyond the considerations about economic growth in the euro area, the escalation in the prices of energy and food raw materials could trigger geopolitical tensions, especially in the most vulnerable and less developed areas that are more dependent on the supply of these products from Russia and Ukraine.

BOX 5. THE EXECUTION PROFILE OF THE INVESTMENTS ASSOCIATED WITH THE RECOVERY, TRANSFORMATION AND RESILIENCE PLAN (RTRP)

Experience gained over 2021 suggests that the timing of the resources associated with these investments reaching the real economy may be very different from the profile obtained from the budget execution. The information derived from the Public Sector Procurement Platform and the National Subsidies Database facilitates the monitoring of approved projects. However, in any case, in order to project the impact of the RTRP in the coming years, assumptions need to be made about the rate at which investment projects will materialise over time.

To this end, AIReF has made a detailed analysis of each one of the components of the RTRP and the associated investments. This information is cross-referenced with the detail provided in the annex to the proposed European Council Implementation Decision on the approval of the assessment of the Spanish plan *(Council Implementation Decision* - CID). Specifically, this document provides the dates on which investments must meet certain milestones, distinguishing between award milestones, implementation progress and investment completion milestones. Meeting these milestones, which extend until the second quarter of 2026, conditions the staggered disbursement of funds agreed with the European Commission.

This analysis makes it possible to offer an alternative execution schedule for RTRP investments linked to the achievement of milestones. The difficulty with this approach is that the CID does not reflect all the investments contained in the components nor does it contain the level of detail that they offer. The execution profile is also modulated based on the analysis of the weekly bulletins of the Recovery Plan published by the Government, which provide information on the different execution phases of the different investment lines and sub-lines of the components which is useful when determining the start date or speed of execution of an investment.

Given the granularity of the analysis, for the time being the 11 components[9] with the highest volume of investment have been analysed. This has allowed an analysis of a total of €50.55bn or 72.71% of the full amount included in the RTRP (€69.53bn).

For each investment line of the different components analysed, a quarterly investment profile is set that is determined based on three elements: investment start quarter, completion quarter and speed of investment

[9] The components analysed were: 1, 2, 6, 7, 11, 12, 13, 14, 15, 17 and 19.

considered. Allocation from a particular quarter means that from that moment the investment will start to be executed and produce effects on the real economy. The investment completion date is the date that appears in the CID for each milestone and target analysed[10]. The start date of the investment is ultimately determined by the progress of the weekly bulletins. The information contained in the CID as well as that contained in the different calls for proposals or execution deadlines are also taken into account[11].

To determine the speed of the investment, different factors are taken into account such as the intermediate award targets[12], the intermediate completion milestones[13], and the progress that has been made in the investment. Three investment profiles are considered: constant linear, decreasing linear and concentrated quadratic. The first of these involves the homogeneous distribution of the investment among the different quarters between the start quarter considered and the investment completion date. The decreasing linear profile is used when the project is considered to have made substantial progress or if the administration in charge of its execution has a history of fast execution, such as, for example, RENFE or ADIF. Finally, the concentrated quadratic profile manages to concentrate the investment in the central period of the investment allocation time horizon.

The results show a time distribution of the investment that is very different from the one explicitly set out in the components of the RTRP. The following figure compares the two results[14]. AIReF's profile, compared with that of the Government, would be characterised by a timing shift in the investment profile, and a more homogeneous time distribution.

COMPARISON OF INVESTMENT PROFILES (€m)

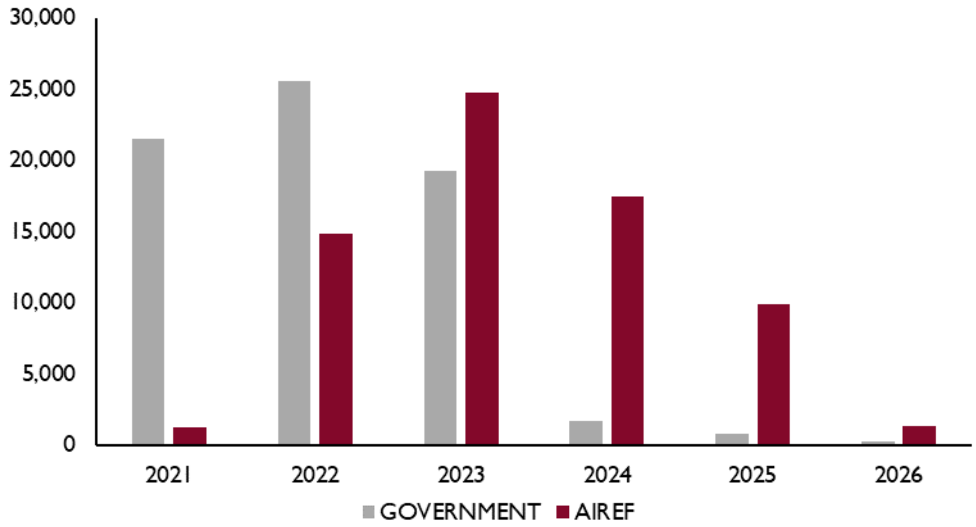
[10] For the final execution targets in 2Q 2026, however, it is considered that the investments are completed by 1Q 2026 since it seems prudent to think that in 2Q the investments will be very low.

[11] In addition, a prudence approach is followed such that for the investments that do not have any progress in the weekly bulletins or execution reports, the closest date on which the investments would begin is taken.

[12] For example, milestone 88 of Component 6 (C6), investment line 2, determines that by the fourth quarter of 2022 at least €1bn must be allocated for the improvement of the non-core trans-European transport network.

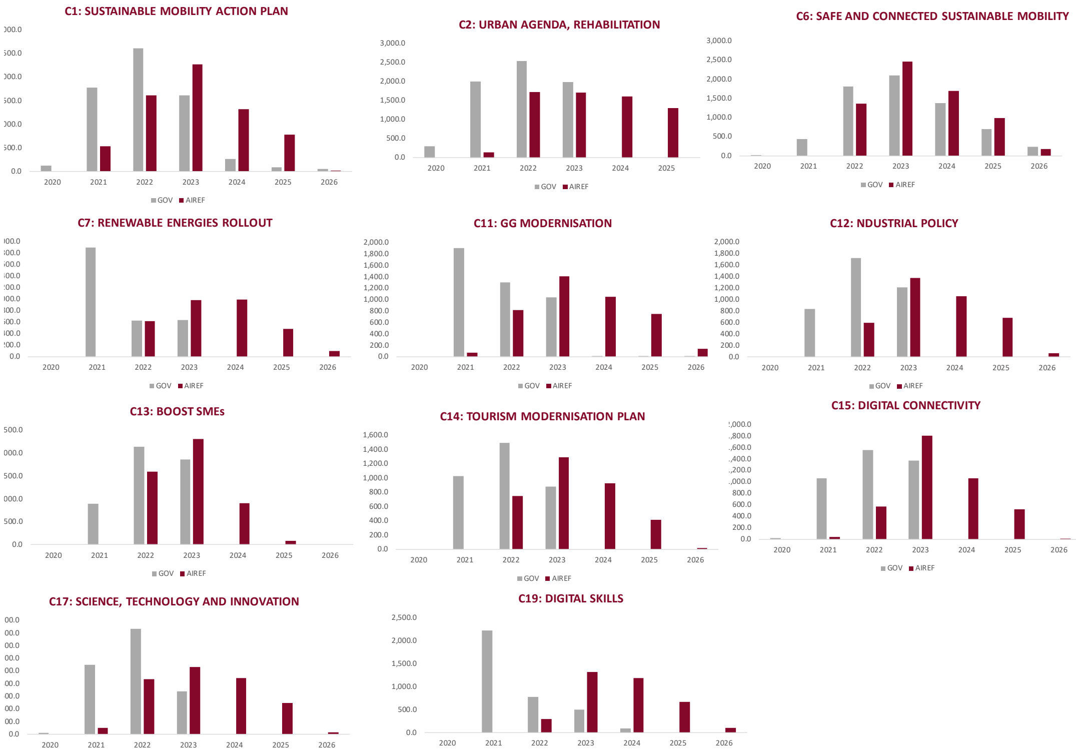
[13] For example, in target 171 of C11, investment line 4, the intermediate objective is the energy renovations of 140,000 m^2 in public buildings by 4Q 2024, while the final objective is the energy renovation of 1 million m^2 by 2Q 2026 (target 172).

[14] AIReF's profile has been extrapolated from the 72.71% analysed of 100% of the investments. The criterion for allocating investments is an accounting criterion in the AIReF analysis, while the Government does not determine whether it follows an accounting, budgetary or other criterion.



Source: Government and AIReF

TIME DISTRIBUTION OF INVESTMENT PROFILES BY RTRP COMPONENT (€M)



Source: Government and AIReF

3. ANALYSIS OF THE 2022-2025 BUDGET SCENARIO

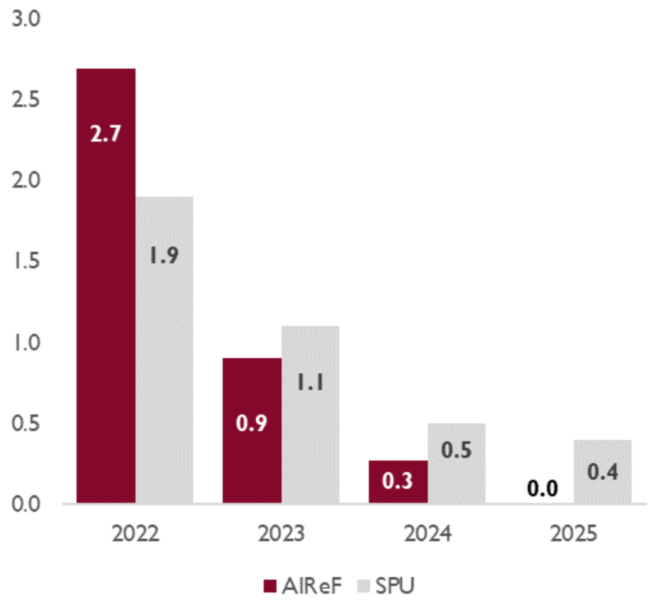
AIReF forecasts a GG deficit of 3% of GDP in 2025, 0.1 points higher than that included in the SPU, with a different reduction profile. AIReF's forecasts concentrate the deficit reduction in 2022 as a result of the gradual withdrawal of COVID-19 related spending and, to a lesser extent, the continuation of the recovery. Both effects are partially offset by the measures taken to mitigate the effects of the war with Ukraine and the energy crisis. Consequently, in the absence of additional measures, the deficit would stand at 4.2% of GDP in 2022, 2.7 points less than in 2021. The reduction in the deficit subsequently slows to 3% in 2024, 1.2 points for two years, and finally stops in 2025. The Government's scenario is less optimistic for 2022, a year in which it maintains the reference rate of 5% of GDP despite the fact that the year-end 2021 figure was 1.5 points lower than the Government's forecast. In contrast, in subsequent years, the SPU presents a more pronounced path of reduction to end at a level slightly lower than AIReF's forecasts.

TABLE 2. REVENUE AND EXPENDITURE AS % OF GDP (WITHOUT NGEU).

	AIReF				SPU			
	2022	2023	2024	2025	2022	2023	2024	2025
REVENUE	42.2	42.3	41.7	41.3	42.0	41.8	41.4	41.3
EXPENDITURE	46.4	45.5	44.7	44.3	47.0	45.6	44.8	44.3
NET LENDING OR BORROWING	-4.2	-3.3	-3.0	-3.0	-5.0	-3.9	-3.3	-2.9

Source: SPU and AIReF

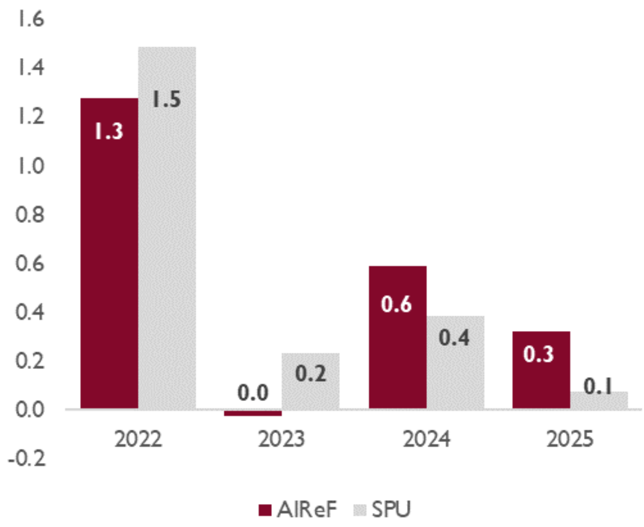
FIGURE 20. ANNUAL DEFICIT REDUCTION FORECAST (% GDP)



Source: SPU and AIReF

AIReF forecasts that the weight of revenue over GDP, excluding the RTRP, will stand at 41.3% in 2025, in line with the SPU. In 2022, AIReF estimates that revenue will moderate its growth compared with 2021 to 5%, in line with economic activity, but reduced as a result of the measures adopted to mitigate the effects of the energy crisis. Subsequently, in 2023, the growth in revenue would be driven to 5.7% by both economic activity and the reversal of the measures. This growth moderates in the last two years of the period to an average of 3%, following the slowdown in economic activity. The growth is concentrated in taxes and social contributions, while other revenue falls in 2022 and grows by around 2% in the rest of the period.

FIGURE 21. FORECAST ANNUAL REDUCTION IN REVENUE (WITHOUT NGEU) (% GDP)

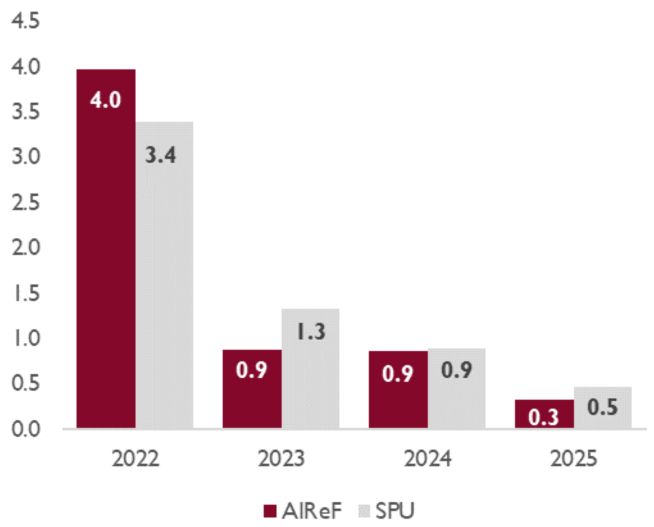


Source: SPU and AIReF

Revenue reduces its weight over GDP compared with 2021 by 2.2 points according to AIReF's forecasts, but would still stand at 2.1 points above 2019 levels. Following strong growth in 2021, AIReF estimates that revenue will grow below nominal GDP. While taxes on production and other revenue would return to 2019 levels of GDP, the weight of taxes on income and social contributions would be higher. This implies assuming lower elasticities in taxes on the underlying macroeconomic variables than those recorded in 2021 and also below the historical average. Part of the increase in the weight of taxes on income and social contributions over GDP - approximately 0.5 percentage points - can be explained by regulatory measures such as the Intergenerational Equity Mechanism, changes in Corporate Income Tax and, to a lesser extent, in Personal Income Tax. The rest of the increase is not based on regulatory changes and reflects the divergent evolution between macroeconomic variables and collection during the pandemic and the subsequent recovery. This development is broadly similar to that proposed in the SPU, albeit with differences in its composition. The SPU sets out higher growth in taxes, especially taxes on income, and, to a lesser extent, in social contributions and a lower level of other revenue.

The weight of expenditure as a proportion of GDP, excluding the RTRP, also falls in AIReF's central scenario, to 44.3% in 2025, in line with the figure included in the SPU. The differences between AIReF and the SPU are concentrated in the profile and evolution of the components. In 2022, in the absence of additional measures, AIReF expects a small drop in overall spending, in which different factors converge, while the Government expects a small amount of growth. On the one hand, the lower impact of COVID-19 in economic and health terms reduces the expenditure associated with the pandemic. Expenditure also falls due to a smaller amount of non-recurring operations. These effects are partially offset by the measures taken to mitigate the rise in energy prices. In 2023, expenditure would grow by around 3.7%, influenced by two competing factors: inflation and the reversal of measures. The forecast inflation would affect the compensation of employees, while that registered in 2022 would be transferred to pension spending. In contrast, the reversal of the measures approved in 2022 together with a lower amount of non-recurring items would reduce the growth. In 2024 and 2025, AIReF estimates a growth in expenditure of around 2.8%. This moderation in spending growth implicitly assumes a return to fiscal rules. The SPU shows lower growth in expenditure in all years of the 2023-2025 period.

FIGURE 22. ANNUAL REDUCTION IN EXPENDITURE (WITHOUT NGEU) (% GDP)



Source: SPU and AIReF

AIReF forecasts that expenditure will reduce its weight over GDP by 6.1 points compared with 2021, but would still be two points above 2019 levels. The largest decrease in the weight - four points - occurs in 2022 as a result of the combination of the reversal of the non-recurring measures due to COVID-19, which implies a slight drop in spending in nominal terms, and the strong growth in nominal GDP. For the remainder of the period, expenditure continues to grow below nominal GDP with a very different evolution by component. Interest, gross capital formation, subsidies and other expenditure return to close to the pre-crisis level. In contrast, the components of public consumption increase their weight over GDP compared with the pre-pandemic level, reflecting the impact on structural expenditure of COVID-19, mainly on health. For their part, although the weight of social transfers in kind falls with respect to the high recorded in 2020, they record the largest increase in weight over

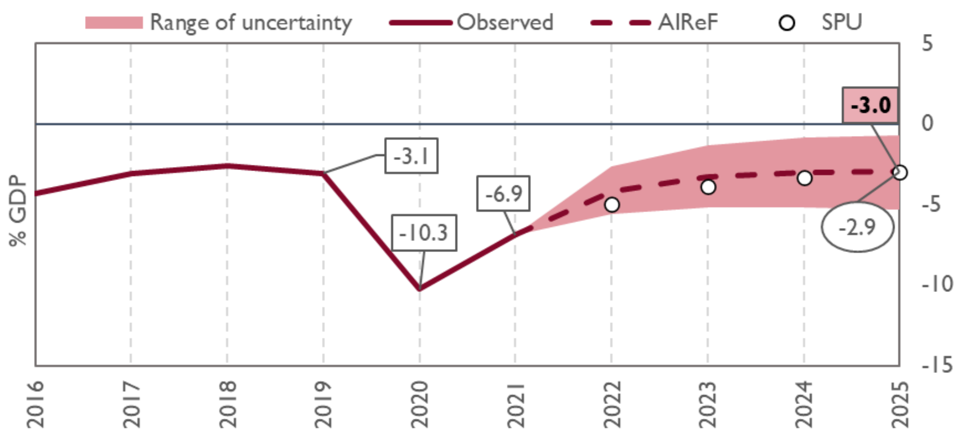
GDP - 1.5 points compared with the 2019 level. Although the impact of benefits associated with COVID-19, such as ERTEs and the extraordinary benefit for the self-employed, is reversed, pensions evolve independently of the economic cycle and are directly driven by the CPI, to which it is important to add the structural measures adopted such as the MLI and the extension of paternity leave. Compared with the SPU, AIReF expects higher expenditure on public consumption, especially at the end of the period, and lower spending on social benefits.

The evolution of the public accounts in the period 2022-2025 will continue to be affected by major uncertainty. On the one hand, this uncertainty comes from the macroeconomic environment, conditioned by important risks, mainly downside, identified in the previous section, such as the war in Ukraine, the pandemic, supply bottlenecks and the pace and quality of implementation of the RTRP. These risks, as they materialise, will affect those variables that mainly depend on economic activity, income and unemployment expenditure. Similarly, inflation, which is largely associated with the above factors, also has an impact on the public accounts. This is distinctly positive in the short term because of its direct and automatic impact on revenue and negative in the medium term as it more or less automatically shifts to expenditure and triggers a tightening of monetary conditions. In addition, there is also uncertainty in the return to the fiscal rules suspended in 2020, which will have an impact on the decisions of the GG and may result in higher increases in spending if the suspension is maintained. On the positive side, if the risks of the macroeconomic scenario do not materialise, revenue may have a more positive evolution than expected if the elasticity of collection in relation to macroeconomic variables remains in line with historical averages and not below, as forecast in the SPU and in AIReF's central scenario.

The persistence of the energy crisis could lead to an extension of the approved measures, which would increase the deficit in 2022 by between 0.2 and 0.6 points of GDP. The measures approved to date, such as the reduction in VAT on electricity, will be in force until June 30th, 2022, as stated in the SPU and AIReF's central scenario. If tensions persist in energy markets as a result of the war in Ukraine, the extension of these measures would bring the deficit to 4.4% or 4.8% of GDP depending on the decision on which measures are to be extended and the period of said extension. In that case, the measures would be reversed for 2023 and therefore the rest of the path would, in theory, remain unchanged.

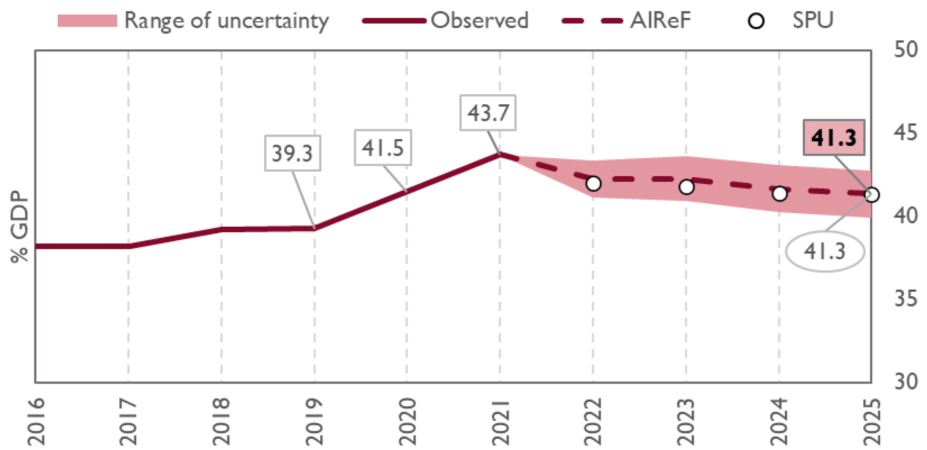
FIGURE 23. TOTAL GENERAL GOVERNMENT

FIGURE 23.A. NET LENDING/BORROWING (% GDP)



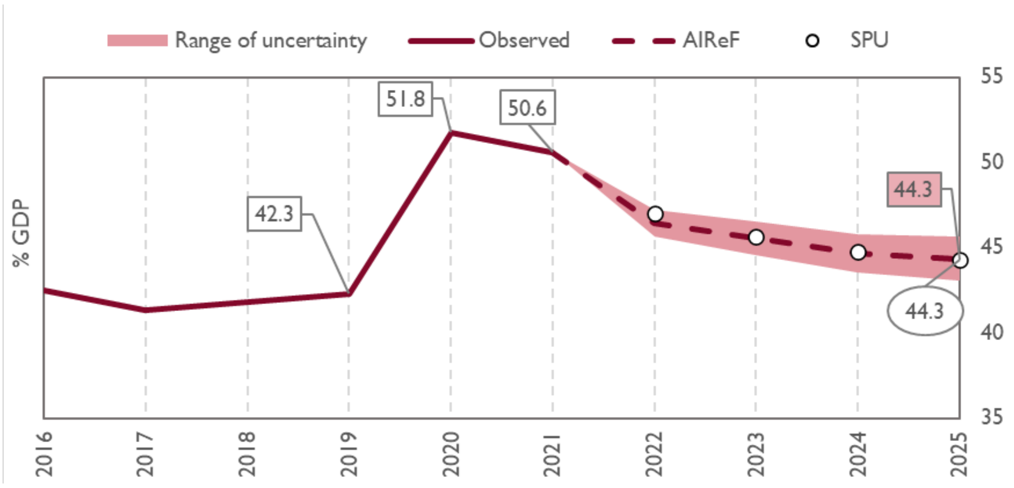
Source: IGAE, SPU and AIReF.

FIGURE 23.B. REVENUE (% GDP)



Source: IGAE, SPU and AIReF.

FIGURE 23.C. EXPENDITURE (% GDP)



Source: IGAE, SPU and AIReF.

3.1. Evolution of General Government revenue

AIReF forecasts that the weight of revenue over GDP will reach 41.3% at the end of the period, in line with the projection included in the SPU. If the effect of the NGEU funds is included, the weight would rise by 2 points in 2022, 1.8 points in 2023, 1.1 points in 2024 and 0.05 points in 2025. However, both the evolution of total revenue and the estimated revenue structure for 2025 is different. AIReF considers that the reduction in the weight of revenue does not begin until 2024, while the SPU shows an almost linear reduction over the entire period. Furthermore, while AIReF divides the drop between taxes and other revenue, the SPU concentrates the reduction in the weight on other revenue, even showing an increase in the weight of contributions.

TABLE 3. REVENUE IN % OF GDP (WITHOUT NGEU) AIREF VS. SPU.

		AIReF				SPU			
	2021	2022	2023	2024	2025	2022	2023	2024	2025
REVENUE	**43.1**	**42.2**	**42.3**	**41.7**	**41.3**	**42.0**	**41.8**	**41.4**	**41.3**
TAXES	24.5	24.2	24.2	23.9	23.7	24.3	24.3	24.2	24.1
On production	12.1	12.1	12.1	11.7	11.5	12.0	12.0	11.8	11.6
On income	11.9	11.7	11.8	11.8	11.7	11.8	11.8	12.0	12.1
Capital	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
CONTRIBUTIONS:	14.3	13.7	13.9	13.8	13.7	13.7	13.7	13.8	13.9
Other revenue	4.3	4.3	4.1	4.0	4.0	4.0	3.8	3.4	3.3

Source: AIReF and SPU

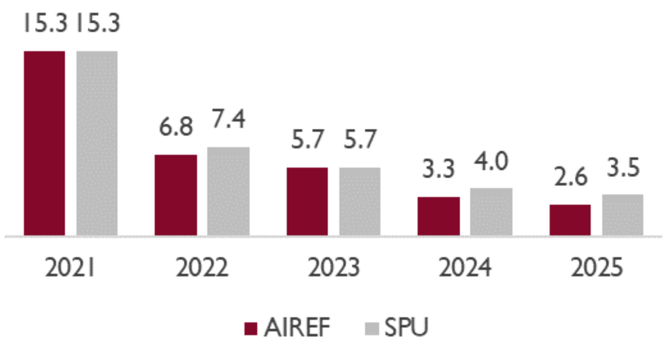
TABLE 4. BREAKDOWN OF THE DIFFERENCES IN AIREF VS SPU REVENUE % GDP

	AIReF	SPU	diff. AIReF-SPU	Breakdown of the differences			
				Taxes on production	Taxes on income	Contributions	Other
2022	42.2	42.0	**0.2**	0.0	-0.1	0.1	0.2
2023	42.3	41.8	**0.5**	0.0	-0.1	0.2	0.3
2024	41.7	41.4	**0.3**	-0.1	-0.2	0.0	0.5
2025	41.3	41.3	**0.0**	-0.1	-0.4	-0.2	0.6

Source: AIReF and SPU

AIREF estimates that tax revenue will amount to 23.7% of GDP in 2025, less than 0.5 points below the SPU forecast. In general terms, during the period 2022-2025, the Government's estimates deviate from AIReF's estimates, especially with regard to the weight of taxes on income. After the sharp increase in revenue in 2021, AIReF's forecasts show strong growth in 2022, although lower than in 2021, which slows down during the years analysed, especially from 2024. In general, AIReF shows a less dynamic evolution of tax revenue than that estimated by the SPU for the entire period. With regard to the composition, AIReF estimates lower revenue from taxes on income and, at the end of the period, also lower income from taxes on production and imports.

FIGURE 24. EVOLUTION OF TOTAL TAXES (% CHANGE) AIREF VS SPU

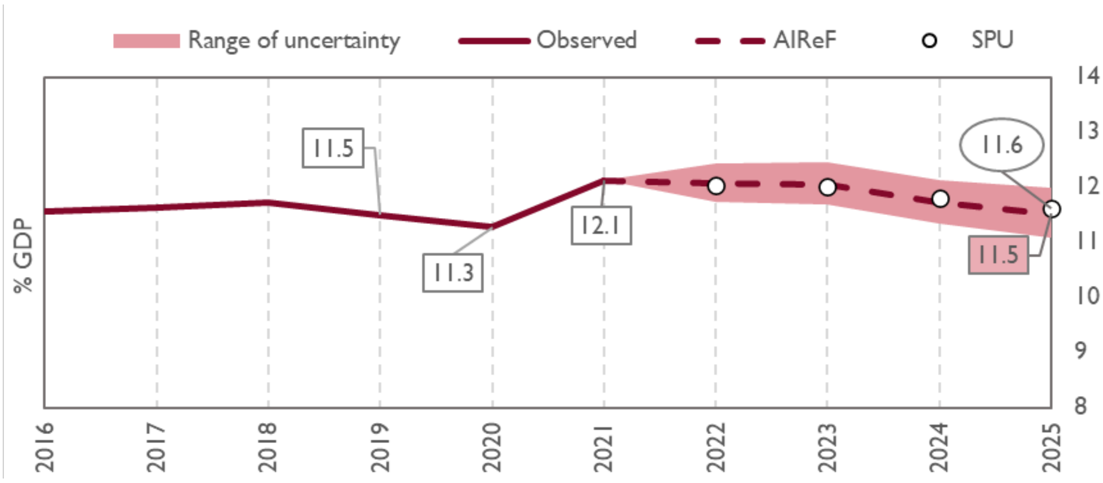


Source: AIReF and SPU

3.1.1. Taxes on production and imports

AIReF estimates revenue from taxes on production and imports similar to that of the SPU in 2022. However, at the end of the period, they stand at a weight over GDP of 11.5%, 0.1 points below the Government's estimates. The main components of this heading are VAT and taxes on products, including special taxes. Of the 11.5 points of GDP that this revenue reaches at the end of the period, 6.7 correspond to VAT, 3.2 to taxes on products and 1.6 to other taxes on production. In AIReF's forecasts, the slowdown in growth is mainly justified by both the fall in the dynamism of VAT, the projection of which is linked to domestic demand, and the slowdown in the growth of special taxes, in line with the evolution of real GDP and the decrease in the Tax on the Value of Electricity Production, linked to the gradual expected decline in electricity prices. If the SPU's macroeconomic scenario were taken as the basis for AIReF's forecasting models, taxes on production and imports would also remain at 0.1 points of GDP below the Government's in 2025.

FIGURE 25. TAXES ON PRODUCTION AND IMPORTS. TOTAL GENERAL GOVERNMENT. AS % GDP



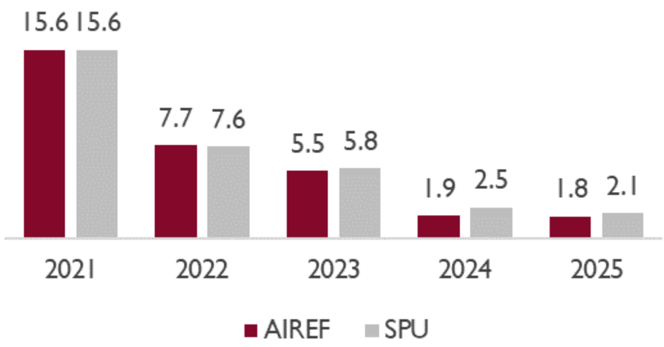
Source: IGAE, SPU and AIReF.

For taxes on production and imports, AIReF forecasts growth of 7.7% and 5.5% in 2022 and 2023, respectively, which slows down to close the period at 1.8%. After exceptional growth of 15.6% in 2021, as a result of being compared with 2020, which was entirely affected by the pandemic, AIReF expects less intense growth for 2022, in line with the Government. In the following years up to 2025, it projects a less dynamic evolution. Growth in 2022 is driven by the expected increase in VAT, despite the reduction in the rate on electricity. In 2023, the new Tax on Single-Use Plastics is expected to enter into force and the effect of the measures taken to mitigate the rise in electricity prices is expected to be reversed[15]. There is a particularly noteworthy impact in the case of the Tax on the Value of Electricity Production (IVPEE), for which values above those recorded before the rise in the price of electricity are estimated, as lower prices are expected than in 2022 but still above the average of recent years. According to AIReF's estimates, all these measures together represent an

[15] Reduction of rates in VAT and in the Special Tax on Electricity and suspension of the Tax on the Value of Electricity Production.

increase of 0.1 points of GDP[16]. A less dynamic scenario is expected as from 2024 as a result of the evolution of macroeconomic variables and a progressive fall in the price of electricity.

FIGURE 26. EVOLUTION OF TAXES ON PRODUCTION AND IMPORTS (% CHANGE) AIREF VS. SPU



Source: AIReF and SPU

TABLE 5. AIREF BREAKDOWN OF TAXES ON PRODUCTION AND IMPORTS (% CHANGE)

Taxes on production and imports	2021	2022	2023	2024	2025
Total	**15.6**	**7.7**	**5.5**	**1.9**	**1.8**
Value-added taxes VAT	18.4	9.6	3.8	2.5	2.9
Taxes on products	16.6	5.8	10.5	0.7	0.2
Other taxes on production	4.6	3.5	3.3	1.5	0.4

Source: AIReF

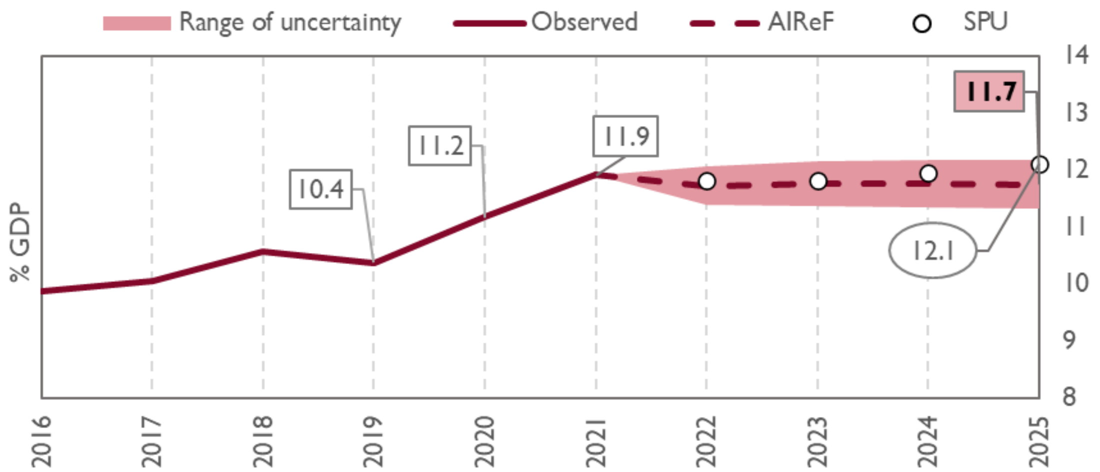
Taxes on production return to the pre-pandemic level of GDP in 2025. The outbreak of the pandemic led to a separation between the evolution of VAT and that of the macroeconomic variable of national demand, with a greater fall in Final Expenditure Subject to VAT in 2020 and greater growth in 2021. This divergence is not explained by regulatory changes and may be due to certain factors such as the reduction in fraud or changes in household consumption patterns, whose impact and structural or cyclical nature is still to be determined. AIReF's forecasting models readjust these imbalances and produce values that, in national accounting terms, for 2023 and 2024 have an elasticity with respect to national demand that is lower than the historical average, to which they return in 2025.

[16] For further details, see 3.4.2 Revenue measures

3.1.2. Taxes on income and wealth

AIReF forecasts that taxes on income and wealth will amount to 11.7% of GDP in 2025, 0.4 points below the forecasts in the SPU. The Government forecasts a higher starting level in 2022 and greater dynamism at the end of the period, reaching growth that is 1.5 points higher in 2025 than AIReF's projections. The main items making up this heading are Personal Income Tax (PIT), Corporate Income Tax (CIT) and Non-Resident Income Tax (NRIT). According to AIReF's estimates, of the 11.7 points of GDP at the end of the period, 8.9 correspond to Personal Income Tax (including NRIT of natural persons), 2.6 are attributed to Corporate Income Tax (including NRIT of legal persons), and 0.3 to other current taxes. For PIT (including NRIT for natural persons), AIReF's projections slow down at the end of the period, following the trend of compensation of employees. With regard to Corporate Income Tax, AIReF estimates lower dynamism at the end of the period, in line with the expected evolution of Gross Operating Surplus. Other current taxes are expected to remain stable over the period. Applying the SPU's macroeconomic assumptions on AIReF's forecasting models, revenue from taxes on income at the end of the period would rise by a little over 0.1 points in terms of weight over GDP with respect to the estimates in its central scenario, and would stand at more than 0.2 points below those presented by the Government.

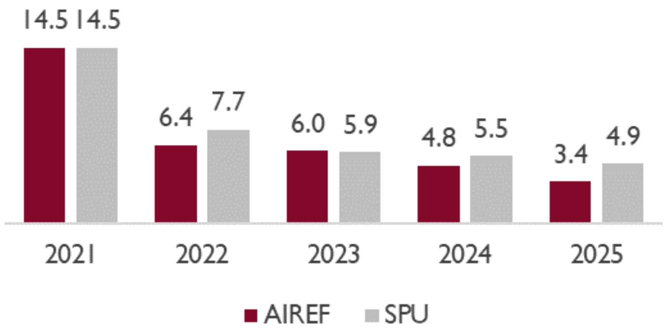
FIGURE 27. CURRENT TAXES ON INCOME AND WEALTH. TOTAL GG AS % GDP



Source: AIReF and SPU

AIReF forecasts a gradual decline in the growth of taxes on income from 6.4% in 2022 to 3.4% at the end of the period. After growing by 14.5% in 2021, mainly as a result of the recovery in Corporate Income Tax, which, in addition, included exceptional revenue, AIReF's forecasting models predict less intense initial growth than that of the SPU and a less dynamic evolution over the period. In 2022, the annual Personal Income Tax and Corporate Income Tax returns will include the positive impact of part of the tax measures approved in the 2021 GSB[17], and in 2023 the impact of those approved in the 2022 GSB[18]. According to AIReF's estimates, the tax measures introduced in the 2021 and 2022 General State Budgets represent an increase of 0.2 points of GDP[19]. For the other years, the estimated growth in this revenue is solely determined on the basis of the evolution of macroeconomic variables.

FIGURE 28. EVOLUTION OF CURRENT TAXES ON INCOME AND WEALTH (% CHANGE) AIREF VS. SPU



Source: AIReF and SPU

TABLE 6. AIREF BREAKDOWN OF CURRENT TAXES ON INCOME AND WEALTH (% CHANGE)

Current taxes on income and wealth	2021	2022	2023	2024	2025
Total	**14.5**	**6.4**	**6.0**	**4.8**	**3.4**
PIT (including NRIT natural persons)	7.8	7.6	6.6	4.9	3.5
Corporate Inc. Tax (including NRIT legal persons)	46.6	3.5	4.6	4.8	3.5
Other current taxes	1.7	-0.7	0.8	0.8	0.8

Source: AIReF

For 2025, taxes on income and wealth will maintain a level of 1.3 points of GDP higher than that recorded prior to the pandemic, of which 0.2 points are due to the measures adopted. In relation to the evolution of Personal Income Tax,

[17] PIT: Increase in rates on higher income bases and modification of limits on contribution to pension plans.
CIT: Limitation on exemption for dividends and capital gains and increase in SOCIMI (Spanish REIT company) tax rate.

[18] PIT: Modification of pension plan contribution limits.

CIT: Setting minimum rate and reduction in home leasing allowance

[19] For further details, see 3.4.2 Revenue measures.

during the pandemic there was a decoupling with respect to the macroeconomic variable of compensation of employees linked to its growth, with a smaller fall in PIT wage bases in 2020 and a larger recovery in 2021, influenced by income support measures. In parallel with the method explained in the previous section on VAT, AIReF's forecasting models readjust these imbalances and produce values that, in national accounting terms, have an elasticity with respect to compensation of employees that is lower than the historical average over the entire projected period.

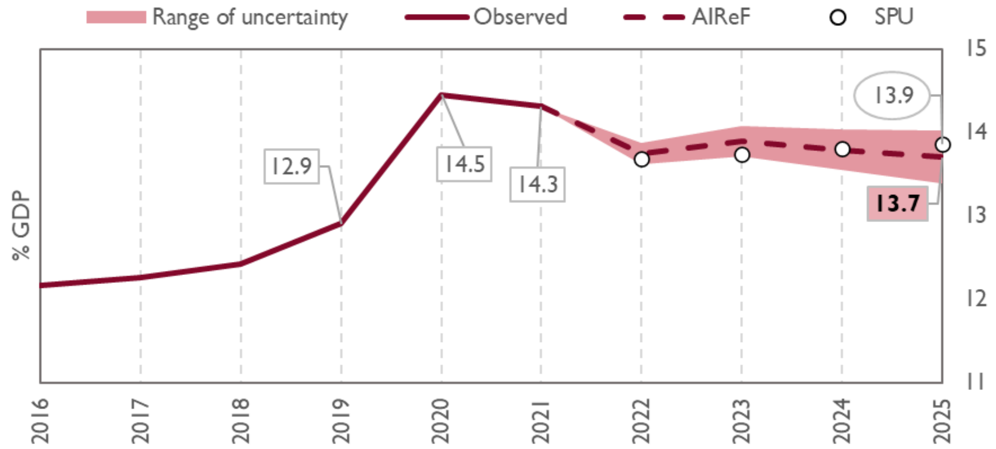
3.1.3. Taxes on capital

According to AIReF, taxes on capital maintain their weight over GDP at 0.4 points over the whole period, the same as the SPU. In 2021, there was exceptional growth in this type of tax as a result of the increase in the collection of Inheritance and Gift Tax, due both to the increase in the number of deaths and the extension of deadlines for its settlement. These taxes will return to their normal levels as from 2022. AIReF's forecasts are more dynamic than those of the SPU and predict a 6.2% drop in 2022 and a more positive evolution for the following years, rising to 2.6% and 2.9% in 2023 and 2024 and ending at 2.6% in 2025. In contrast, the SPU forecasts a more moderate fall in 2022, which is estimated at 4.6%, and it expects growth from 2023 until the end of the period of 0.7%, 1.2% and 0.9%.

3.1.4. Social contributions

AIReF expects the weight of contributions as a proportion of GDP to fall from 14.3% in 2021 to 13.7% in 2025, compared with 13.9% estimated in the SPU. In 2022, their weight over GDP falls by 0.6 points, chiefly as a result of the disappearance of COVID-19 measures. Over the rest of the period, the decrease is caused by the moderation in the weight of compensation of employees over GDP, partially offset in 2023 by the effect of the Intergenerational Equity Mechanism, which adds 0.2 points of GDP to revenue from social contributions. According to the Government's forecasts, social contributions fall from 14.3% to 13.7% of GDP in 2022, remain constant in 2023 and rise in 2024 and 2025 to 13.9% of GDP. However, the SPU does not explain the increase in these two years in a scenario that does not include economic policy measures. Despite the moderation of the weight over GDP, at the end of the projection horizon it remains higher than in 2019 in both forecasts, the year in which social contributions accounted for 12.9% of GDP.

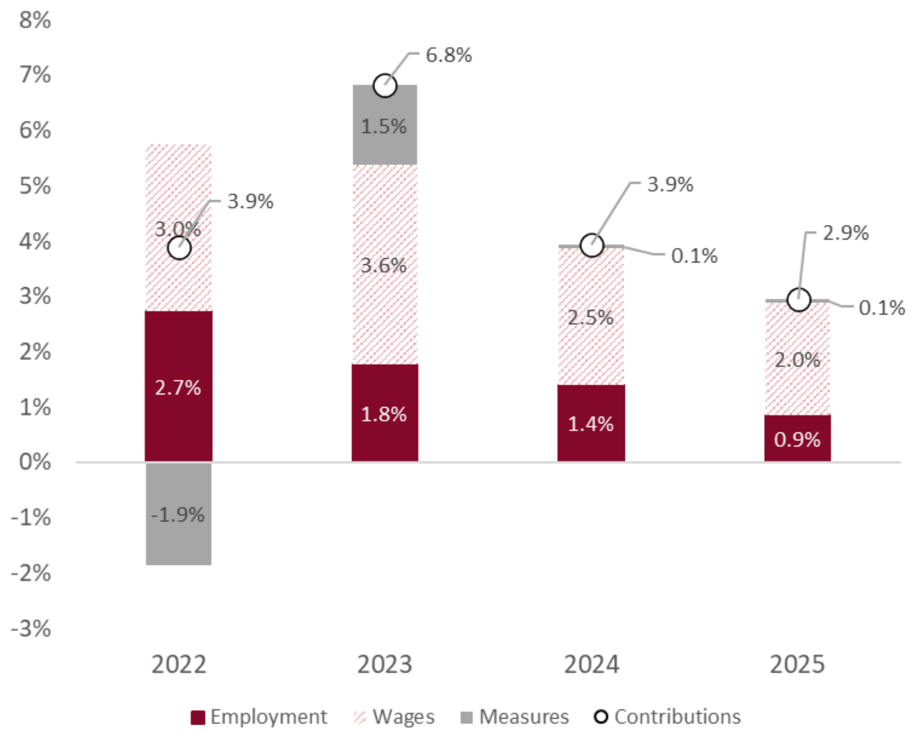
FIGURE 29. SOCIAL CONTRIBUTIONS. TOTAL GG AS % GDP



Source: IGAE, SPU and AIReF.

The positive trend in employment and wages drives the growth in social contributions over the 2022-2025 projection period. In 2022, the gradual disappearance of subsidies for exemptions from contributions for ERTEs and self-employed workers pushes the growth rate of contributions down, while wages and employment contribute positively to the growth in contributions. From 2023, the entry into force of the Intergenerational Equity Mechanism means that the measures will have a positive contribution on the growth in social contributions. Wages and employment maintain their positive contribution throughout the entire projection horizon.

FIGURE 30. BREAKDOWN OF GROWTH (% CHANGE) IN SOCIAL CONTRIBUTIONS



Source: AIReF

3.1.5. Other revenue

AIReF considers that other revenue will continue its downward path from 4.7% in 2021 until it returns to its historical weight of 4% in 2025, 0.6 points higher than estimated in the SPU. AIReF considers that the reduction in the weight of this heading is mainly due to the withdrawal of REACT funds, which will result in it returning to historical levels by 2023. The SPU, however, expects a reduction in this aggregate that is much larger and permanent over time. It considers that it will revert to historical values of 4% in 2022 and it considers that the weight will fall by an additional 0.2 or 0.3 points each year to end the forecast period at 3.3%. With the information provided, it is not possible to determine the reason for this additional reduction.

3.2. Evolution of GG expenditure

AIREF estimates that expenditure will amount to 44.3% of GDP in 2025, in line with the SPU forecasts. The expenditure path forecast by AIReF for the period 2022-2025 starts in 2022 with expenditure that is 0.6 points lower than forecast by the Government, remains at 0.1 points below the Government's forecast for 2023 and 2024 to then converge with the SPU in 2025. Compared with the

SPU, AIReF expects higher expenditure on public consumption, especially at the end of the period, and lower spending on social benefits and interest. These forecasts do not contain the impact of expenditure financed from RTRP funds. This is due to the fact that the SPU, in accordance with the principle that these funds are neutral in the public accounts, has not incorporated them into its budgetary projections. AIReF estimates that, considering the expenditure financed by the NGEU, expenditure would reach 44.4% of GDP in 2025.

TABLE 7. EXPENDITURE AS % OF GDP (WITHOUT NGEU) AIREF VS. SPU.

	AIReF				SPU			
	2022	2023	2024	2025	2022	2023	2024	2025
EXPENDITURE	**46,4**	**45,5**	**44,7**	**44,3**	**47,0**	**45,6**	**44,8**	**44,3**
Compensation of employees	11,6	11,4	11,3	11,2	11,5	11,3	11,1	10,9
Intermediate consumption	5,6	5,5	5,4	5,4	5,5	5,4	5,3	5,2
Social transfers in kind via market	2,9	2,8	2,8	2,7	3,0	2,8	2,7	2,7
Social benefits in cash	17,5	17,5	17,4	17,4	17,6	17,7	17,7	17,6
Interest	2,1	2,0	2,0	2,0	2,2	2,2	2,1	2,1
Subsidies	1,2	1,2	1,1	1,1	1,4	1,1	1,1	1,0
Gross capital formation	2,4	2,3	2,1	2,1	2,4	2,3	2,2	2,1
Capital transfers	1,1	0,8	0,7	0,6	1,2	0,8	0,6	0,6
Other expenditure	2,1	2,0	1,9	1,9	2,1	2,1	2,0	2,0
NET LENDING OR BORROWING	**-4,2**	**-3,3**	**-3,0**	**-3,0**	**-5,0**	**-4,0**	**-3,2**	**-3,2**

Source: SPU and AIReF

TABLE 8. BREAKDOWN OF THE DIFFERENCES IN AIREF VS SPU EXPENDITURE % GDP

	AIReF	SPU	Diff. AIReF-SPU	Breakdown of the differences				
				Public consumption components	Social benefits in cash	Interest	GCF	Other
2022	46.4	47.0	**-0.6**	0.0	-0.1	-0.1	-0.1	-0.3
2023	45.5	45.6	**-0.1**	0.3	-0.2	-0.1	-0.1	0.0
2024	44.7	44.8	**-0.1**	0.3	-0.3	-0.1	-0.1	0.0
2025	44.3	44.3	**0.0**	0.5	-0.2	0.0	0.0	-0.1

Source: SPU and AIReF

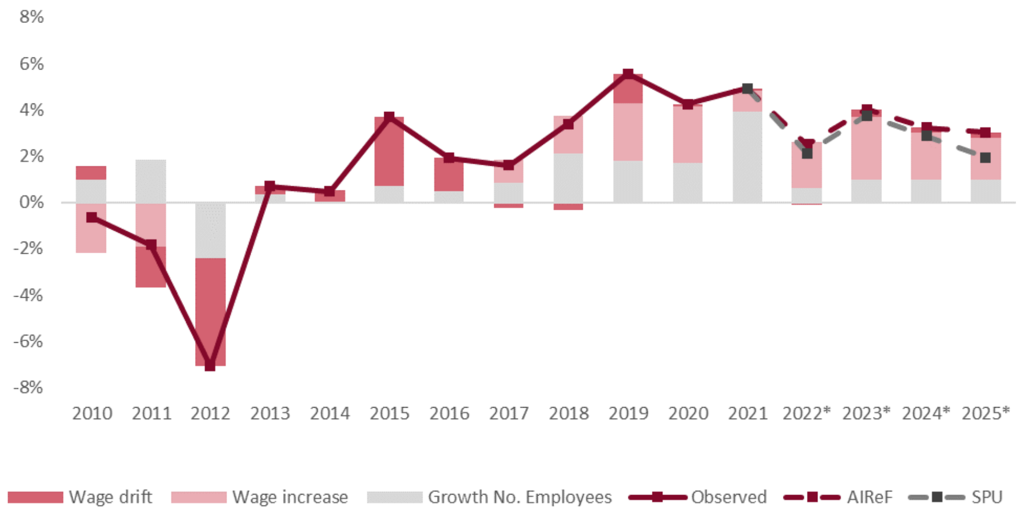
3.2.1. Public consumption

AIReF expects higher expenditure on public consumption, especially at the end of the period. AIReF's forecast for public consumption starts in 2022 at 0.1 points lower than the SPU's, but remains higher for the rest of the period, by 0.3 points in 2023 and 2024 and by 0.5 points in 2025. With regard to the analysis by component, the differences occur in compensation of employees and intermediate consumption. The pattern is quite similar in both cases in that the differences in estimates widen towards the end of the path. In contrast, social transfers in kind remain in line with the SPU, with only slight positive and negative differences that disappear at the end of the period.

Compensation of employees

AIReF's forecast for compensation of employees is 11.2% of GDP in 2025, 0.3 points higher than the figure indicated in the SPU. AIReF forecasts that compensation of employees will fall to 11.2% of GDP in 2025 from the 11.6% of GDP forecast for 2022. This represents a fall in GDP weight of 0.4 points, which is lower than the 0.6 points forecast by the Government. AIReF estimates average growth of 3.4%, while the SPU estimates an average of 2.7%, with lower rates in the final years.

FIGURE 31. BREAKDOWN OF THE GROWTH IN COMPENSATION OF PUBLIC EMPLOYEES (%)



Source: INE, IGAE and AIReF

The evolution of public employees is conditioned by the consolidation of part of the spending resulting from the pandemic. From 2022 onwards, AIReF assumes that part of the expenditure associated with the COVID-19 measures is consolidated and stabilised at the end of the period. In addition to this, an increase in the number of public employees of around 1% is assumed in accordance with the models based on the evolution of GDP and the population.

With regard to the compensation component, the increase in public wages is assumed to be in line with the CPI forecast. In the case of 2022, the 2% wage increase provided for in the 2022 GSB has been used. For the rest of the period, in the absence of specific compensation agreements, the rate of increase in the CPI as estimated by AIReF has been used. In addition, a wage drift of 0.3% has been considered for 2023 and of 0.2% for 2024 and 2025.

Intermediate consumption

AIReF estimates expenditure on intermediate consumption at 5.4% of GDP in 2025, 0.2 points higher than that included in the SPU. AIReF estimates that at the end of the path, expenditure on intermediate consumption will have a weight as a percentage of GDP that is 0.2 points higher than prior to the pandemic, while the Government places it at the same level. The evolution of this spending item is conditioned by several factors. On the one hand, the increase in prices will be gradually incorporated as contracts are renewed or revised according to public procurement legislation, with the impact in 2022 limited by the budgets in force. On the other hand, AIReF's forecasts reflect a fall in spending associated with measures adopted to combat COVID-19, such as purchases of vaccines and other healthcare material, which continue to have an impact in 2022 and are expected to continue for the rest of the period, but to a lesser extent. Finally, the expenditure on elections has been considered due to the holding of general, regional and European elections over the period.

Social transfers in kind

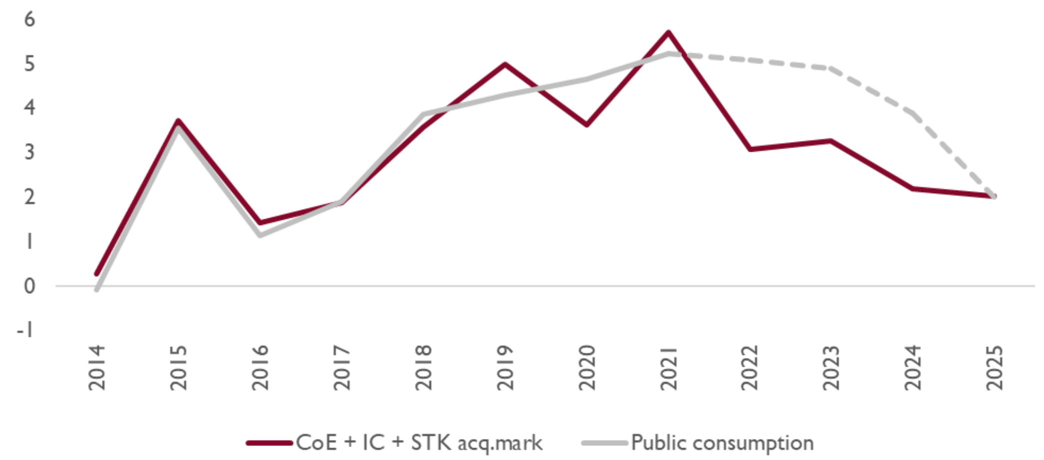
AIReF forecasts that expenditure on social transfers in kind will amount to 2.7% of GDP in 2025, in line with the SPU forecast. Unlike the other components of public consumption, AIReF's forecast of 2.7% of GDP at the end of the path coincides with the expenditure included in the SPU. The other factors that have been taken into account in this evolution include the impact in 2022 of certain economic measures in response to the war in Ukraine and for the rest of the period, the incorporation of the increase in prices that particularly affects some items of this type of expenditure. In addition, AIReF assumes that part of the COVID-19 expenditure (agreements on health and education) is maintained after the needs arising as a result of the pandemic. At the end of the period, this expenditure heading is expected to increase its weight over GDP by 0.1 points compared with the values recorded prior to the pandemic.

The comparison between the growth of the aggregate of public consumption[20] and that of its components in the public accounts shows a lack of

[20] Public consumption is one of the macroeconomic aggregates that make up GDP on the demand side; in accounting terms, it is identified with the sum of certain headings in the General Government accounts, specifically, Compensation of employees (D.1), Intermediate consumption (P.2), Social transfers in kind purchased on the market (D.63), Other taxes on production (D.29) and Fixed capital consumption, deducting what are referred to as "sales" from this sum (P.11, P.12 and

reconciliation in the SPU between the macroeconomic and the fiscal scenarios. For the macroeconomic aggregate, growth in nominal terms of 5.1% is expected in 2022, which falls to 2% in 2025, with average growth of 4% for the period. According to the SPU, compensation of employees, intermediate consumption and social transfers in kind will have average growth of 2.6% in that period. For the heading of other revenue, which includes sales, the Government predicts an average fall of 4%. This implies a positive contribution to the growth in public consumption, although it would not be sufficient to offset the difference between the two estimates.

FIGURE 32. % CHANGE IN PUBLIC CONSUMPTION AND ITS MAIN COMPONENTS



Source: SPU

3.2.2. Social benefits in cash

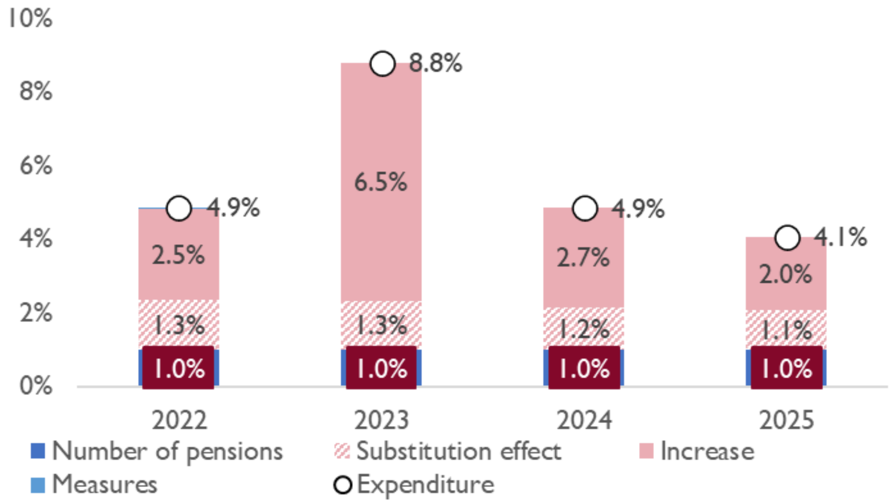
AIReF forecasts that social transfers in cash fall over the projection period by 1.5 points, from 18.9% of GDP in 2021 to 17.4% in 2025, compared with the 17.6% estimated in the SPU. AIReF estimates that their weight will fall by 1.5 points in 2022 due to the disappearance of COVID-19 measures, and will subsequently fall by almost an additional 0.1 points until 2025 mainly due to the expected improvement in the labour market. With regard to unemployment expenditure, the Government's forecasts for the unemployment rate are somewhat more positive than those of AIReF.

AIReF estimates that pension expenditure will rise by 4.9% in 2022, 8.8% in 2023, 4.9% in 2024 and 4.1% in 2025. The evolution of pension expenditure is explained by the sum of the increase in the number of pensions, the annual pension increase, the substitution effect and the measures applied to the

P.131). Consequently, the evolution of the aggregate will be determined by that of its components.

pension system. AIReF estimates the increase in the number of pensions and the substitution effect using the pension expenditure projection model, and considers that the pension increase will be made in line with the CPI of the previous year, as established by Law 21/2021. Only the measures to increase non-contributory pensions and minimum pensions by 3% in 2022 contained in the 2022 GSB are included.

FIGURE 33. GROWTH IN PENSION EXPENDITURE (% CHANGE). AIREF PROJECTIONS



Source: AIReF

The SPU should include, in addition to the joint EU-wide Ageing Report exercise, updated projections reflecting current legislation and economic policy at the time of publication. This exercise would make it possible to comply with the code of conduct agreed by the Economic and Financial Committee of the European Commission for the preparation of the Member States' Stability Programmes. This states that they should include all the necessary additional information, both of a qualitative and quantitative nature, to the forecasts in the joint exercise of the Ageing Report that are necessary to evaluate the sustainability of the public finances based on countries’ current policies.

BOX 6. IMPACT OF THE 2021 PENSION REFORM

Law 21/2021 on guaranteeing the purchasing power of pensions and other measures to strengthen the financial and social sustainability of the public pension system constitutes the first stage of the pension reform committed to in the RTRP. The plan provided that measures would be taken to maintain the purchasing power of pensions and align the effective and legal age of retirement.

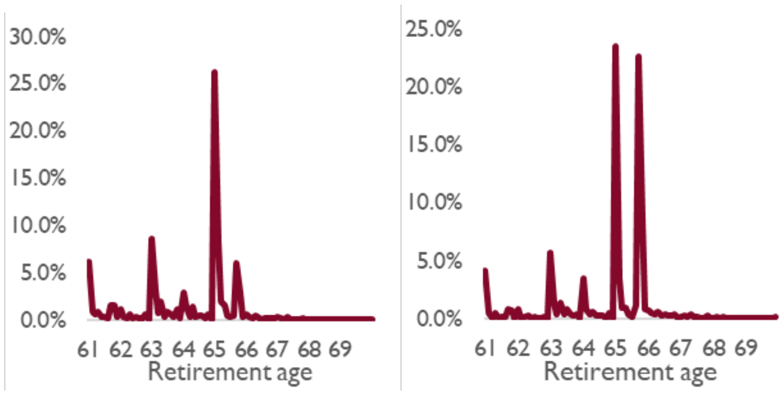
The main measures included in this reform are the transfer of expenditure considered "improper" by the Social Security to the General State Budget, the replacement of the Pension Revaluation Index (PRI) by the CPI of the previous year as the annual mechanism for increasing pensions, the replacement of the sustainability factor (SF), which was to enter into force in 2023, by a new Intergenerational Equity Mechanism (IEM) and the introduction of new incentives to delay retirement.

The replacement of the Pension Revaluation Index (PRI) by the CPI as the annual mechanism for increasing pensions was already included in the baseline scenario in AIReF's projections prior to the approval of the 2021 reform as the PRI had been abandoned as the effective mechanism for year-to-year pension increases since 2018. AIReF estimates an impact of using the CPI instead of the PRI of 0.5 percentage points in 2025 and a little over two percentage points in 2050, subject to inflation averaging around the 2% reference of the common monetary policy.

The IEM that replaces the SF sets a new special-purpose contribution between 2023 and 2032 of 0.6 percentage points to build up the Social Security Reserve Fund. From that year, the need to take additional measures will be periodically assessed based on the projected evolution of pension expenditure. AIReF estimates that the increase in social security contributions over ten years, the sole IEM measure for which sufficiently detailed information is available, would result in additional revenue of 0.2 percentage points of GDP per year (over €2.5bn) in the period 2023-2032. The effect of repealing the SF is very limited until 2032 (in 2025, around €200m), but its impact is permanent and growing. Therefore, in 2050 it means an increase in spending of around one percentage point.

Data on the actual retirement age in Spain show that there is still scope for measures to bring the effective retirement age closer to the legal retirement age. According to data from the continuous sample of working lives (Spanish acronym: MCVL), only around 5% of the total population that retires does so at a later age than their legal retirement age. In addition, as shown in the following figures, despite the 2011 reform, about 25% of people continue to retire at age 65. It can also be seen how the change in the legal retirement age of the 2011 reform has caused 5% of men to delay their retirement due to not meeting the requirements at age 65, while over 20% of women now retire at the new retirement age.

RETIREMENT AGE OF MEN (LEFT) AND WOMEN (RIGHT). MCVL 2019



Source: MCVL 2019

Incentives to raise the effective retirement age include, among other measures, revising the coefficients applicable to early and delayed retirement and the possibility of replacing the pension increase with a single payment at the time of delayed retirement. The coefficients applicable to early retirement are determined on the basis of the number of months (rather than the number of quarters) in which retirement is brought forward and the contribution path. In general, the reform results in a greater penalty when individuals decide to bring forward retirement between 21 and 24 months or between 3 months and 1 month, while they become more favourable in the other cases. The design of the measure therefore provides an incentive to delay retirement for three months for those who brought forward retirement by two years and those who brought forward retirement by three months, while the rest of the population would not be penalised, but would benefit from the new structure. If it were assumed as a simplification that the entire population decides to postpone their retirement for three months, the impact on expenditure would be a reduction in the rate of growth of pensions in the early years of between 0.1 and 0.2 points. This impact would fade in the long term due to the increase that this would cause in the average pension. Given the incentive structure of the Law, the estimate is considered an upper limit for the impact of this measure.

The coefficients applicable to delayed retirement are calculated on a full-year basis, as was the case before the reform. However, the same additional percentage is applied for each year of delayed retirement instead of this being calculated on the basis of the contribution period. This percentage rises to 4% per year of delay. In addition, the reform prohibits forced retirement through collective bargaining agreements at ages below 68. Alternative scenarios are defined based on different assumptions of agent behaviour in reaction to regulatory change.

The assessment of the behavioural changes in the decision to retire is based on the information contained in the regulatory impact analysis report of Law 21/2021 based on a survey conducted by the Ministry of Inclusion, Social Security and Migration, which showed that only 25% of workers stated that they were freely able to postpone access to retirement. For the lump-sum payment option, this survey indicated that more than 50% of people would be “sure” or “likely” to delay retirement, while when presented with the option of an increase in the monthly pension, the percentage that would be “sure” or “likely” to delay falls to around 30%.

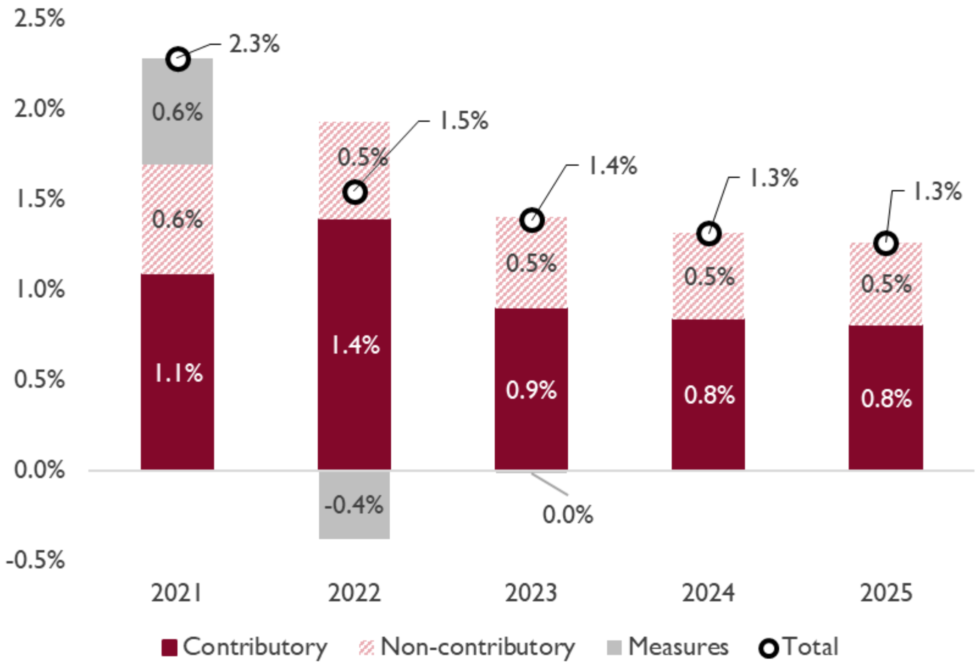
The impact of this reform on expenditure will depend on the modification of agents' behaviour in reaction to the regulatory change, with the effect being similar whether they do so with an increase in the pension or a subsidised lump-sum payment. Various situations have been analysed, ranging from 10% of individuals deciding to delay to over 50% of them doing so. The impact of these expenditure simulations shows that in 2050, pension expenditure may fall by between 0.2 points in the case in which only 10% delay their retirement to around 1.5 points of GDP in the case where over 50% do so.

AIReF will shortly publish an Opinion on the long-term sustainability of public finances in which the demographic and macroeconomic scenario and long-term projections of pension expenditure will be updated, including the impact of recent pension system reforms and providing more detail on the aforementioned simulations.

The 2022-25 SPU only presents the long-term projection of pension expenditure of the *Ageing Report 2021* as the last edition of this report available at the time of publication. The baseline scenario of the projections assumed the annual increase in pensions with the PRI and application of the SF to new pensions as from 2023 as it complied with the no-policy-change assumption at the time, although economic policy decisions determined that the PRI would not be applied from 2018 and entry into force of the SF would be delayed. The divergence between this scenario and the current framework means that the figures included in the SPU do not reflect the long-term sustainability situation of the pension system.

Unemployment benefits fall from 2.3% of GDP in 2021 to 1.3% in 2025. In 2022, the measures moderate the weight of unemployment benefits because the cost of ERTE benefits is reduced, from total spending of around €5.5bn in 2021 to around €240m in 2022. The measures also include the cost of raising the IPREM (Public Multiple-Effect Income Indicator) on the cost of the unemployment benefit by 2.5% in 2022 and the cost of the benefits for people over 52 years of age. The weight of the heading moderates over the rest of the projection horizon due to the expected reduction in the unemployment rate.

FIGURE 34. EVOLUTION OF UNEMPLOYMENT EXPENDITURE, % OF GDP. AIREF'S FORECASTS



Source: SEPE and AIReF

The weight of the other benefits included in social transfers in cash falls from 4.4% of GDP in 2021 to 3.8% in 2025. The reduction mainly takes place in 2022 due to the near disappearance of the spending on measures in response to the coronavirus crisis, such as the benefit for cessation of activity or the spending on temporary incapacity for work, which includes the cost of coronavirus sick leave. In addition, this heading includes the cost of financing the Minimum Living Income (MLI), the increase provided for in the 2022 GSB of 3% for 2022, and the extraordinary measure included in RDL 6/2022 of an increase of 15% in the MLI for the months of April, May and June 2022. The increase in the MLI will entail a cost of around €90m, while the temporary increase of 15% will imply spending of around €78m.

3.2.3. Subsidies

Subsidies reduce their weight over GDP from 1.5% in 2021 to 1.1% in 2025, slightly above the 1% estimate in the SPU. In 2022, the impact of the exemptions to contributions almost disappears entirely as a result of the withdrawal of COVID-19 measures. However, this effect is partially offset by the support for the primary sector, industry and transport contained in the Economic Response Plan to the war in Ukraine. From 2022, the weight falls by an additional 0.1 points. The path is similar to that forecast in the SPU, except that the weight in the latter falls by 0.5 points in 2022 instead of the 0.4 points forecast by AIReF.

3.2.4. Interest

AIReF forecasts a lower interest expenditure path than that of the SPU, to stand at 2.1% of GDP at the end of the period, 0.1 points lower than the Government's forecast. AIReF estimates lower interest expenditure than that forecast by the Government throughout the period. This estimate reflects the expectations of inflation and the normalisation of monetary policy, which have been passed on to sovereign debt yields, with an impact on new issues and on the portfolio of indexed bonds. The sensitivity is very high, given a level of debt at historical highs amounting to 118.4% of GDP. However, the average maturity of the debt is also very high, which will cushion the impact, deferring the full pass-through of rate increases to the average debt rate by eight years. In line with the evolution of sovereign bond yields over the last year, the central interest rate scenario for the period 2022-2025 will entail an increase of over 100 basis points for new issues compared with the previous forecast. This will result in a cumulative increase in the financial burden of approximately €20bn. Nevertheless, interest expenditure as a percentage of GDP remains at around 2% for the entire period, given the expected high growth rates of nominal GDP. For its part, the Government includes a slightly higher interest rate path, at around 2.1% of GDP. However, this does not seem to be in line with the technical assumptions used on drawing up the SPU, which placed the interest rate of the Spanish ten-year government bond at 0.8% in 2022 and at 1.1% in 2025 (currently this yield has exceeded 2%).

3.2.5. Gross capital formation

AIReF agrees with the SPU in forecasting investments without the RTRP at 2.1% of GDP for 2025, 0.1 points of GDP less than before the pandemic. The spending path evolves according to the new inflation estimate that affects all sub-sectors in accordance with Royal Decree-law 3/2022. At the sub-sector level, the projection takes into account the multi-year investment commitments included in the 2022 GSB and military investments by the Central Government and, unlike in recent years, it does not include reversals in highway concessions. At a territorial level, in the Autonomous Regions (ARs), the impact of COVID-19 spending on investments mainly related to health and education disappears, but the impact of REACT-EU is expected in the early years of the period. In the Local Governments (LGs), the application of cash surpluses from previous years is forecast to continue to be used for investment projects until 2024. However, an increase in investment other than that associated with the RTRP is not expected, given the limitation on absorbing a higher volume of expenditure. If the RTRP is taken into account, expenditure as a proportion of GDP would rise significantly from 2022 to 2024, but it would also end at 2.1% of GDP in 2025, given the very low level of RTRP investments estimated for that year. At any event, it is estimated that the weight of this expenditure over GDP will not recover to the level that existed before the pandemic, when it reached 2.2% in 2019.

3.2.6. Capital transfers

AIReF's estimates of capital transfer expenditure at the end of the period match those of the SPU at 0.6% of GDP. Although there are slight positive and negative differences between the expenditure forecast by AIReF and that included in the SPU in 2023 and 2024, the estimates converge as a percentage of GDP at the end of the path. AIReF expects some reduction in the first two years to then stabilise at the end of the period. One of the factors explaining this evolution is the lower impact of COVID-19 measures. On the one hand, it is estimated that the impact of possible defaults of ICO guarantees linked to the pandemic will be lower over the period after the €4.3bn recorded in 2021. On the other hand, the COVID-19 debt restructuring facility is expected to be executed with €3bn in the early years of the period. In addition, the impact in 2022 of potential defaults on the new €10 billion line of guarantees created in response to the war in Ukraine should be added. Another factor taken into account is the possible impact of the enforcement of judgments, quantified for 2022 at €1.35bn.

3.3. Analysis by sub-sector

AIReF forecasts both a different evolution of the deficit level and a different composition of the deficit by sub-sector than that presented in the SPU, although in both cases it is the Central Government that bears the greatest weight of the deficit. The biggest discrepancy between the two scenarios occurs at the level of deficit expected for 2022, almost entirely reflected in the deficit of the Central Government. Subsequently, only in 2025 is there a substantial difference between sub-sectors as AIReF considers that the ARs will again have a slight deficit, while the SPU estimates that the ARs will end the period with a surplus and that the Central Government will bear a larger deficit.

TABLE 9. EVOLUTION OF THE DEFICIT BY SUB- SECTOR, AIREF VS SPU (% GDP)

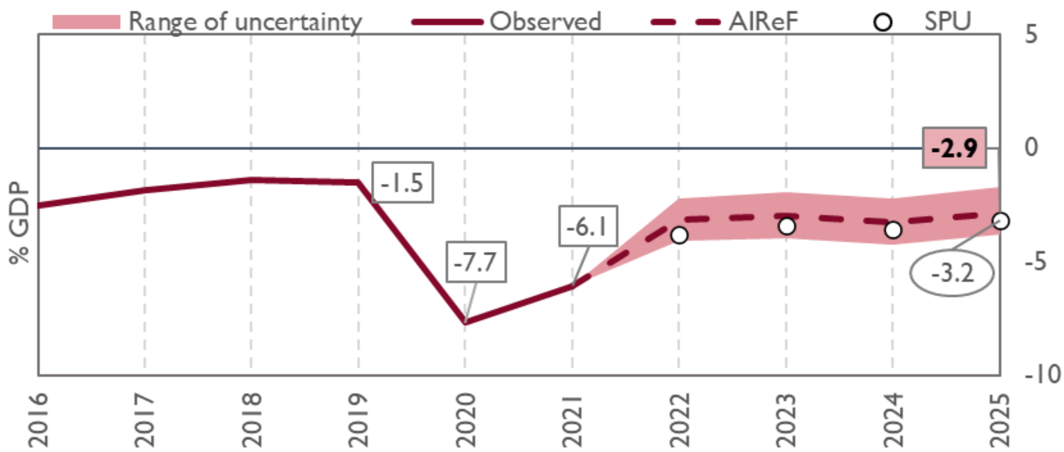
	AIReF				SPU			
	2022	2023	2024	2025	2022	2023	2024	2025
GG	**-4.2**	**-3.3**	**-3.0**	**-3.0**	**-5.0**	**-3.9**	**-3.3**	**-2.9**
CG	-3.2	-3.0	-3.3	-2.9	-3.8	-3.4	-3.6	-3.2
SSFs	-0.5	-0.5	-0.3	-0.3	-0.5	-0.5	-0.3	-0.2
ARs	-0.7	-0.1	0.2	-0.1	-0.8	-0.1	0.2	0.2
LGs	0.2	0.3	0.4	0.3	0.1	0.2	0.3	0.2

Source: SPU and AIReF

AIReF forecasts a Central Government deficit in 2025 of 2.9% of GDP, 0.4 points lower than that presented by the SPU. The biggest difference between the AIReF and SPU scenario occurs in 2022, where it reaches 0.7 points of GDP. For the rest of the period, the gap is reduced to an average of 0.4 points of GDP.

Central Government revenue would rise to 18.4% in 2025, while expenditure would fall to 21.2% of GDP, excluding the RTRP in both cases. The revenue from European funds is expected to be mainly received in the first three years of the period, contributing 2 points in 2022, 1.8 in 2023 and 1.1 in 2024. The expected path of expenditure is marked in 2022 by the adoption of measures in response to the war in Ukraine and by the recording of non-recurring operations (the enforcement of judgments, allocation of defaults from the ICO guarantee due to the war and the implementation of the COVID-19 debt restructuring line). Particularly noteworthy for the rest of the path until 2025 are the disappearance of COVID-19 measures and those resulting from the war in Ukraine and the impact in 2023 and 2024 of the final positive settlements of the financing system of the regional and local governments.

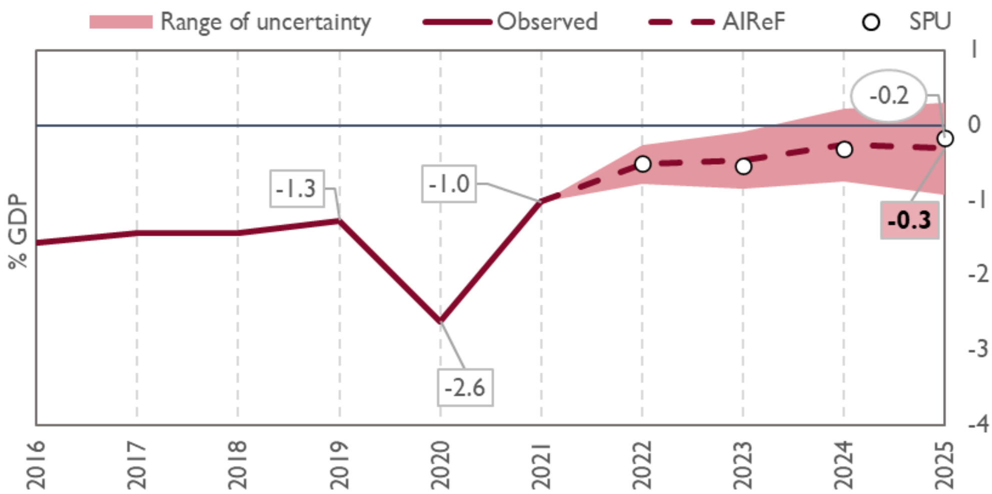
FIGURE 35. CENTRAL GOVERNMENT NET LENDING/BORROWING (% GDP)



Source: IGAE, SPU and AIReF.

AIReF's estimate of the balance of the Social Security Funds (SSF) is somewhat more negative than the Government's as it considers that the deficit will fall to 0.3% in 2025 compared with the 0.2% estimated by the SPU. Most of the reduction in the deficit takes place in 2022 due to the disappearance of COVID-19 measures. In 2023, the deficit remains despite increases in transfers due to the increase in pensions in line with the 2022 CPI. In 2024, the increase in transfers for "improper" expenses reduces the deficit, which is maintained in 2025.

FIGURE 36. SOCIAL SECURITY FUNDS NET LENDING/BORROWING (% GDP)

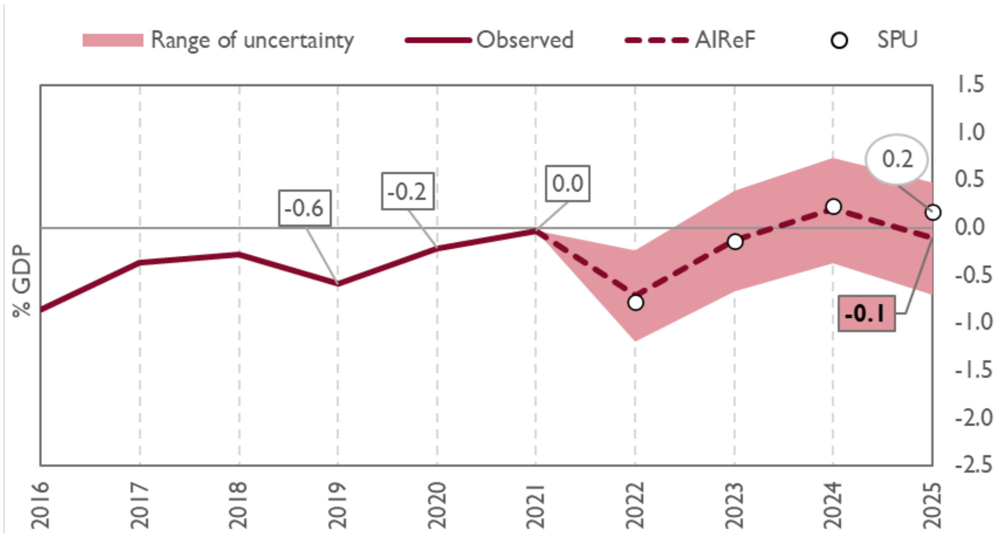


Source: IGAE, SPU and AIReF.

Up to 2024, the SPU sets out a similar outlook for the AR sub-sector to that considered by AIReF, and more optimistic for the final year of the period. The

SPU forecasts a significant worsening in the balance of the ARs in 2022 and indicates a progressive consolidation from 2023 until a surplus of 0.2 points is reached in 2024, which would be maintained in 2025. AIReF maintains a similar profile until 2024, but forecasts a worsening of the balance in 2025, which could close with a deficit of close to 0.1 points of GDP. Fiscal consolidation in 2023 and 2024 would be fundamentally conditioned by the revenue of the regional financing system, in which significant positive settlements would be recorded resulting from the actual collection of 2021 and 2022. Together with the expected REACT-EU funds, this would make it possible to absorb the estimated growth in expenditure not financed by the RTRP. In 2025, the year in which a normalised evolution of the main regional revenue would return, the balance would deteriorate as a result of the estimated trend growth in expenditure. Neither the details of the assumptions for evolution nor the figures on the main regional revenue and expenditure considered in the SPU are available. Therefore, it is not possible to analyse the possible discrepancies between the Government's and AIReF's forecasts, which mainly become evident in the last year of the period.

FIGURE 37. NET LENDING/BORROWING ARS (% GDP)



Source: IGAE, SPU and AIReF.

AIReF forecasts that the revenue of the ARs will amount to 15% of GDP at the end of the period. After 2020 and 2021, in which the revenue of the ARs reached levels of 17.2% and 17.7% of GDP, AIReF considers that this weight will moderate significantly in 2022, slightly in 2024 and again sharply in 2025. This is conditioned by the evolution of revenue from the system, the removal of extraordinary revenue received from the Central Government and the decrease in the NGEU funds.

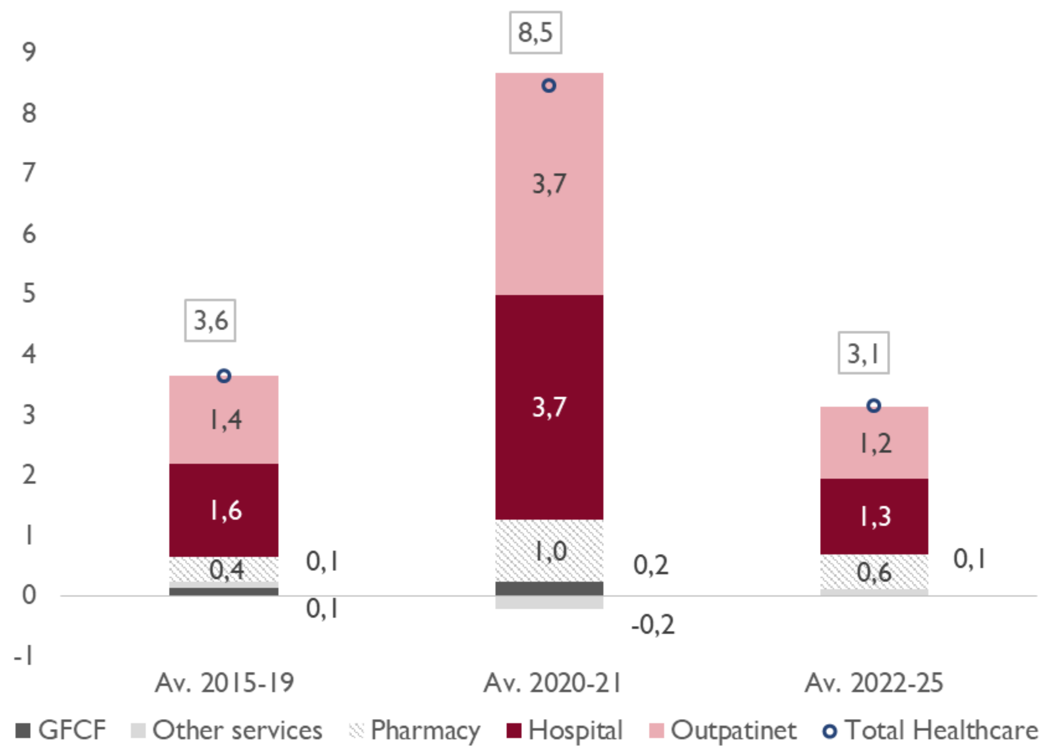
At the end of the period, expenditure would have a weight of 15.1%, higher than that existing before the crisis, as part of the spending generated in the pandemic is consolidated. After the exceptional levels recorded in 2020 and 2021, as a result of COVID-19, as from 2022 AIReF expects a steady fall in the weight of expenditure to stand in 2025 at 0.5 points higher than in 2019. It is estimated that about 40% of the expenditure incurred in 2020 and 2021 as a result of the pandemic will be consolidated (excluding direct support to companies from the COVID line). In addition, spending on healthcare not associated with COVID-19 is expected to recover progressively and grow in line with the average of the years prior to the crisis. Under these assumptions, AIReF's healthcare and education expenditure forecasts are, in general, higher than those of the SPU (see Box 7).

BOX 7. HEALTHCARE AND EDUCATION SPENDING

Healthcare

COVID-19 has led to a considerable increase in healthcare spending, which AIReF estimates will be partially consolidated in the future. The Covid-19 crisis led to a considerable increase in healthcare spending in 2020 and 2021, particularly in current spending, concentrated in compensation of employees, intermediate consumption and, to a lesser extent, social transfers in kind, in the areas of hospital and primary care and healthcare agreements. In the period 2022-25, it is estimated that the weight of this expenditure will fall, although it will remain at higher levels than those existing before the crisis. Hospital care and outpatient services, which group together primary and specialised care, will remain the areas that contribute most to the growth in healthcare spending, in proportions closer to those existing in the pre-pandemic period.

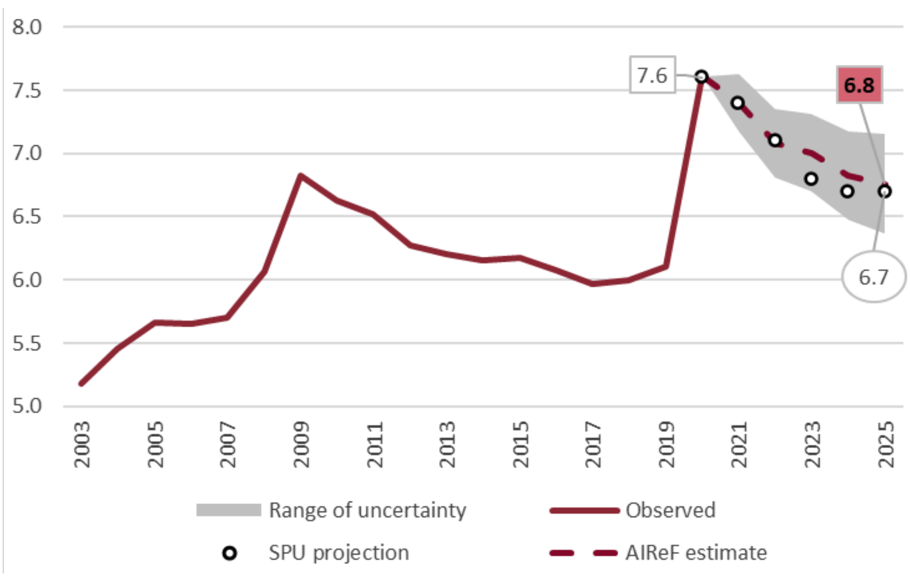
BREAKDOWN OF GROWTH IN HEALTHCARE EXPENDITURE (%).



Source: COFOG classification of expenditure (IGAE) and AIReF

The SPU's forecasts on the level of healthcare spending in the period 2022-2025 are slightly lower than those of AIReF. The SPU forecasts, which have been substantially revised upwards since the previous update, point to a sharp fall in healthcare expenditure as a percentage of GDP (according to the COFOG classification) in 2022 and 2023, which would put it in 2024 and 2025 at 6.7% of GDP, 0.6 points above the 2019 level. AIReF has also revised its medium-term healthcare expenditure estimates upwards and considers a reduction similar to that of the SPU in 2022, but more moderate in 2023, which places its estimates from that year onwards above those set out in the SPU. However, they start to converge and maintain a difference of around 0.1 points at the end of the period.

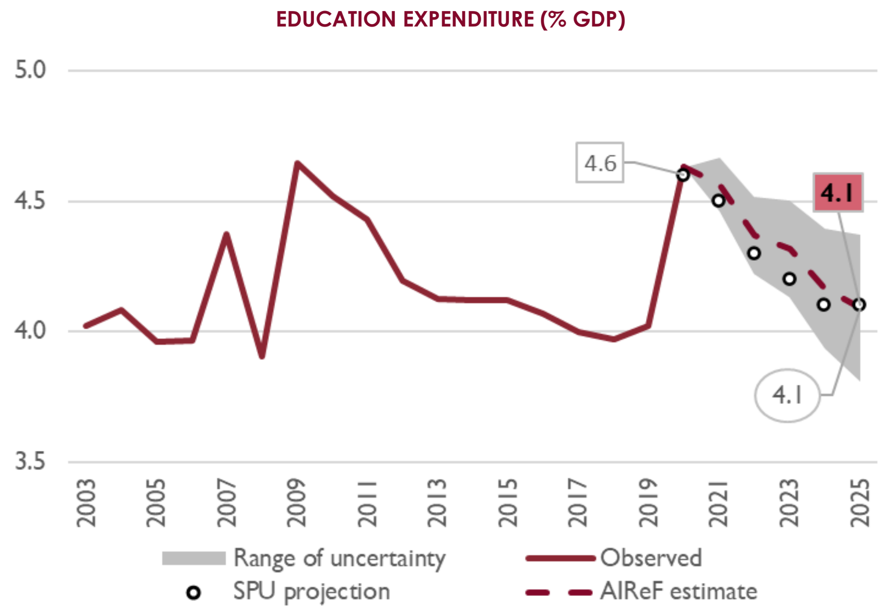
HEALTHCARE EXPENDITURE (% GDP)



Source: COFOG classification of expenditure (IGAE), SPU and AIReF.

Education

The SPU's forecasts on the growth of education spending in the period 2022-2025 are lower than AIReF's, except in the last year. The SPU considers, after the 4.6% of GDP reached in 2020, a sharp fall in spending on education as a percentage of GDP in 2022 and a more moderate fall until 2024, reaching in that year a weight of 4.1% of GDP, which would be maintained in 2025. AIReF's forecasts start from an expenditure level in 2021 higher than that of the SPU, which, under a similar profile in the expected reduction in spending until 2024, means that it remains above the level of the SPU until that year. In 2025, AIReF considers that there will still be a decrease in the weight of educational spending over GDP, which would place it at the same level as that expected in the SPU.



Source: COFOG classification of expenditure (IGAE), SPU and AIReF.

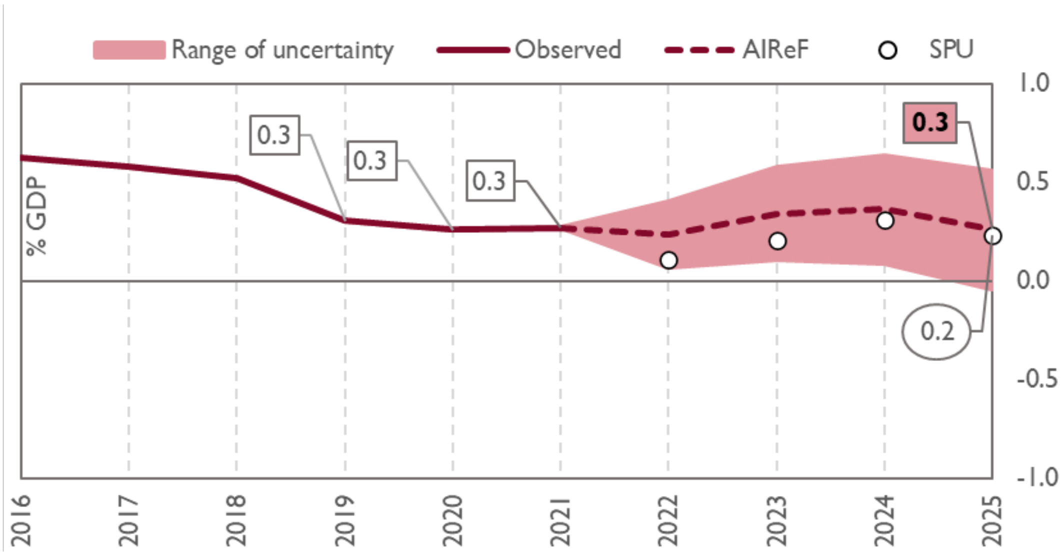
AIReF estimates that the structural surplus of the LGs will remain at around 0.3% of GDP until 2025, which would be corrected upwards or downwards depending on the impact of the application of surpluses from previous years to expenditure and the settlement of the financing system. AIReF revises downwards slightly the forecasts of the result to be achieved by the LGs in 2022 included in its Report on the Initial Budgets of the General Government for this year[21], in light of the information included in the SPU on the higher amount of surpluses resulting from the year-end 2021 figures. The aforementioned report of April this year already highlighted the existence of significant uncertainties around the level that the expenditure financed with surpluses settled in 2021 will finally reach in 2022, as well as its effect on ordinary spending for the year. AIReF's central scenario may be altered upwards or downwards as a result of the limitations to the scope resulting from the quantification of this expenditure. Although the information set out in the SPU does not quantify the amount of the 2021 surpluses, it does suggest that at a national level they are higher than those obtained in 2020. In addition, another significant expenditure item with an impact on the 2022 surplus is the allocation of the settlement to be paid to the State from the 2020 financing system. Corrected for both effects, the expected surplus in 2022 for the LGs as a whole is slightly over 0.2% of GDP. In 2024, according to AIReF's forecasts, the effect of a high settlement in favour of the LGs from the State financing system, due to the positive evolution of tax revenue in 2022, would correct the

[21] Report on the Initial Budgets of the General Government 2022

structural surplus of the LGs by 0.1 points of GDP, placing the balance to be obtained at around 0.4% of GDP.

In the medium term, AIReF estimates are 0.1 points better in each year than the SPU scenario, although they maintain the same trend throughout the 2022-2025 time horizon. In the SPU horizon, AIReF's projections are consistent with the Government's scenario. However, they correct its forecasts upwards by 0.1 points each year given that AIReF's estimates are made in a trend scenario whose starting year, 2022, is 0.1 points higher than in the Government's forecasts. That difference of 0.1 points in the starting year is mainly the result of AIReF's 2022 estimates being made on the verified balance of 2021 (with its breakdown by component).

FIGURE 38. NET LENDING/BORROWING LGS (% GDP)



Source: IGAE, SPU and AIReF.

3.4. Impact of the measures on the General Government accounts

AIReF, like the Government, considers a baseline scenario for the projection period in which only the impact of the measures already approved is included. In line with the SPU approved by the Government, AIReF considers a baseline scenario in which all the expenditure and revenue measures approved to date are included. These measures include the measures adopted in response to the energy crisis caused by the current geopolitical situation, whose total impact for this year will be more than 0.4 points of GDP.

3.4.1. Expenditure measures

The CG expenditure measures included in the SPU for 2022 include those approved in the National Response Plan for the economic and social consequences of the Russian war[22], whose impact on this year's deficit will be 0.3% of GDP. On March 29th, the Council of Ministers adopted various measures aimed at mobilising resources to mitigate the effects of the war in Ukraine on both consumers and various productive sectors. These measures include some with a direct impact on the deficit, such as direct support for certain productive sectors especially affected by the energy crisis and a rebate of up to 20 cents per litre on fuel consumption, among others. AIReF, in line with the SPU, has estimated that the impact of these measures is temporary, mostly ending on June 30th. Bearing in mind that some of them may be extended, depending on the geopolitical situation, the impact on the deficit depends on the period for which they remain in force. AIReF estimates that if the fuel consumption rebate per litre were to be extended until the end of the year, its impact on the deficit would be almost an additional 0.3 points of GDP.

22 *Royal Decree-law 6/2022, of March 29th, adopting urgent measures in the framework of the National Response Plan for the economic and social consequences of the war in Ukraine*

TABLE 10. IMPACT OF EXPENDITURE MEASURES: RDL 6/2022 AND AIREF ESTIMATE

CG EXPENDITURE measures - RDL 6/2022		Article	IMPACT (mill €)	
			Government	AIReF
Support for individuals	Reduction in the price per litre of fuel to individuals	Art 15	823	1.053
	MLI increase until June 30	Art 45		78
	Subsides for the prevention of gender-based violence	Art 50	2	2
	Extra credit for refugee care Ukraine	Art 51	1.200	1.200
	New beneficiaries Thermal social voucher	AD 15	75	75
Support for the agricultural and fishing sector	Direct support for the agricultural sector	Arts 33 and 40	129	129
	Direct support for the dairy sector	Arts 31 and 40	169	169
	Direct support for the fishing sector	Arts 32 and 40	18	18
	Direct support for additional costs in the fishing and aquaculture sector	Arts 34 and 35 and 40	35	35
Support for the electrotechnical and gas-intensive industry	Direct support for gas-intensive companies	Art 3	125	125
	80% reduction in electricity network tolls	Arts 1 and 2	225	225
	Increase in CO2 emission cost compensation	AD 14	65	65
	Transfer to CNMC underground storage	AD 16	22	22
Support for the transport sector	Price reduction per litre of fuel for workers	Art 15	600	600
	Direct support for road transport	Arts 25-27	450	450
	Direct support for rail transport	Arts 25-27	5	5
	Compensation port tax reduction	Art 23	6	6
	Support for self-employed road haulage contractors who leave the activity	AD 17	10	10
TOTAL			**3.958**	**4.266**
Liquidity measures	New line of ICO guarantees until 31 December	Arts 29 and 30	10.000	10.000
	Extension of maturity of guaranteed loans and grace period for sectors affected by the energy crisis*	FP 32		

* agriculture, livestock, fisheries and road transport sector

Source: Government and AIReF

The expenditure measures planned by the ARs in the period, which are of little weight, mainly affect compensation of employees. Most of the measures planned by the ARs in the period refer to staff. They would have a positive impact in 2022 of around €100m, resulting from the non-repetition of some measures adopted in previous years, such as the return of extra payments abolished until 2014 in Catalonia, which would offset the increases in remuneration (career bonuses, mainly in the health and education sector) and staffing planned in other regions for the year. In the following years, a net increase in expenditure on staff is expected, at around €50m each year, for measures of the same nature. Alongside the actions in the area of staff, some ARs forecast savings in pharmacy and health are the result of the application of streamlining and efficiency measures and higher spending on investments and other actions focused on the field of education. Taken together, these measures have little impact.

3.4.2. Revenue measures

In tax matters, AIReF estimates that the set of measures adopted will reduce revenue by 0.1 points of GDP in 2022 compared with 2021 and will raise it by 0.4 points from 2023 to 2025. AIReF's revenue forecasts include the assessment of the measures established in the 2021 and 2022 General State Budget, the measures adopted to alleviate the rise in energy prices and new taxes. For its part, the SPU does not include an assessment of the measures considered.

AIReF estimates that measures to mitigate the rise in electricity prices will reduce revenue in 2022 by 0.3 points of GDP compared with 2021. In differential terms with respect to the impact measured for 2021, the reduction in the VAT rate implemented in July 2021 and extended until mid-2022[23] will subtract less than 0.05 points of GDP in 2022, which will be reversed from 2023. The reduction in the rate of the Special Tax on Electricity[24] adds an additional quarter of impact in 2022 with respect to 2021, which is measured at a little under 0.1 points of GDP, while for the following years it will entail the recovery of the affected quarter in 2021. The suspension of the Tax on the Value of Electricity Production (IVPEE) initially established for the last two quarters of 2021 (of which the last is paid in the first quarter of 2022), and extended for two additional quarters in 2022, will subtract almost 0.2 points of GDP in 2022,

[23] Reduction of the VAT rate to 10% on the electricity bill of consumers with up to 10 kW of contracted power, provided that the average monthly price of the wholesale market of the previous month is greater than €45/MWh, initially from July to December 2021, extended until 30/06/2022.

[24] Reduction in the rate of the Special Tax on Electricity from 5.1% to 0.5%, initially from 15 September to 31 December, extended to 30/06/2022.

and will imply the recovery of the affected quarter in 2021 as from 2023. Extending this package until the end of 2022 would mean an additional reduction of more than 0.1 points of GDP in 2022 and just under 0.1 points in 2023 due to the shift of part of its impact to the cash figure of that year.

The tax measures adopted in the 2021 and 2022 General State Budget will raise revenue by 0.2 points of GDP compared with 2021. Most of the measures, which were approved in the 2021 General State Budget, began to take effect over that year. However, it will be in 2022 when their full impact will be recorded with the filing of the 2021 Personal Income Tax and Corporate Income Tax settlements and as a result of the transfer of part of the 2021 accrual to 2022 cash. Similarly, the measures incorporated in the 2022 General State Budget will shift their impact to 2023 when the settlements of both taxes relating to 2022 are filed.

For the other measures, AIReF estimates a negative combined effect in 2022 compared with 2021 and a positive effect from 2023, which does not entail differences in weight over GDP. Revenue falls in 2022 as a result of the tax incentive established for PIT aimed at contributing towards improving energy efficiency (RDL 19/2021), which will be financed with the Recovery, Transformation and Resilience Plan, and will therefore have no impact on the deficit. Along the same lines, COVID-19 measures relating to the application of a zero rate for VAT on medical devices and the rebate on the rental income of premises used for certain economic activities affected by the pandemic during the first quarter of 2021 (RDL 35/2020), which is moved to 2022 as this is the year in which the 2021 Personal Income Tax settlement will be filed, will remain in force. On the other hand, a positive impact is expected due to the increased collection of the new Taxes on Financial Transactions and on Certain Digital Services, as well as the entry into force of the new Tax on Single-Use Plastics from 2023, according to the Law on Waste and Contaminated Soils approved on 31/03/2022.

TABLE 11. IMPACT OF REVENUE MEASURES IN TERMS OF CASH: AIREF ESTIMATE (MILLION EUROS AND % GDP)

REVENUE measures: Annual cash impact with respect to 2021 impact	2022 €m	2023-25 €m	2022 % GDP	2023-25 % GDP
Energy price measures	**-3.520**	**1.602**	**-0,3**	**0,1**
VAT: Reduction rate on electricity (RDL 12, 17 & 29 /2021 & 6/2022).	-480	509	0,0	0,0
STs: Reduction rate on electricity (RDL 17, 29/2021 & 6/2022)	-708	333	-0,1	0,0
OTHERS: Suspension Tax on Val. Elec. Prod. (RDL 12, 17, 29/2021 & 6/2022)	-2.331	760	-0,2	0,1
Measures 2021GSB	**2.610**	**2.610**	**0,2**	**0,2**
PIT: Increase in rates on higher incomes and modification of contribution limits to pension plans.	1.131	1.131	0,1	0,1
CIT: Limitation on exemption for dividends and capital gains and increase in SOCIMI (Spanish REIT company) tax rate.	1.358	1.358	0,1	0,1
VAT: Increase in rates on sugary drinks	75	75	0,0	0,0
OTHERS: Tax on Insurance Premiums: Increase in rates	46	46	0,0	0,0
Measures 2022GSB	**0**	**570**	**0,0**	**0,0**
PIT: Modification of pension plan contribution limits	0	149	0,0	0,0
CIT: Setting minimum rate and reduction in home leasing allowance	0	421	0,0	0,0
Other measures	**-432**	**333**	**0,0**	**0,0**
PIT: Deductions for housing rehabilitation (RDL 19/2021) and COVID measures (rent reduction RDL 35/2020)	-497	-76	0,0	0,0
VAT: COVID measures (0 rates and rate cuts, RDL 15, 28, 34, 35/2020)	-57	-57	0,0	0,0
OTROS: Tax on Financial Transactions and Certain Digital Services (Law 5 and 4/2020)	122	122	0,0	0,0
OTHERS: Tax on Single-Use Plastics (Law 31/03/2022)	0	344	0,0	0,0
TOTAL	**-1.342**	**5.114**	**-0,1**	**0,4**

Source: AIReF

Source: AIReF

The ARs as a whole forecast tax reductions concentrated in PIT and Transfer Tax and Stamp Duty, offset by the increase in environmental taxes. In their medium-term budgetary plans, the ARs generally provide for tax reduction measures in PIT and Transfer Tax and Stamp Duty and higher collection as a result of environmental taxes and disposals of investments, although in general they have very limited impact. Taken together, they could result in lower revenue for the ARs of around €300m in 2022 and 2023. In addition, the positive effect of the implementation of the tax on landfilling, incineration and co-incineration of waste is expected to be incorporated from 2023 onwards, as indicated in the SPU.

3.5. Analysis of the Transformation, Recovery and Resilience Plan (RTRP)

AIReF estimates that the execution of the RTRP in national accounting will be greater in 2022 and 2023, fall in 2024 and be insignificant in 2025. AIReF has prepared its own revenue and expenditure forecasts for the period 2022-2025, incorporating the implementation of the RTRP in national accounting terms. This estimate has been made despite the lack of data on the execution of the RTRP in national accounting terms to date, and the uncertainty about the arrival of the funds to the final recipient to the extent that the experience gained over 2021 suggests that the rate at which the funds reach the real economy may differ significantly from the budget execution (see Box 5).

TABLE 12. AIREF FORECASTS ON REVENUE EXPENDITURE FOR THE PERIOD 2022-2025 INCLUDING THE RTRP (AS % OF GDP)

	AIReF			
	2022	2023	2024	2025
REVENUE	**44,2**	**44,1**	**42,7**	**41,4**
TAXES	24,2	24,2	23,9	23,7
On production	12,1	12,1	11,7	11,5
On income	11,7	11,8	11,8	11,7
Capital	0,4	0,4	0,4	0,4
CONTRIBUTIONS:	13,7	13,9	13,8	13,7
Other revenue	6,2	5,9	5,0	4,0
EXPENDITURE	**48,4**	**47,3**	**45,7**	**44,4**
Compensation of employees	11,6	11,4	11,3	11,2
Intermediate consumption	5,6	5,5	5,4	5,4
Social transfers in kind via market	2,9	2,9	2,8	2,7
Social benefits in cash	17,5	17,5	17,4	17,4
Interest	2,1	2,0	2,0	2,0
Gross capital formation	3,2	3,0	2,6	2,1
Subsidies and other expenditure	5,5	5,0	4,3	3,5
NET LENDING OR BORROWING	**-4,2**	**-3,3**	**-3,0**	**-3,0**

Source: AIReF

Despite the neutrality of the RTRP on public accounts in national accounting terms, AIReF considers that it will have an impact on the structural deficit. As AIReF has pointed out in previous reports, some investments provided for in the RTRP might result in a higher structural deficit to the extent that they become permanent in order to continue the actions initiated or to put the financed investments into operation. In addition, certain reforms might lead to increases in expenditure in the future (such as the updating of pensions in line with the CPI, the conversion of job-retention schemes – ERTEs – into structural mechanisms and the extension of health services and jobs in education). In contrast, other reforms could generate savings (this would be the case of the spending review processes, the mechanisms to delay the effective retirement age and the reform of the tax system) with a positive impact on the structural deficit. Although the net effect that may result from a combination of these elements remains unknown, the RTRP will have a very significant impact on the public accounts that the SPU does not break down or quantify.

4. FISCAL RISKS

As in previous years, the SPU does not include sufficient information on the fiscal risks that may affect its 2022-2025 time horizon. Section 6.3 of the SPU on contingent liabilities is limited to including the outstanding balance of the guarantees granted by the GG up to 2021. In 2020, two ICO lines of guarantees were launched for a total amount of €140bn to protect the production structure as a result of the crisis caused by the pandemic and in 2022 a new ICO line of guarantees was approved for an amount of €10bn due to the economic response measures to the war in Ukraine. The information included in the SPU does not refer to the expected impact of these guarantees or other possible liabilities that the GG may face resulting from court judgments, information on public-private partnerships, unpaid loans or any other type of risk that may affect the objectives of budgetary stability and financial sustainability. In this regard, AIReF has been requesting more information in various reports in the interest of greater transparency.

The SPU does not provide information on the expected impact for the period 2022-2025 of the guarantees included in the contingent liabilities section. In 2021, the allocation of defaults of ICO guarantees linked to the pandemic for an amount greater than €4.3bn was recorded. For 2022, the SPU mentions, but does not quantify, the impact of the new line of guarantees for the effects of the war in Ukraine. Despite the volume of guarantees granted by the ICO, the SPU does not even provide information on the expected impact for the 2022-2025 time horizon in the section devoted to contingent liabilities. There is no information on the amount allocated to 2022 or on whether the

Government estimates a revision of the amount of defaults already recorded in 2021 over the period 2022-2025.

In addition, the SPU does not provide information on the funds created in the pandemic to support company solvency. The Support Fund for the Solvency of Strategic Companies, which is endowed with €10bn and managed by the SEPI, has so far approved operations amounting to around €2.2bn. In addition, there is no detailed information on the risks arising from the recapitalisation fund for companies affected by COVID-19, which is endowed with €1bn and managed by COFIDES, with its budget fully executed in 2021.

There is also a risk of a higher deficit due to measures in the short and medium term if the crisis in the energy sector, exacerbated by the war in Ukraine, persists. The duration of the war in Ukraine, the process of transition to other sources of green energy and the energy policy decisions taken within the EU are some of the factors on which the evolution of the energy sector crisis might depend. Therefore, the risk of further increases in the deficit in the short and medium term remains alive if circumstances force the Government to adopt fiscal measures to address the escalation of the CPI, as well as to lower the electricity bill in line with those already adopted for the last quarter of 2021 and subsequently extended until mid-2022.

In addition, there are other uncertainties about the macroeconomic scenario, to which must be added the uncertainty resulting from the war in Ukraine, which endanger the materialisation of the projected fiscal scenario. In addition to the persistence of problems related to bottlenecks in manufacturing production and in logistics and the increase in raw material prices, there is also inflation, the rise in interest rates, the uncertainty resulting from the war in Ukraine and the impact of the sanctions adopted in response to the war. This high uncertainty that persists in relation to the macroeconomic scenario is compounded by the risk of new waves due to COVID-19 and a slower-than-planned pace of RTRP execution. All these elements remain key in the evolution of certain variables such as employment, wages, private consumption and gross operating surplus, which will affect the final path of tax revenue and contributions, as well as unemployment and interest expenditure, with an impact on the projected fiscal scenario.

In addition to the fiscal risks originating in the macroeconomic scenario, there are risks related to the enforcement of judgments. The SPU mentions the allocation of judgments to 2022 for an amount of €1.35bn. AIReF has already warned of this risk of enforcement of judgments in its previous report on the 2022 initial budgets[25]. On the one hand, the judgment of the Court of Justice

[25] AIReF Report on the Initial Budgets of the General Government for 2022

of the European Union in 2022, which found national legislation on the obligation to declare assets or rights abroad to be contrary to EU law. And, on the other hand, the judgment of the National High Court in 2021 in favour of Telefónica regarding company tax settlements for 2009 and 2010. Although an appeal has been lodged with the Supreme Court, if it is upheld, it may cost the State over €1bn. In addition, the risk of greater compensation to the concessionaire ACESA in the coming years remains due to the discrepancies relating to the amount claimed and the litigation on renewable energies remains open, quantified at €9.63bn in the 2019 CG General Account. However, the Government currently considers it unlikely that it will have to compensate the claimant companies.

Lastly, there are other risks whose amount is repeatedly unknown and no information is provided. Investments in defence modernisation programmes are underway and involve a significant volume of expenditure with a major impact on the deficit. However, no information is published on the planning of these military deliveries and their impact on the public deficit. There is also no information on the possible impact of the risks assumed by public-private partnership contracts or loans granted by public authorities that might prove to be doubtful receivables.

5. FISCAL POLICY STANCE

Activation of the escape clause within the scope of both national legislation and the Stability and Growth Pact means that there are no regulatory benchmarks for assessing the evolution of the public balances forecast in the Stability Programme. According to the Communication of the European Commission "Fiscal policy guidance for 2023", published on March 2nd, 2022, the escape clause at a European level will remain in force throughout this year, although it is expected to be deactivated in 2023 on the basis of the EC spring forecast. The fiscal framework to be applied thereafter is subject to the outcome of the fiscal governance review process that was relaunched at the end of last year.[26]

The escape clause temporarily suspends fiscal rules, but not the supervision of fiscal policy, which must continue to ensure that its design and planning are governed by a series of principles. The aforementioned Communication from the European Commission sets out five principles. In particular, at a national level it establishes the need to: (i) ensure debt sustainability through a fiscal adjustment – that must be gradual and high-quality - and preserve economic growth; (ii) foster investment and promote sustainable growth; (iii) promote medium-term fiscal adjustment strategies; and (iv) for high-debt countries, stabilise and reduce public debt ratios by controlling current expenditure net of discretionary revenue measures. Finally, it highlights the need for fiscal policy coordination in the euro area as a whole.

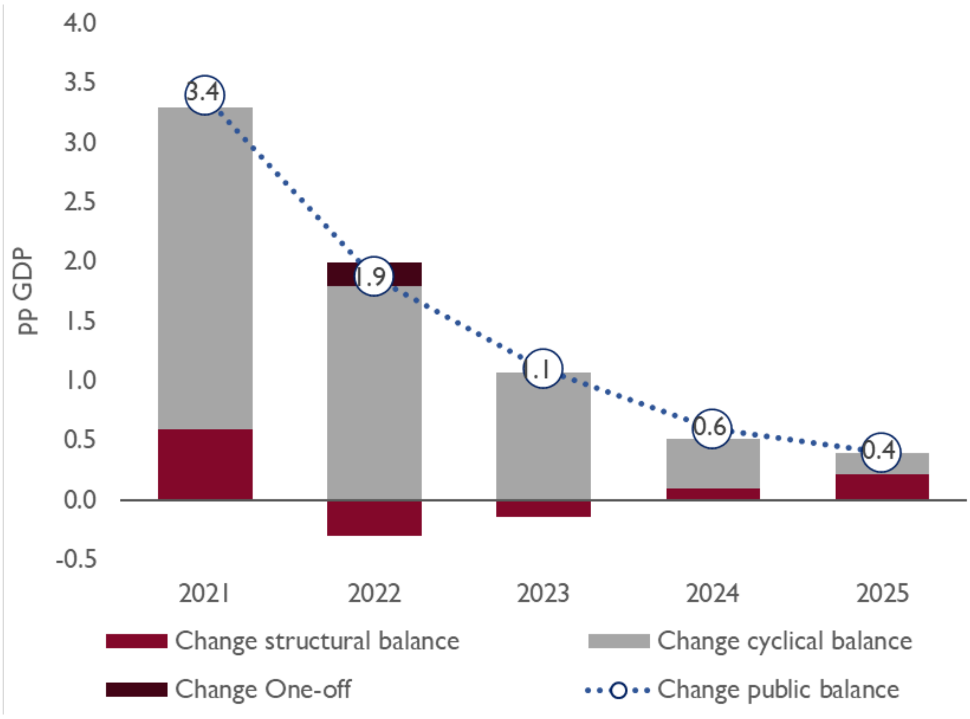
[26] See "AIReF's Contribution to the European Commission's Public Consultation on the Reform of the European Fiscal Framework", Working Paper 1/2022

In this context, the estimate of the fiscal policy stance based on the information contained in Section 4.6 of the Stability Programme makes it possible to assess the fiscal policy orientation planned by the Government for the medium term. On the basis of the principles established at a country level, this section of the report provides information on the fiscal policy stance. It also distinguishes between those measures that include NGEU funds and those that do not. In particular, the fiscal adjustment or fiscal policy stance contained in the SPU is first assessed, comparing the data contained in the Stability Programme and AIReF's estimates. Second, the evolution of current national expenditure, net of revenue measures, is assessed.

5.1. Government planning of the national fiscal policy, according to the 2022-2025 Stability Programme

The structural balance figures provided by the Government imply an oscillating domestic fiscal policy: after a contractionary stance in 2021, it becomes expansionary this year, turning practically neutral in 2023 and 2024 and again contractionary at the end of the programme period. According to the Government's estimates, the improvement in the public balance in 2021 was supported by a significant improvement in the structural balance – by 0.6 percentage points – and by the positive evolution of the cyclical balance. According to the estimates of the Stability Programme, last year's adjustment would give way to an expansive fiscal policy in 2022, with a boost of around 0.3 percentage points of GDP, to which the effect of the Next Generation EU funds should be added. In 2023 and 2024, the structural balance would remain practically constant and start to improve again in 2025.

FIGURE 39. CONTRIBUTIONS TO THE CHANGE IN THE PUBLIC BALANCE, 2022-2025 SPU

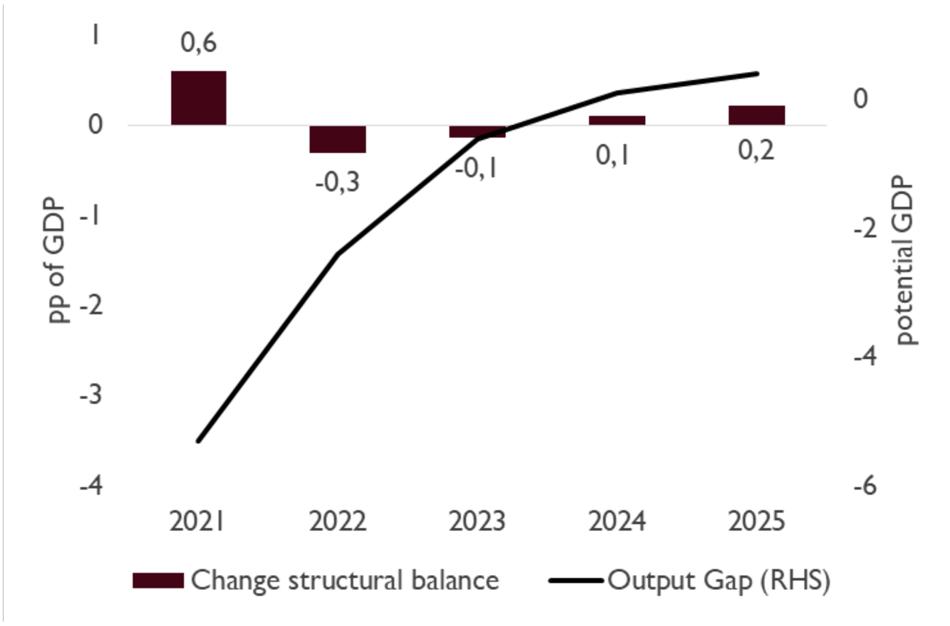


Source: 2022-2025 Stability Programme and AIReF

The improvement in the structural balance expected by the Government towards the end of the programme period is hardly compatible with a no-policy-change scenario from 2023 onwards. The fiscal projections in the Stability Programme have been drawn up on the basis of a baseline scenario using the 2022 GSB. They therefore only include the impact of the measures adopted up to the date they were drawn up[27]. In AIReF's opinion, in the absence of new measures, a spontaneous structural improvement in the underlying situation of Spain's public finances cannot be expected in 2024 and 2025. Therefore, as from 2023, and in the absence of new measures, the deficit would only improve as a result of its cyclical component.

[27] See Section "4.3. 2022-2025 fiscal strategy" of the 2022-2025 Stability Programme Update

FIGURE 40. BREAKDOWN OF CHANGES IN THE STRUCTURAL BALANCE, 2022-2025 SPU



Source: 2022-2025 Stability Programme and AIReF

In this stability programme, the Government has modified the medium-term objective (MTO) from a structural balance to a deficit of -0.4% of GDP. The medium-term objective (MTO) is the benchmark established in the SGP to ensure that countries maintain a medium-term budgetary policy close to balance and that public finances are in a sound position. The Stability and Growth Pact requires EU countries to achieve these medium-term objectives by adjusting their structural positions at a benchmark rate of 0.5 percentage points. The MTO takes into account the need to achieve sustainable debt levels, while ensuring sufficient room for manoeuvre to avoid breaching the deficit limit of -3%. Each Member State may set the medium-term objective at a level it deems appropriate, provided that it is not lower than a minimum updated by the European Commission every three years[28]. In this regard, the modification of Spain's medium-term objective to -0.4% is in line with the Commission's latest update[29]. However, it may conflict with the budget stability target of the national fiscal framework, which Organic Law 2/2012 of April 27th defines as structural balance - i.e. compatible with the medium-term objective of 0% that has been in force until now. The existence of a medium-term objective for the purposes of the EU framework (structural balance of -0.4% of GDP) and another for the purposes of the national framework

[28] The last update took place in 2019. For Spain the minimum MTO was set at -0.7% of GDP. Therefore, the Government can set a new medium-term objective at or above that level.

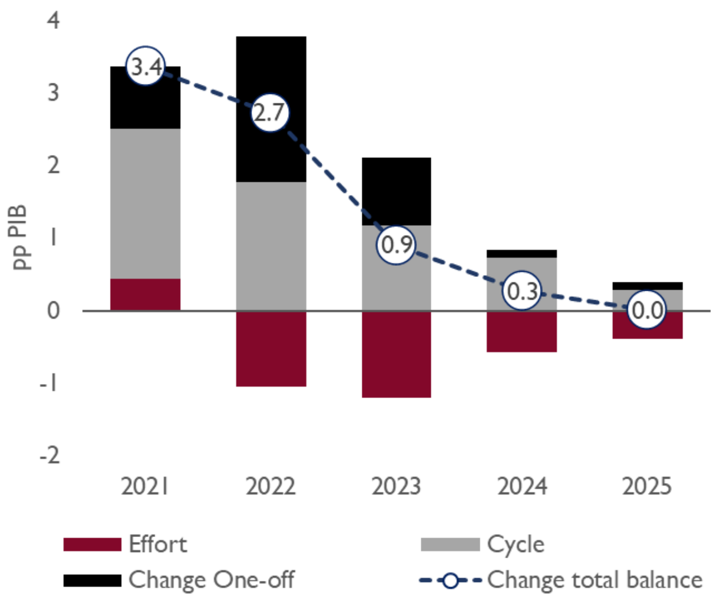
[29] See Annex 2 of the latest edition of the Vade Mecum on the Stability & Growth Pact.

(structural balance of 0% of GDP) adds confusion in a context where the need to simplify fiscal governance is heightened. At any event, according to Government estimates, the structural balance in 2025 would be around -3% of GDP, far from the medium-term objective.

5.2. AIReF's estimates on the structural position of public finances based on the information contained in the 2022-2025 Stability Programme

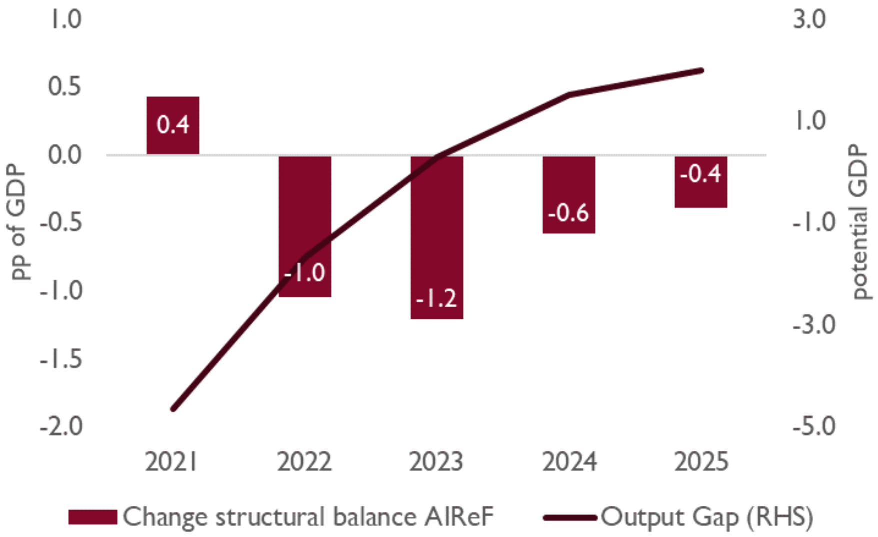
AIReF's structural balance estimates show a different path for the national fiscal policy stance, clearly expansionary from 2022 onwards. After the improvement in the underlying position of public finances in 2021, the structural balance would start to deteriorate. This is consistent with a baseline scenario such as that included in the stability programme, which, by definition, does not include measures that may offset the underlying expenditure pressures.

FIGURE 41. CONTRIBUTIONS TO CHANGES IN THE PUBLIC BALANCE, AIREF



Source: AIReF

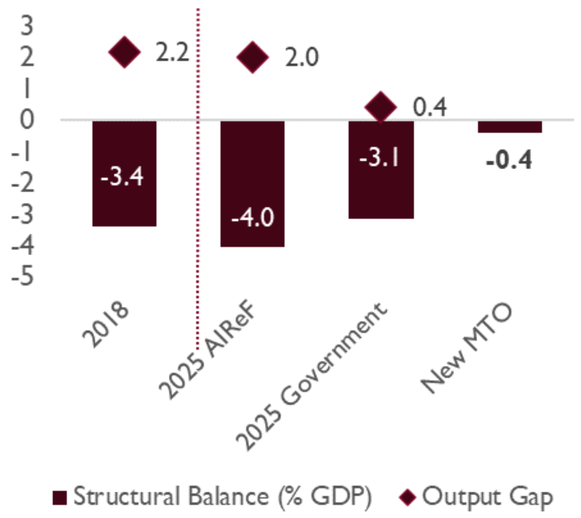
FIGURE 42. BREAKDOWN OF EVOLUTION OF THE STRUCTURAL BALANCE, AIREF



Source: AIReF

According to AIReF's estimates, when an output gap level equivalent to that before the pandemic is recovered, the structural deficit will be over half a point higher than the pre-pandemic level and one point higher than the Government's estimate. AIReF's projections do not incorporate any impact associated with the RTRP on long-term potential growth and therefore there is a convergence to pre-pandemic levels over the forecast horizon. In contrast, the Government's projections incorporate potential growth that increases in the medium term up to 2% and that in the forecast horizon is higher than that of AIReF. Thus, while AIReF's estimates predict that the output gap will enter positive territory as of next year, the Government's projections show a practically flat output gap, which hardly varies. Together with the structural improvement that the Stability Programme proposes for 2024 and 2025, this means, according to the Government's forecasts, that the structural deficit in 2025 is projected at a level that is somewhat more favourable than that recorded before the pandemic. In contrast, according to AIReF's estimates, the structural position of our public finances will record a balance of -4% of GDP in 2025, which means an increase in the structural deficit compared with the pre-pandemic position of over 0.5 percentage points.

FIGURE 43. STRUCTURAL BALANCE AND OUTPUT GAP (2018, 2025)

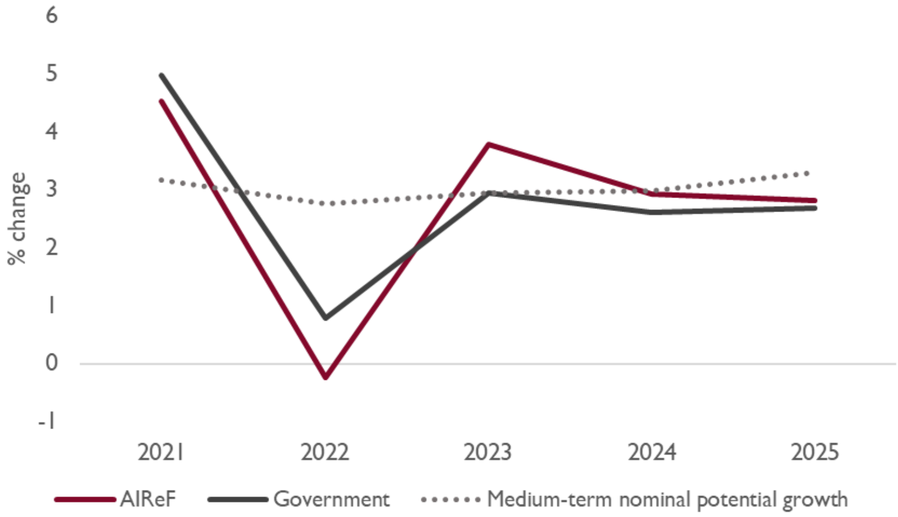


Source: AIReF and Stability Programme

Finally, the European Commission's March 2nd Communication recommends that high-debt countries limit the growth of current spending financed from national budgets. The Commission considered in March that highly indebted countries, such as Spain, should begin to gradually adjust their public finances next year. The Communication pointed out that, to achieve this, from 2023 onwards, nationally-financed current expenditure (net of discretionary revenue measures) should grow more slowly than medium-term potential output, which, according to AIReF's estimates, stands at around 3% for the period under consideration[30]. AIReF's fiscal projections predict that nationally-financed current expenditure will grow significantly below the benchmark of potential GDP over the medium term in 2022. However, over the next three years, its rate of change will only fall below this benchmark on one occasion, towards the end of the programme horizon.

[30] This benchmark is obtained from the sum of the ten-year average of real potential growth and the ten-year average of the GDP deflator, taking AIReF's estimates.

FIGURE 44. EVOLUTION OF NATIONALLY-FINANCED CURRENT EXPENDITURE



Source: AIReF and Stability Programme

5.3. AIReF estimates on the aggregate fiscal policy stance, including NGEU funds in the period 2022-2025

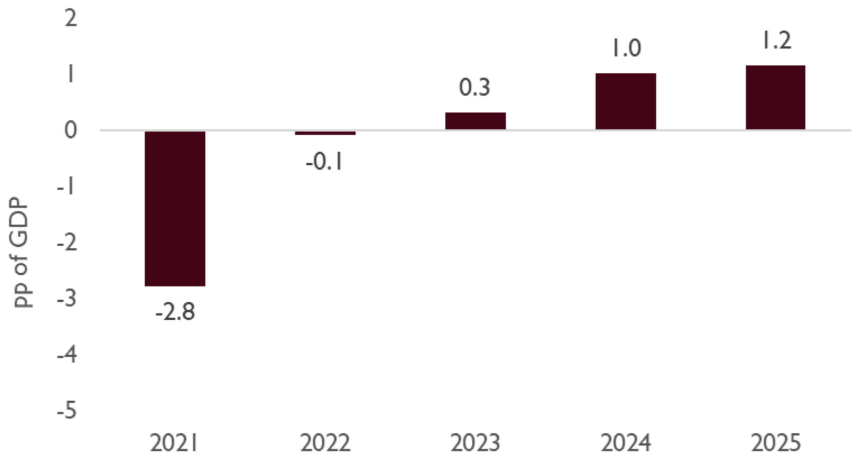
Measuring the evolution of expenditure, including NGEU funds, in relation to the potential performance of the economy in the medium term makes it possible to estimate the aggregate fiscal policy stance. This complementary measure of discretionary fiscal effort (DFE)[31] is relevant in the current circumstances, given the difficulties in estimating the output gap and structural balances in times of large cyclical fluctuations. Moreover, bearing in mind that the Next Generation EU funds have, in theory, a deficit-neutral impact, the evolution of the structural balance does not capture the magnitude of the fiscal impact associated with these funds.

The discretionary fiscal effort (DFE) indicator signals that the aggregate fiscal policy stance - including both nationally-financed and NGEU-financed expenditure - becomes contractionary from next year. In line with the signal sent by the change in the structural balance, the DFE points to a considerable fiscal expansion in 2021. This boost is mainly explained by the increase in nationally-financed primary spending (which rose by over €26bn), since for last year, AIReF's figures estimate a limited execution of RTRP funds (at a value of 0.2 percentage points of GDP). In 2022, AIReF forecasts that nationally-

[31] For further details on the methodology for calculating discretionary fiscal effort, see Carnot, N. & F. de Castro (2015). "The Discretionary Fiscal Effort: an Assessment of Fiscal Policy and its Output Effect." European Commission. *Economic Papers 543* (February 2015).

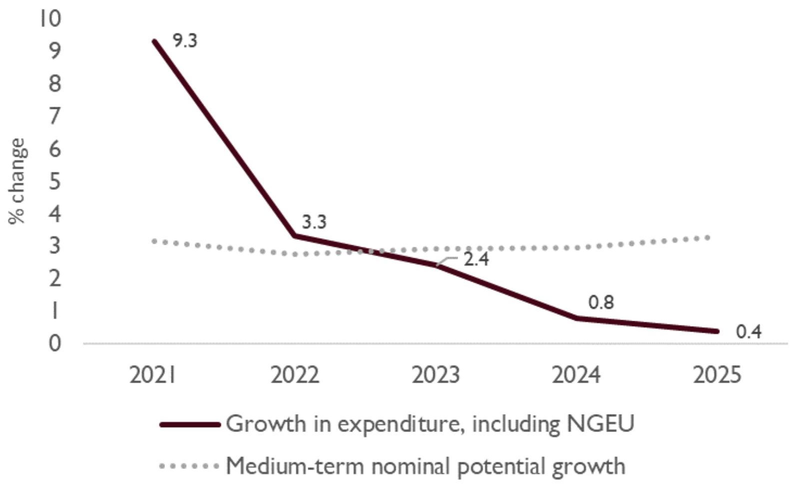
financed primary expenditure will fall, but a greater execution of RTRP funds will make it possible to maintain a slightly expansionary aggregate stance this year. From 2023, and as the effect of the funds fades, total expenditure, including that financed from the transfers of the Recovery and Resilience Facility, grows at rates lower than those marked by the nominal potential growth of the economy.

FIGURE 45. EVOLUTION OF DISCRETIONARY FISCAL EFFORT (DFE) INCLUDING NGEU FUNDS



Source: AIReF and Stability Programme

FIGURE 46. REVOLUTION OF ELIGIBLE EXPENDITURE FOR DFE PURPOSES



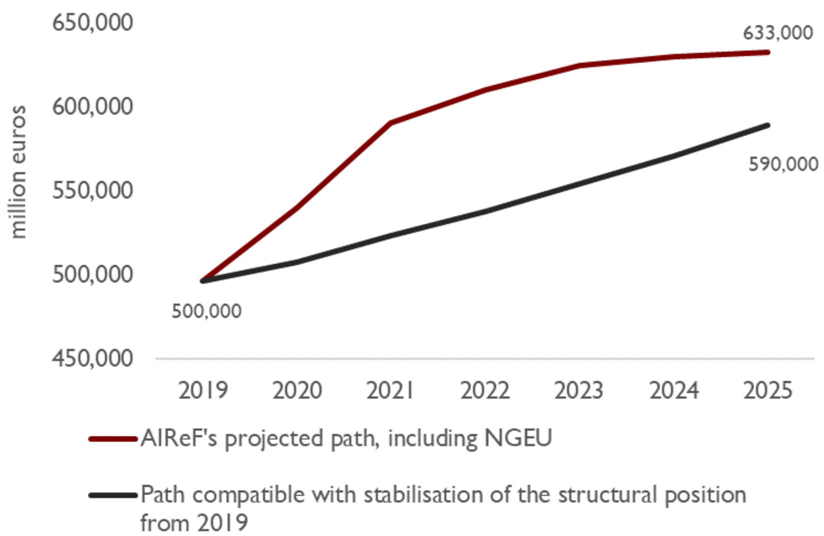
Source: AIReF and Stability Programme

If we look at spending in levels, the total projected for 2025 is €40bn higher (almost 3 points of GDP) than would have been the case in a counterfactual scenario if fiscal policy had remained neutral since 2019. In this case[32],

[32] Net of discretionary revenue measures and cyclical expenditure on unemployment.

projected net primary expenditure is compared with net primary expenditure in a reference scenario compatible with a stabilisation of the structural position of public finances. The benchmark expenditure path is constructed by projecting the level of net primary expenditure in 2019 with the potential performance of the Spanish economy over the medium term. If discretionary expenditure had grown by around 3% per year since 2019, the expenditure ratio over the cycle would have stabilised in the medium term, which – in the absence of new revenue measures – would have been consistent with a constant structural balance and a level of eligible expenditure of approximately €590bn in 2025, as opposed to the forecast of over €630bn.

FIGURE 47. ELIGIBLE EXPENDITURE FOR DFE PURPOSES: 2022-2025 SPU AND COUNTERFACTUAL SCENARIO



Source: AIReF and Stability Programme

AIReF wishes to point out the difficulty posed by the measurement of the fiscal policy stance at the present time, where there is not only the usual uncertainty around the measurement of the output gap, but also about the impact that some of the reforms associated with the RTRP may have on the potential growth of the economy. At any event, neither the analysis carried out in this section from various approaches nor the detailed analysis of the Stability Programme suggests the existence of discretionary measures that can offset the underlying expenditure pressures.

6. EVOLUTION AND SUSTAINABILITY OF PUBLIC DEBT

6.1. Recent evolution and starting point

The debt-to-GDP ratio stood at 118.4% at the end of 2021, a reduction of 1.5 points over the year and an increase of 20.1 points on the pre-pandemic level. In monetary terms, public debt has continued to grow in 2021 to reach €1.43tn. However, the rate of debt growth has been lower than that of nominal GDP, which has led to a reduction in the ratio. The quarterly profile shows three consecutive quarters of reduction after five quarters of rises, with the ratio falling by 6.8 points from the high reached in the first quarter of 2021 (125.2%).

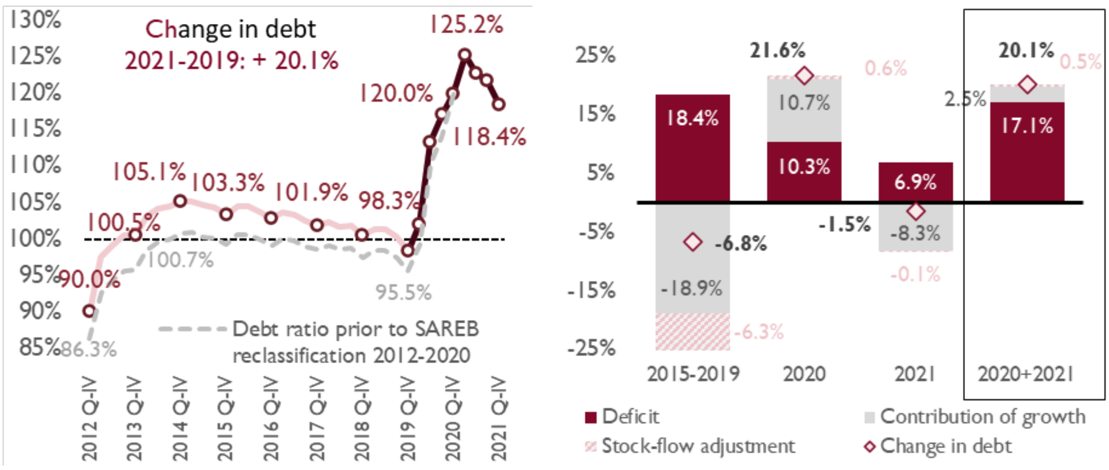
The Bank of Spain has revised the historical series of EDP debt incorporating the effects of the reclassification of the Sociedad de Gestión de Activos Procedentes de la Reestructuración Bancaria (SAREB) to the General Government sector since its creation in 2012, increasing the ratio until 2020 by an average of 3.7 points of GDP. Since the EDP notification in the spring of 2021, SAREB has been included within the General Government sector with effect from December 2020[33]. However, in the context of this year's spring EDP notification, the Bank of Spain has decided, in agreement with Eurostat, to reclassify that unit within the sector since its creation in 2012. The most recent

[33] See the "*Briefing note on the revision of the General Government debt according to the Excessive Deficit Procedure (EDP). SAREB reclassification in the General Government sector*"

EDP debt data, from the end of 2020, are not affected by moving the reclassification of SAREB back in time, but the previous data are affected. This retrospective revision has raised the stock of debt as a result of the previous financial crisis by an average of 3.7 points of GDP in the revision period (2012-2020), raising the previous all-time high of late 2014 to 105.1% (from 100.7% previously) and placing the pre-pandemic debt stock three points higher.

FIGURE 48. EVOLUTION OF DEBT AND CONTRIBUTIONS TO THE CHANGE

DEBT (% GDP), QUARTER-ON-QUARTER EVOLUTION | **CONTRIBUTIONS TO THE CHANGE IN DEBT (% GDP)**



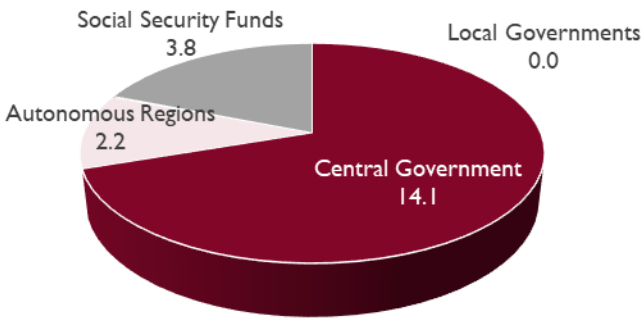
Source: Bank of Spain, INE and AIReF.

The debt ratio eventually recorded in 2021 (118.4%) is an improvement on the different forecasts made both by international bodies - European Commission (120.6%), IMF (120.4%), OECD (120.1%) - and by the national ones - Government of Spain (119.5%), Bank of Spain (120.4%) and AIReF (119.8%).

Following the sharp increase caused by the pandemic, the debt ratio is stabilising. A significant reduction in the high public deficit resulting from the health crisis together with the rebound in activity has caused the debt ratio to stabilise in 2021 following the sharp increase in 2020. Over the 2020-2021 period as a whole, a negative contribution of economic growth to the increase in the debt ratio (2.5 points) is estimated, but almost 90% of the debt increase for the period is determined by the public deficit and the stock-flow adjustment (17.6 points).

The Central Government and the Social Security Funds have borne 90% of the increase in debt in the last two years by financing most of the expenditure associated with the pandemic. The extraordinary transfers and the non-impact of the fall in tax revenues on the instalment payments made to the Autonomous Regions under the ordinary regime have cushioned the increase in the debt ratio of the Autonomous Regions. This ratio has only grown by 2.2 points – to 25.9% of GDP – of which 0.7 points are attributable to the denominator effect. For their part, Local Governments saw no increase in their debt.

FIGURE 49. INCREASE IN DEBT (GDP POINTS) BETWEEN 2021 AND 2019 BY SUB-SECTOR



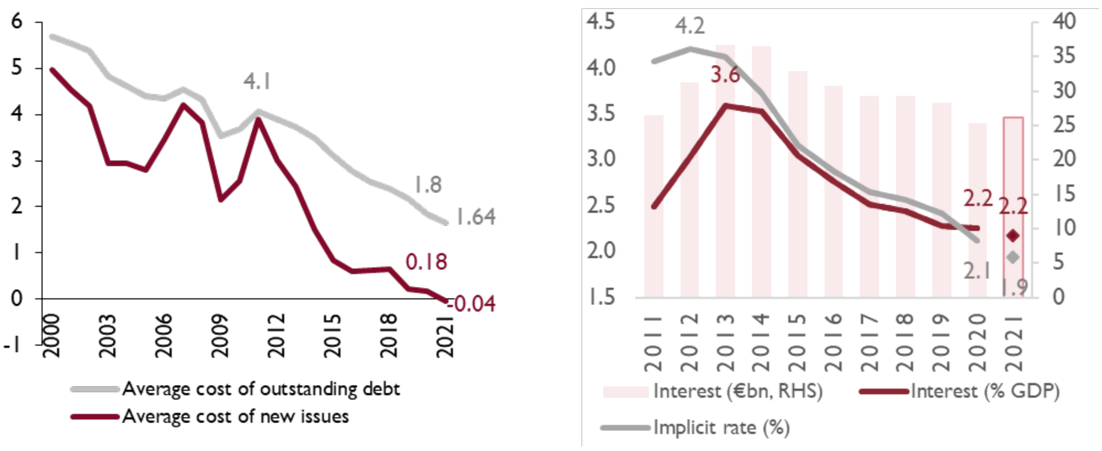
Source: Bank of Spain, INE and AIReF.

Despite higher borrowing, the cost of debt has continued to fall, recording a new all-time low in 2021. For the first time, the average cost of the Treasury's issues for the year as a whole was in negative territory in 2021. The low yields recorded in all sovereign debt issuance maturities, close to all-time lows, have placed the average rate of new issues in negative territory for the first time. In 2021, the Public Treasury has placed over 60% of its debt issues at negative rates. This has made it possible to maintain the path of reducing the average cost of financing, which has reached a new all-time low. Specifically, the average cost of new issues fell in 2021 to -0.04%, from 0.18% at the end of 2020, which meant that the average cost of the entire State debt portfolio stood at 1.64% at that date, down from 1.86% at the end of 2020.

The low issuance rates have made it possible to stabilise the financial burden despite a marked increase in debt. Interest expenditure stood at 2.2% of GDP in 2021, the same figure as at year-end 2020. In absolute terms, it rose by €848m to €26.09bn. The implicit rate continued the downward trend started in 2012, to stand at 1.9%.

FIGURE 50. DEBT INTEREST RATES AND FINANCIAL BURDEN

AVERAGE COST OF STATE DEBT (%) **FINANCIAL BURDEN AND IMPLICIT RATE OF THE DEBT**



Source: Public Treasury, IGAE

6.2. Debt projections over the horizon of the Stability Programme Update (2022-2025)

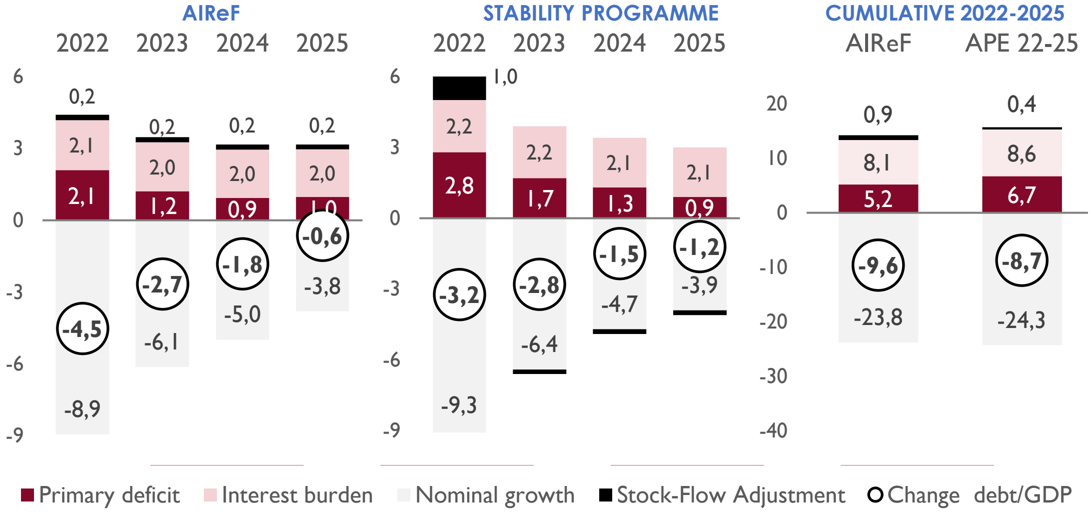
Under the macro-fiscal forecasts prepared by AIReF to assess the Stability Programme, the debt-to-GDP ratio is projected to fall by 9.6 points over the next four years to 108.8% in 2025. After reaching its peak value in the first quarter of 2021 (125.2%), the debt ratio has started a downward path, to stand at 118.4% of GDP at the end of 2021. AIReF's projections show a continuation of this trend over the next four years, with the ratio expected to stand at around 114% at the end of this year, and in a range between 107% and 111% according to the central interval of AIReF's stochastic projections[34] for 2025.

The reduction in the ratio will be mainly supported by the growth in nominal GDP, where the deflator will play a very significant contribution. Most of the reduction in the debt ratio (7.2 out of the 9.6 points forecast up to 2025) takes place in the first two years, coinciding with the economy's sharp nominal growth, while it is forecast to stabilise somewhat as from the third year. The Government deficit will continue to contribute significantly to the increase in debt, with a financial burden that will rise in absolute terms, but will remain stable relative to GDP due to the sharp nominal increase in the latter. It should be noted that 2020 already saw a turning point in the evolution of the level of

[34] The technique consists of simulating a very large number of debt paths incorporating the shocks observed in the past to determine a future probabilistic distribution around a central path through the variance-covariance matrix of the shocks of a VAR model. The central interval corresponds to the 40-60 range of these projections.

the interest expense, starting an upward path after the long period of continuous falls that began in 2013.

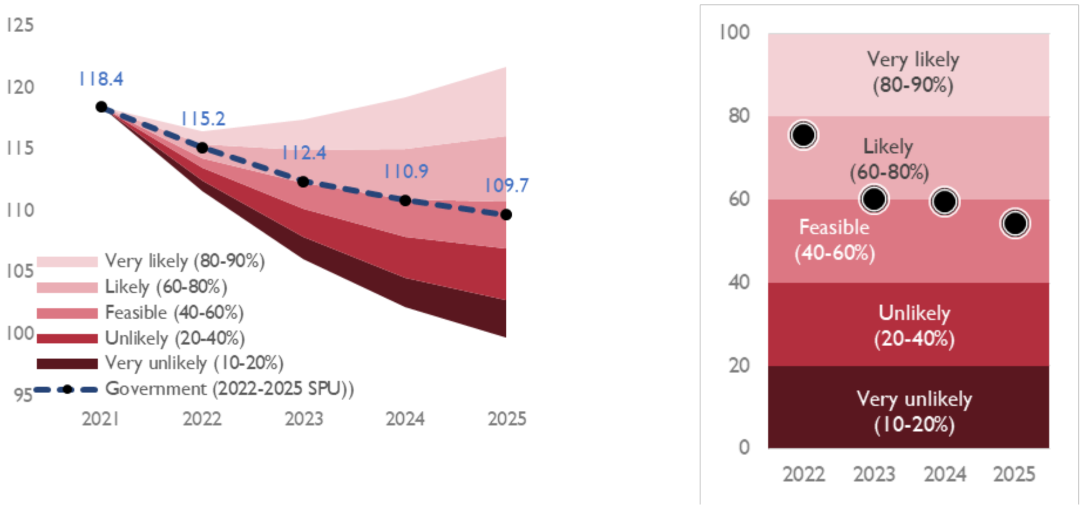
FIGURE 51. CONTRIBUTIONS TO THE CHANGE IN THE DEBT-TO-GDP RATIO



Source: Government and AIReF

AIReF considers the debt projection included in the SPU for 2025 to be feasible. According to AIReF's stochastic projections, achieving a debt-to-GDP ratio equal to or lower than that projected by the Government in 2025 is considered feasible. Over the period as a whole, both the reduction in the ratio projected by AIReF and the composition of the factors that determine its evolution are similar to those estimated by the Government.

FIGURE 52. DEBT FORECASTS (% GDP) AND LIKELIHOOD OF REACHING A RATIO EQUAL TO OR LOWER THAN THAT PROJECTED BY THE GOVERNMENT IN THE 2022-2025 SPU



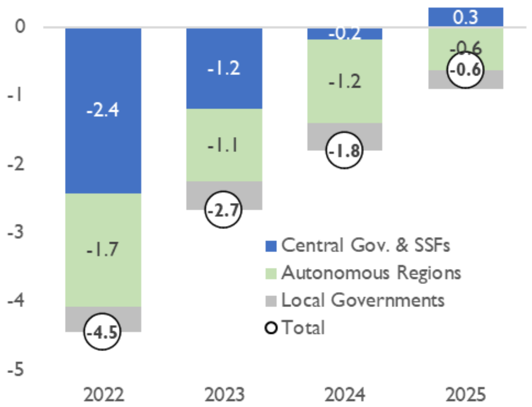
Source: Government and AIReF

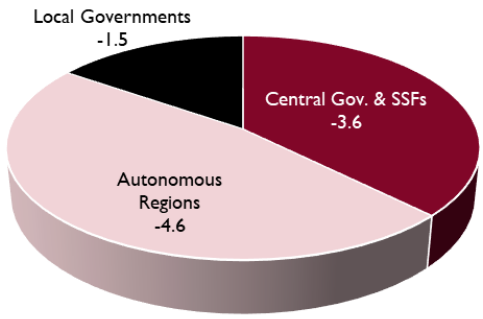
At a sub-sector level, the largest reduction in the debt ratio will be recorded by the Autonomous Regions. According to forecasts prepared by AIReF, the Autonomous Regions will record the largest reduction in the debt ratio (4.6 points), bringing their ratio to 21.4% of GDP in 2025. The ratio will fall to a lesser extent in the CG and SSFs (3.6 points) and the LGs (1.5 point).

FIGURE 53. CHANGE IN DEBT BY SUB-SECTOR (GDP POINTS)

BY YEARS

CUMULATIVE PERIOD 2022-2025





Source: AIReF

6.3. Sustainability and risk analysis

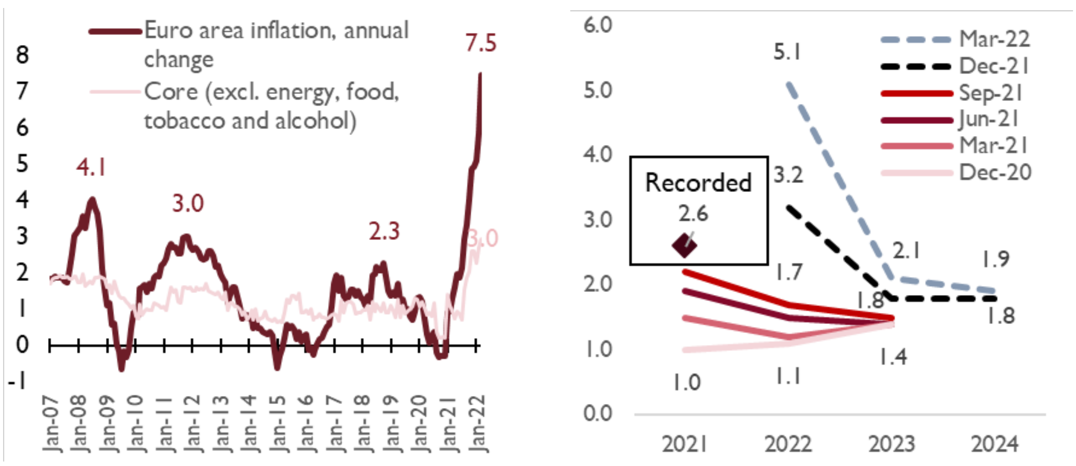
The significant increase in the stock of public debt places the sustainability of public finances in a highly vulnerable position in the medium term. The scars of the previous financial crisis, together with the sharp increase in borrowing caused by the pandemic, have brought the debt-to-GDP ratio to an all-time high, thus considerably increasing the vulnerability of public finances over the medium-term.

6.3.1. Financing conditions: inflation and interest rates

The rise in energy and raw material prices and supply chain problems have triggered a rise in prices that has far exceeded the initial forecasts. The sharp upturn in inflation worldwide continues to surprise with rises that exceed all forecasts month after month. This raises the risk of second-round effects on wages and prices, causing inflationary pressures to persist longer than expected. The year-on-year inflation rate in the euro area stood at 7.5% in April, the highest figure since records began in 1997. The increase in prices has surprised the monetary authorities, who have been continuously revising their forecasts upwards. The ECB underestimated its forecast for 2021 by 1.6 points and has recently revised its inflation forecast for 2022 by almost two points, to stand at 5.1%. Core inflation has also picked up from its lowest level reached at the end of 2020 to stand at 3.5%, well above the 2% target for price stability.

FIGURE 54. HISTORICAL INFLATION AND OUTLOOK

HARMONISED INFLATION IN THE EURO AREA | ECB'S EUROPEAN INFLATION FORECASTS



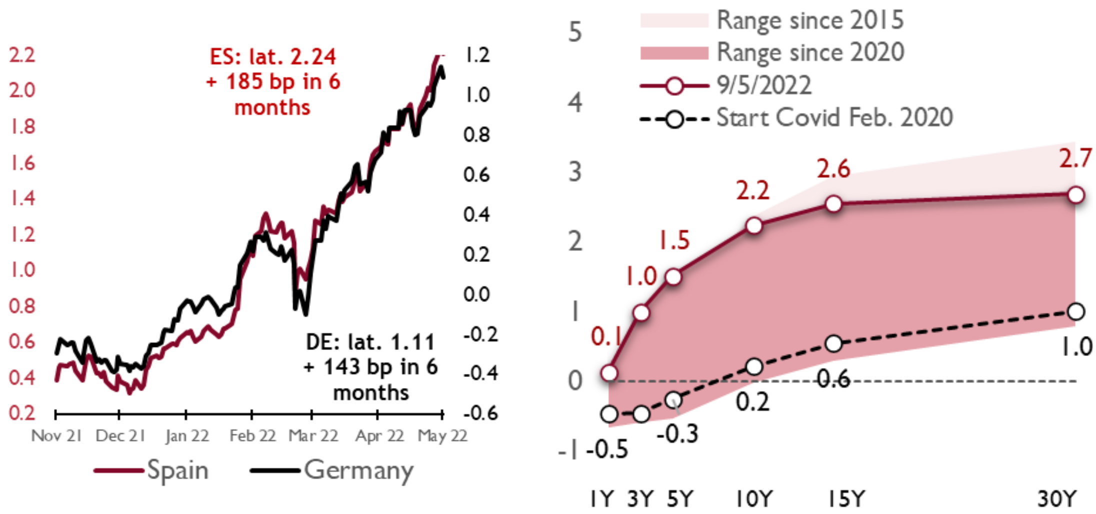
Source: Eurostat and ECB

The sharp upturn in inflation worldwide has led to a tightening of monetary policy, worsening financing conditions. The sharp upturn in inflation has led to the gradual withdrawal of stimulus packages by central banks, initiating a tightening of monetary policy with interest rate hikes. The Bank of England and the US Federal Reserve have raised their reference rates on four and two occasions, respectively, and further rate hikes are expected in the coming months and years. The ECB is expected to start with hikes after the summer, once the asset purchase programmes have concluded.

Financial markets have started the year by adjusting to the new scenario of high inflation and rises in interest rates favouring a correction in equities and an increase in yields in all sovereign debt tranches. The possibility of the episode of inflation becoming more permanent could trigger upward spirals. This risk has focused the attention of financial markets on inflation data, energy prices and the statements of the various members of the leading central banks. Long-term interest rates on sovereign debt of the highest credit quality have started an upward trend, interrupted at certain times due to the safe-haven nature of this class of asset in situations of major uncertainty. The US ten-year bond stands at around 3%, while the German bond stands in positive territory at 1%. The yield on the Spanish ten-year bond stands above 2%, an increase of 185 basis points in the last six months. The spread between the Spanish and Italian ten-year bonds and the German bond (risk premium) has widened by 35 and 75 points compared with last year's average, to 110 and 200 basis points, respectively.

FIGURE 55. YIELD ON SOVEREIGN DEBT

10-YEAR BOND YIELD (%) **SPANISH INTEREST RATE CURVE (%)**



Source: ECB and Refinitiv, May 9th, 2022

The sovereign debt interest rate curve stands at two-year highs, exceeding the levels recorded at the start of the pandemic. Following a year, 2021, with interest rates close to all-time lows, the sovereign debt yield curve now stands at two-year highs. However, from a historical perspective, interest rates cannot be considered high.

The sharp increase in sovereign debt yields recorded over the past year will result in an increase in the financial burden of approximately €20 billion in the period 2021-2024 compared with the forecast in the previous report on the Stability Programme. In line with the evolution of sovereign bond yields over the last year, the central interest rate scenario for the coming years will be more than 100 basis points higher than the previous forecast for new issues. This will result in a cumulative increase in the financial burden of approximately €20bn.

In the short term, an additional rise in sovereign debt interest rates would have a limited impact on the evolution of the debt ratio. However, in the medium and long term, higher interest rates would require a more intense and prolonged fiscal effort. According to AIReF simulations, a 100bp-rise in rates in all sections of the curve would not result in a substantive change in the evolution of the short-term debt ratio (specifically, it would generate an increase of 0.7 points in 2025). However, it would result in a certain increase in the financial burden as a percentage of GDP (by 0.4 points) and an additional accumulated interest expense in 2025 of just over €15bn. Although in the short term the impact of a rise in rates is limited, in the medium and long term, the impact would end up being very significant in the evolution of the financial burden and, if not offset by adjustments in other expenditure or revenue items, in the debt path.

FIGURE 56. INTEREST RATES ON NEW ISSUES

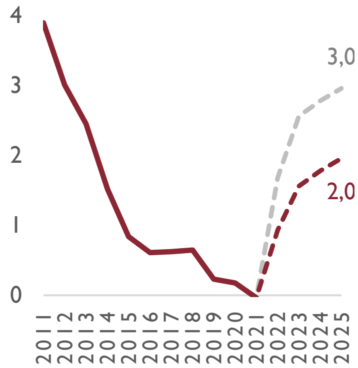


FIGURE 57. AVERAGE INTEREST RATE OF THE DEBT

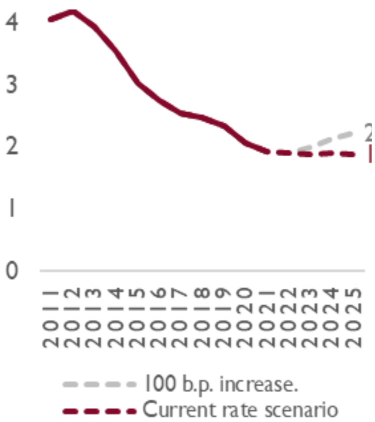
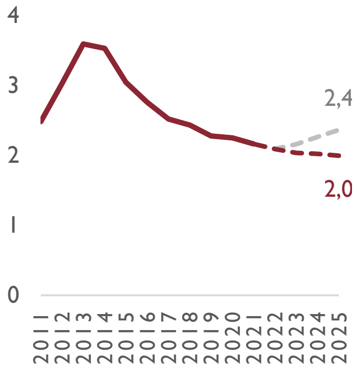


FIGURE 58. INTEREST EXPENDITURE (% GDP)

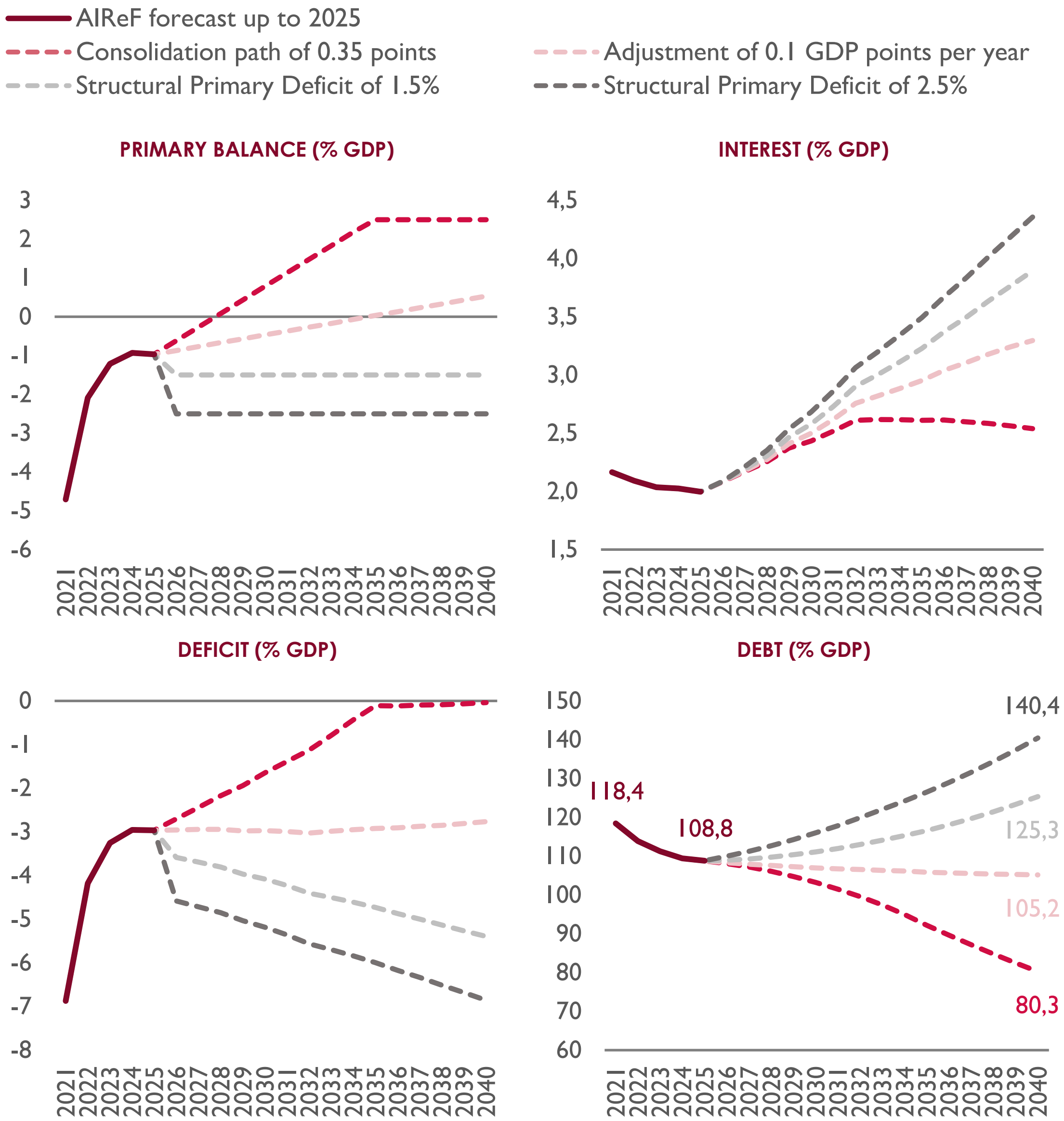


Source: AIReF

6.3.2. Long-term projections and sustainability

AIReF's projections paint an unfavourable trend in the medium and long-term debt ratio under a no-policy-change scenario. Beyond the reduction in the debt ratio that is expected in the short term, once the boost in growth as a result of the rebound in activity following the shutdown during the pandemic ends and prices return to the historical average, the debt-to-GDP ratio will resume an upward path under the assumption of a no-policy-change scenario.

FIGURE 59. LONG-TERM PROJECTIONS BASED ON DIFFERENT PRIMARY BALANCE PATHS

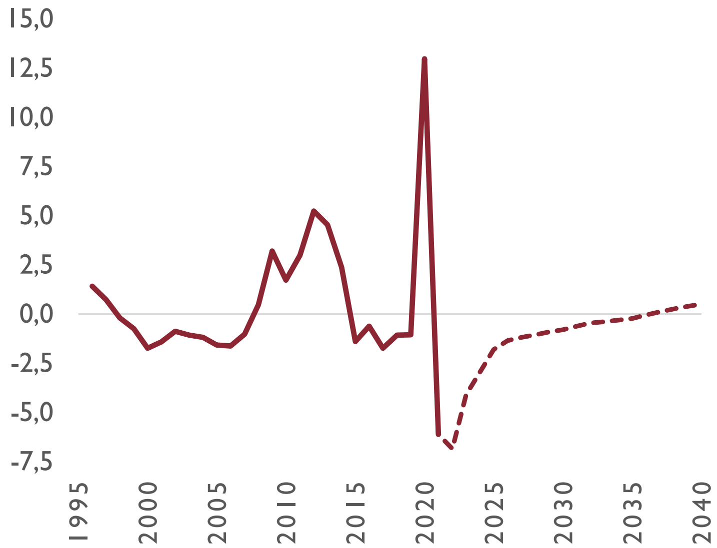


Source: AIReF

As AIReF's simulations show, maintaining a structural primary deficit of between 1.5% and 2.5% of GDP as from 2025 (in line with the Government's and AIReF's estimates, respectively) would initiate an upward trend in the debt ratio path. The no-policy-change scenario from 2025 is that in which a structural primary balance of between -1.5% and -2.5% is maintained[35]. In this no-policy-change scenario, the total deficit would widen as a result of higher interest expenditure. This would again lead to a rising debt ratio path that would exceed all-time highs over the next decade.

The interest rate-growth differential will not be sufficient to keep the debt ratio stable. The negative interest rate-growth differential, which will make it possible to generate a positive "snowball" effect over the coming years, will not be sufficient to stabilise the debt ratio if the primary deficit remains higher than 1.5% of GDP. The recent upward trend in debt interest rates, together with the medium-term projection of moderate growth rates, will result in the differential closing by the middle of next decade.

FIGURE 60. PROJECTION OF INTEREST-GROWTH DIFFERENTIAL (CONTRIBUTION TO CHANGE IN DEBT, GDP POINTS)



Source: AIReF

The high level of debt, together with higher financing rates, will require a sustained structural adjustment to keep the debt ratio stable and contain the financial burden. AIReF's projections indicate that the structural deficit will need to be reduced by at least 0.1 points of GDP per year to keep the debt

[35] These primary structural balance figures are compatible with the estimates of the level of the structural balance of 2025 made by the Government (-3.1%) and by AIReF (-4%).

ratio stable at values at around 105% of GDP. High debt in the medium and long term will result in a significant increase in the financial burden. Thus, maintaining a primary deficit of between 1.5% and 2.5% of GDP and an increasing debt ratio would raise interest expenditure from the 2.2% recorded in 2021 to a figure of between 4% and 4.5% in 2040. The total deficit would therefore widen to a range of between 5% and 7%. The annual adjustment of 0.1 points needed to stabilise the debt would reduce the financial burden to 3.3%, stabilising the total deficit at 3%.

Beyond containing and stabilising the debt ratio, the financial sustainability of the public accounts will require a path for reducing the debt ratio towards a much more comfortable position. A gradual and sustained reduction in the public deficit towards a balanced budget, as indicated by the Spanish legal system, will generate a path of sustained reduction in the debt ratio to more prudent levels. As the simulations carried out by AIReF show, achieving balanced public accounts in the next decade will require a sustained structural fiscal adjustment of between 0.25 and 0.5 points per year. For example, an annual adjustment of 0.35 points would make it possible to reduce the debt ratio to 80% in 2040, achieving budgetary balance in 2035 and maintaining a low interest expenditure of around 2.5% of GDP.

The debt path would increase significantly when considering the structural expenditure relating to an ageing population. Higher structural expenditure on pensions (see Box 6 "*Impact of the 2021 pension reform*") that is not covered by additional revenue will lead to a significant rise in debt from historically high levels.

6.3.3. Medium- and long-term risks

One of the main risks in the short term is that the current episode of high inflation becomes more persistent, unleashing upward spirals and second-round effects on labour costs that force the monetary authorities to take stronger actions. The pandemic has heightened the challenges associated with high levels of public debt, the future sustainability of which is strongly linked to the policies of the ECB. The swift action by the monetary policy body has avoided the resurgence of any doubt about the sustainability of high debt levels. The purchase of public assets through the Pandemic Emergency Purchase Programme (PEPP) has covered most of the extraordinary borrowing needs, while managing to place the entire yield curve at historical lows, minimising spreads between euro area countries. The current episode of inflation, which is higher and longer lasting than initially expected, is forcing a change in the monetary policy stance towards a less accommodative one with the withdrawal of stimulus measures (termination of government debt purchase programmes), clearing the way for an expected rise in interest rates by the ECB before the end of the year. This possibility is beginning to be discounted in the markets with the steepening of the yield curve.

The high level of debt represents a high risk of increasing the financial burden. The global fall in interest rates and the lengthening of debt maturities recorded over recent years have contributed to reducing and stabilising the financial burden. However, the high debt level has considerably increased the risk of a future increase in debt rates. This risk has been mitigated in part thanks to the strategy of lengthening the average life of the portfolio, where the impact of a rise in interest rates would take over seven years to fully carry over to the cost of debt.

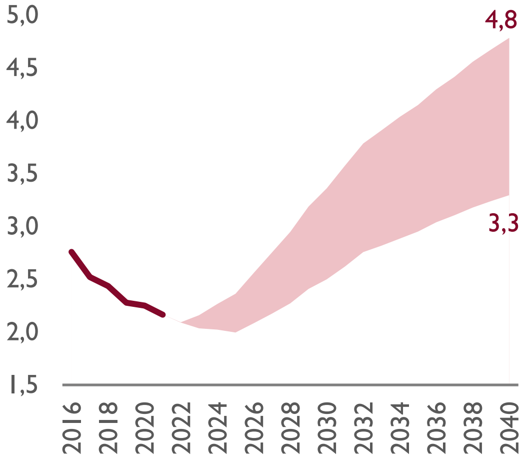
In the long term, an increase in interest rates would eventually have a very significant impact on the evolution of the financial burden and the debt path. AIReF's simulations show that an increase in current interest rate expectations could result in a significant increase in the financial burden:

- In the scenario of stabilisation of the debt ratio (which requires an annual consolidation of 0.1 points of GDP), an increase of 100 bp would result in an increase in the financial burden of 1.5 points in 2040 (from 3.3% to 4.8% of GDP). If it is not offset by additional measures to reduce spending or increase revenue, it would have a 14-point impact on the debt ratio, which would also return to an upward path.
- This impact would be higher in scenarios with growing debt (constant primary deficits of between 1.5% and 2.5% of GDP). Specifically, it would mean an additional 1.7 to 1.9 points of financial burden and an additional 15 to 16 points of debt.

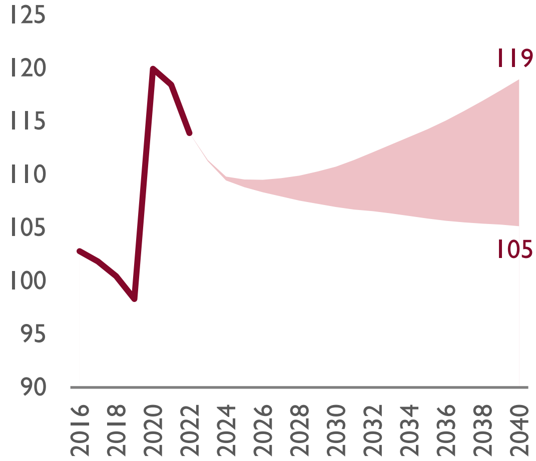
- The increase in rates will have a more limited impact in the case of the debt reduction scenario (fiscal consolidation of 0.35 points per year), resulting in an increase of 1.2 points in interest expenditure and an additional 12 points of debt.

FIGURE 61. IMPACT OF A 100 B.P. INCREASE IN INTEREST RATE EXPECTATIONS (DEBT STABILISATION SCENARIO)

FINANCIAL BURDEN (% GDP)



DEBT (% GDP)



Source: AIReF

The Covid-19 crisis has raised, albeit not very significantly, the refinancing risk. Gross borrowing will grow in the coming years as a greater stock of debt is repaid. Once again, the strategy implemented by the Public Treasury of lengthening the average maturity of the debt portfolio, together with its appropriate management of the maturity profile, will mitigate this risk.

In the long term, the reduction in sovereign debt on the ECB's balance sheet might pose a major challenge that is not without risk as it will require the return of a significant part of the resident investor base that has been displaced over recent years in which the ECB has made net purchases of Spanish debt for an amount greater than 100% of net borrowing needs. The ECB's various public asset purchase programmes initiated in 2015 and intensified in 2020 and 2021 have made the Bank of Spain one of the main holders of Spanish Government debt, with its share of the total debt rising by 25 points over the last five years to around 35%. This increase in holdings has displaced part of the resident investor base, with non-resident investment in securities remaining stable at slightly over 40%.

FIGURE 62. ECB NET PURCHASES VS. TREASURY NET ISSUANCE

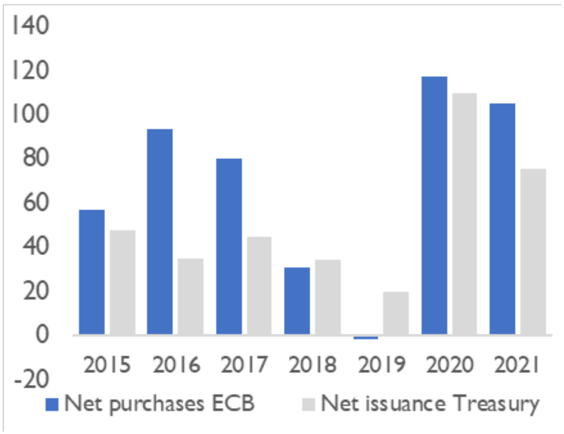
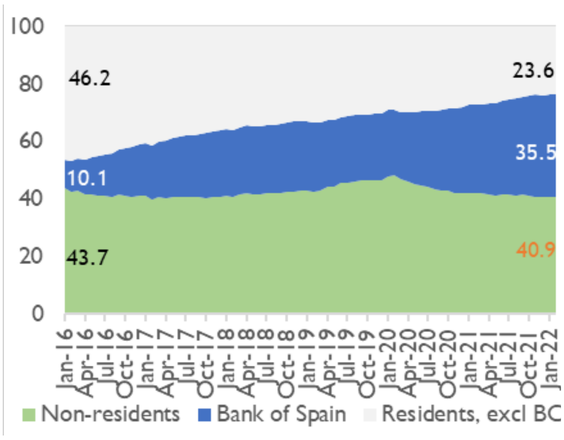


FIGURE 63. HOLDINGS OF GOVERNMENT DEBT BY INVESTOR TYPE (%)



Source: ECB, Bank of Spain and Public Treasury

The increase in contingent liabilities through the Lines of Guarantees poses a risk in the short and medium term, although its impact is limited. In 2020, the Government approved the implementation of two lines of guarantees for a joint amount of up €140bn aimed at guaranteeing the financing granted to self-employed workers and Spanish companies affected by the economic effects of COVID-19. This has led to a significant increase in contingent liabilities. At the end of March 2022, the COVID-19 Lines of Guarantees had deployed guarantees for an amount in excess of €90bn. Although there is a significant risk that part of the COVID-19 Lines of Guarantees will be enforced, the impact of the materialisation of these contingent liabilities on government debt is limited and does not, in itself, endanger its sustainability.

Finally, it is important to note that the expected increase in healthcare and pension spending as a result of the ageing population is one of the major risks for the sustainability of public finances in the medium and long term. As indicated above, higher structural expenditure that is not covered by additional revenue will lead to a very significant rise in debt from levels that are already historically very high. In this regard, AIReF will shortly publish an "*Opinion on the long-term sustainability of public finances*" in which the demographic and macroeconomic scenario and long-term projections of pension expenditure will be updated, including the impact of recent pension system reforms and an assessment of their impact on public debt.

7. RECOMMENDATIONS

7.1. New Recommendations.

The General Government closed 2021 with a deficit of 6.9% of GDP, 1.5 points below the reference rate and the Government's forecasts. This deficit level is in line with AIReF's forecast in its last budget execution monitoring sheet and is 1 point lower than the forecast contained in its Report on the main budgetary lines and draft budget published in October 2021. This larger-than-expected reduction in the deficit was mainly based on an increase in tax collection above that expected by both AIReF and the General State Budget.

Despite this more positive year-end figure, the Government maintains for 2022 a deficit forecast for the GG of 5% of GDP, 0.8 point higher than AIReF's forecast. Although the fiscal rules are still suspended in 2022, the Government's forecast acts as an anchor for the actions of the GG as a whole. Taking into account AIReF's central scenario, the Government's forecast is not demanding and may generate the risk that it will be viewed by the different administrations as a margin to conduct a more expansive fiscal policy than that resulting from the budgets already approved.

As was the case in 2021, the revenue forecast in the 2022 General State Budget will also be exceeded, which may also reinforce the idea that there is room to raise expenditure or reduce revenue in a structural manner. However, as is evident in the analysis of the sustainability of public debt, this margin is totally fictitious, since the high levels of public debt and deficit place the Spanish economy in a position of vulnerability to future shocks.

In addition, higher-than-expected inflation would also bring an additional increase in revenue in the short term over and above the forecast amount, which may reinforce that idea. However, as indicated in the report, medium-term inflation also deteriorates the fiscal balance through the increase in pensions and public wages, the rise in the operating costs of the public sector and the increase in the interest burden.

In addition, the increases in tax collection above the forecasts in the 2021 and 2022 GSB will have an impact on the Autonomous Regions and Local Governments in 2023 and 2024 as a result of the settlements of the financing systems. As stated in AIReF's forecasts, the ARs and LGs will have a major increase in revenue in both years in a purely circumstantial manner. There is once again the risk that this temporary revenue will be allocated to finance increases in expenditure or reductions in other revenue on a structural basis.

These risks are more evident in the absence of a medium-term fiscal strategy and in a context of suspended fiscal rules and uncertainty about the future fiscal framework.

Consequently, AIReF recommends that the Ministry of Finance and the entire GG should:

1. **Allocate the revenue that materialises above the forecast and the temporary revenue towards accelerating the necessary reduction in the structural deficit and avoid increases in expenditure or reductions in revenue of a structural nature that do not have funding that is also structural.**

Russia's invasion of Ukraine, coupled with previously existing tensions in energy markets, has led the Government to adopt new measures and extend existing ones in order to mitigate the rise in energy prices. These measures are assessed in detail in the corresponding section of the report, assuming that they will only be in force until June 30th, as is also assumed by the Government in the SPU.

However, in the section on fiscal risks, AIReF notes that persistent or aggravated tensions in these markets may lead to the need to approve an extension of existing measures or even additional measures. This would result in an estimated increase in the deficit of between 0.2 and 0.6 points of GDP, depending on the measures to be extended until the end of the year.

All these measures have, in theory, a clearly temporary nature and this has been reflected in the regulations governing them. Consequently, both AIReF and the SPU assume that they will be reversed in the following year and will not affect the structural deficit at the end of the forecast period, although they do affect the debt level. In this regard, AIReF has already pointed out on several occasions that the medium-term fiscal strategy needs to be flexible in order to adapt to the current context of risks so as to allow the preservation of economic growth to be compatible with a realistic and credible path of debt reduction to sustainable levels. This means fitting the measures necessary to counteract the materialisation of the various risks identified into the strategy.

Taking into account the vulnerable position in which the high level of public debt places the Spanish economy, these measures should be designed according to criteria of efficiency and effectiveness, as well as their impact in redistributive terms, and aimed at avoiding a structural impact on the public accounts.

Consequently, AIReF recommends:

2. **Evaluating the impact of the measures adopted in terms of efficiency, effectiveness and redistributive impact before deciding, where necessary, on their possible extension.**
3. **Designing the new measures, where appropriate, taking into account the criteria of effectiveness, efficiency and redistributive impact and setting out in an explicit and quantified manner the objectives pursued, the time-frame and the circumstances and assumptions under which they would be extended, as well as the procedure for their evaluation. Along the same lines, in the event that they involve a structural increase in the deficit, to identify their source of financing.**

7.2. Live recommendations[36]

Medium-term fiscal strategy

Since the activation of the escape clause for the suspension of fiscal rules as a result of the crisis generated by the pandemic in 2020, AIReF has been making recommendations for the Government to establish a medium-term

[36] This section sets out recommendations made in previous reports which, even though the Ministry of Finance and Civil Service has explained the reasons why it deviates from compliance with the recommendations, AIReF considers them important for achieving the effectiveness and credibility of fiscal rules and a robust fiscal framework, which it believes is not guaranteed by the usual system and practices. It therefore considers that these recommendations remain in force. They are "live recommendations" and it urges the Ministry of Finance and Civil Service to comply with them. Should this not be the case, it is not necessary to once again explain the reasons for deviating from them, unless they are no longer the same.

fiscal strategy that will act as fiscal guidance and will realistically and credibly ensure the financial sustainability of the GG. This requires:

- The support of all tiers of government, considering their fiscal realities in terms of revenue and powers, in order to ensure appropriate coordination and co-responsibility.
- Specifying the fiscal targets and milestone schedules.
- Including a sufficiently long-time horizon to place the debt on a path that will reduce its level of vulnerability.
- Integrating the macroeconomic and fiscal implications of the investments and reforms set out in the RTRP.
- Basing the strategy on realistic macroeconomic and fiscal forecasts.
- Including measures for contingency scenarios.

The Ministry of Finance and Civil Service has provided different reasons for deviating from compliance. These include those that consider that the recommendation is already being implemented through the different processes that affect the configuration of the public accounts, that is, the Stability Programme Update (SPU) and its subsequent implementation in the Budgetary Plan and the GSB, as well as the Recovery, Transformation and Resilience Plan (RTRP).

The SPU is, in theory, the medium-term national fiscal plan required by European regulations. However, once again, the SPU sent to the European institutions is far from being the medium-term fiscal strategy that AIReF has recommended that the Government should draw up on numerous occasions. On the one hand, in 2025 the structural deficit will stand at around 4%, 0.6 points above the pre-pandemic level. Furthermore, it is noted that at the end of the period the margin to reduce the deficit without adopting additional measures is exhausted, with the deficit stabilising at around 3% in 2024 and 2025, which is the limit set by the Stability and Growth Pact. This stagnation in the reduction of the deficit will put a brake on the reduction of public debt, which in 2025 will still be at very high levels, 108.8% of GDP. This places Spain in a very vulnerable position in view of the likely tightening of monetary conditions.

In addition, the RTRP is still not integrated into the SPU. Firstly, no realistic path of execution of the investments in national accounting terms or their potential impact on structural spending is presented. Secondly, although the RTRP lists various measures aimed, in principle, at reducing the structural deficit, such as tax or pension reform, among others, the SPU does not integrate them into its budget scenario or quantify their potential impacts.

The absence of a medium-term fiscal strategy that encompasses all the key elements of fiscal and economic policy is of particular concern in the current macroeconomic scenario with significant downside risks. The situation requires the capacity to adapt economic policy to the possible materialisation of risks arising from, *inter alia*, the war in Ukraine, inflation and the pandemic. At the same time, a roadmap is required to reduce the structural deficit without hampering economic growth and allowing public debt to be brought to levels that mitigate the vulnerability of the Spanish economy to future crises.

For all these reasons, AIReF maintains the recommendation made to the Ministry of Finance and Civil Service alive:

4. That it should complete the medium-term fiscal strategy to achieve a level of deficit that is sufficient to steer the debt towards more sustainable levels that will reduce the vulnerability of the Spanish economy, which involves:

  a. Extending the time horizon of the strategy

  b. Integrating the macroeconomic and fiscal implications of the implementation of the investments and reforms set out in the RTRP into the strategy

Content of the SPU

The SPU, as stated in the document itself, is considered as the national medium-term fiscal plan referred to in Article 4 of Regulation (EU) 473/2013. However, as mentioned above, the 2022-2025 SPU does not include all the necessary information to be considered as a fiscal strategy for the entire General Government.

As AIReF noted in its Opinion on Fiscal Transparency in the General Government in Spain[37], the budgetary process is fragmented, and it is not possible to ensure consistency between its main elements: the SPU, the budgets of each administration and the budgetary plan. Consequently, the absence of a medium-term budgetary framework is one of the main weaknesses of the Spanish budgetary system. On the one hand, the multi-year budget scenarios in which the GSB must be framed are not published. In addition, at the Central Government level, the medium-term forecasts made

[37] https://www.airef.es/wp-content/uploads/2021/04/ANEXOS-OPINION-TRANSPARENCIA/Opinion-Transparencia-Fiscal.pdf

are performed at an aggregate level for the GG as a whole and in national accounting terms, without developing their link with the annual budgets of the different public administrations.

AIReF considers that, in a decentralised State such as Spain, a medium-term national fiscal framework should collect information broken down by sub-sector that is consistent with aggregate information for the General Government as a whole.

For this reason, AIReF maintains the recommendation in relation to the SPU of previous years to:

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

- **Budgetary projections for the General Government as a whole and for each of the sub-sectors, incorporating the measures and showing their contribution to the reduction of the planned deficit.**
- **Government debt targets broken down by sub-sector.**
- **Detailed information for analysing the expenditure rule for each of the sub-sectors (eligible expenditure and reference rates for all the years covered by the SPU).**
- **More information on any risks which, should they occur, might affect budgetary or debt stability targets.**

7.3. Recommendations contained in the endorsement of the macroeconomic forecasts

On April 29th, AIReF published the endorsement of the SPU's macroeconomic forecasts, which contained three recommendations that are set out below and which have already been forwarded to the recipient administrations.

Information on the execution of the RTRP in national accounting

AIReF believes that an effort at transparency and coordination between all sub-sectors of the General Government is necessary to make available the information required in the framework of the European Commission's communication of March 2nd, 2022[38]. In particular, this information refers to execution of the RTRP funds in national accounting terms over the horizon of the stability programme, which is very useful when assessing its impact.

Information for the endorsement of the macroeconomic forecasts

[38] See COMMUNICATION FROM THE COMMISSION TO THE COUNCIL

AIReF calls for more information on the budgetary and fiscal measures included in the macroeconomic scenario with the aim of increasing the rigour of the endorsement process. The law establishes that the endorsement refers exclusively to the macroeconomic outlook and not to the public finance scenario. However, given the interrelations between the two aspects, AIReF believes that an endorsement with greater rigour would require more detail on the measures incorporated, particularly when these are of the importance of those contained in the RTRP.

Memorandum of Understanding

AIReF once again notes the need for the process of endorsing the macroeconomic forecasts to be regulated by an agreement between the parties. With the aim of making the process of endorsing the macroeconomic framework more transparent and efficient, AIReF reiterates its recommendation to the Government to regulate the flow and timing of the exchange of information through an agreement or "memorandum of understanding", in line with current practices in comparable countries with regard to the interaction between the Government and the National Independent Fiscal Institution.

The President of AIReF

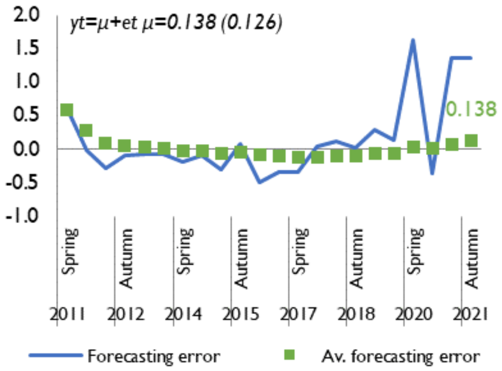
Cristina Herrero Sánchez

ANNEX I. EX-POST ANALYSIS.

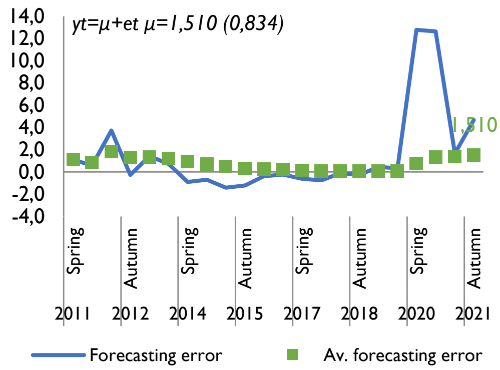
FIGURE 1. FORECASTING ERRORS AND AVERAGE ERROR IN ESTIMATES OF GDP, DEMAND COMPONENTS AND EMPLOYMENT

Gross Domestic Product.

Current year

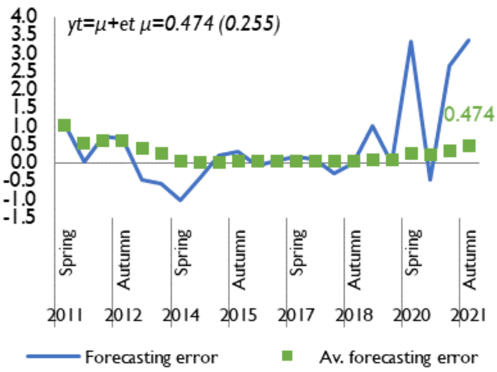


Following year

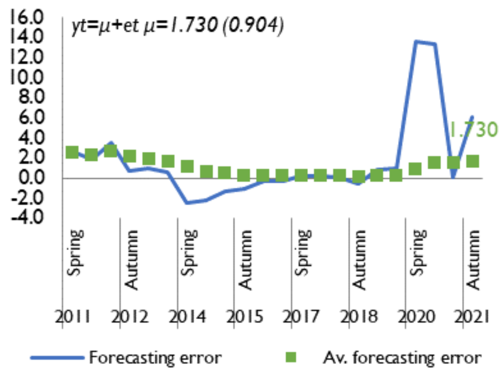


Private consumption

Current year

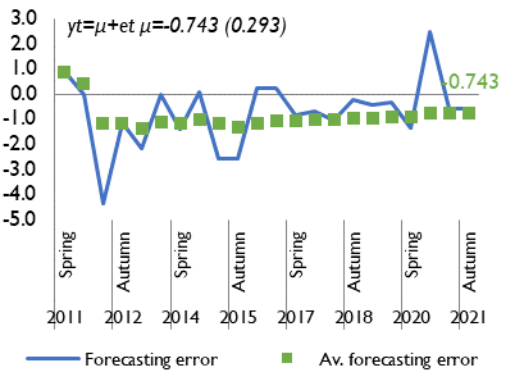


Following year

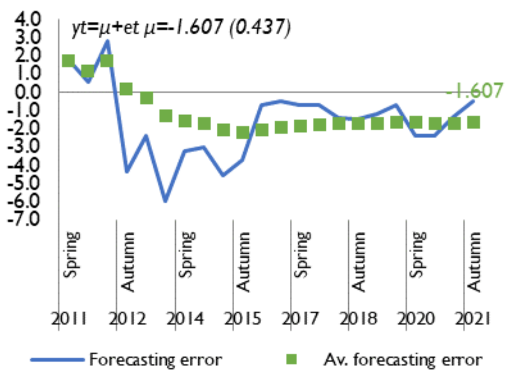


Public consumption

Current year



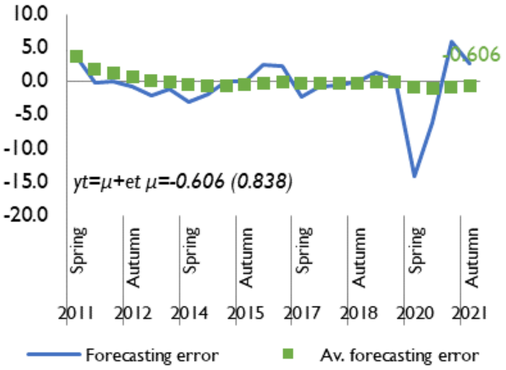
Following year

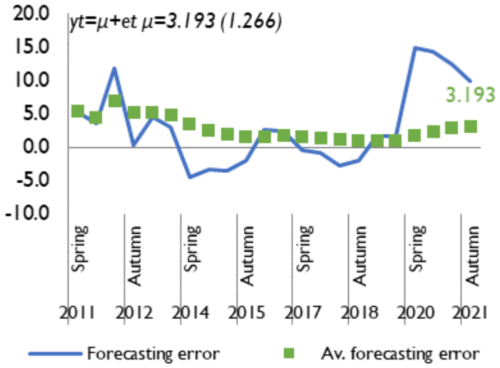


Gross Fixed Capital Formation

Current year

Following year

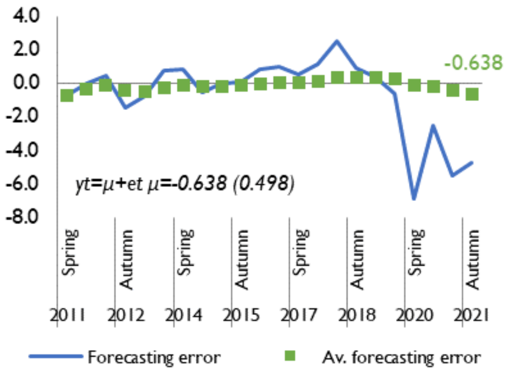


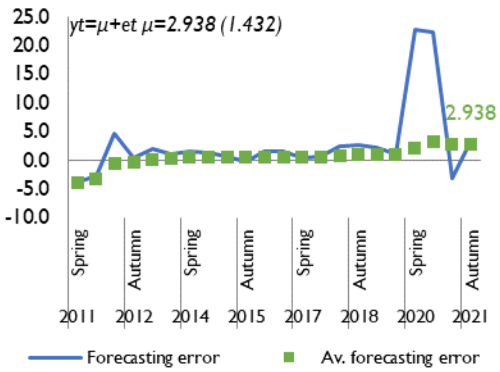


Exports

Current year

Following year

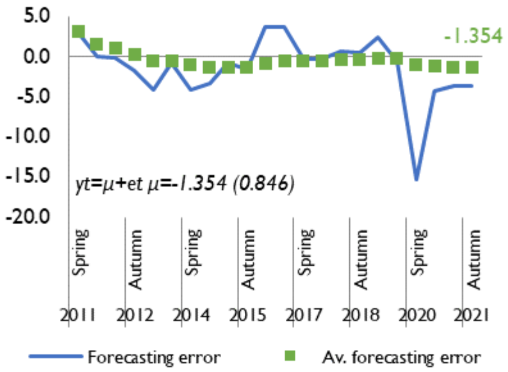


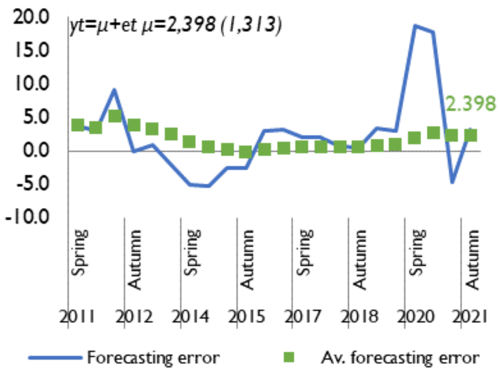


Imports

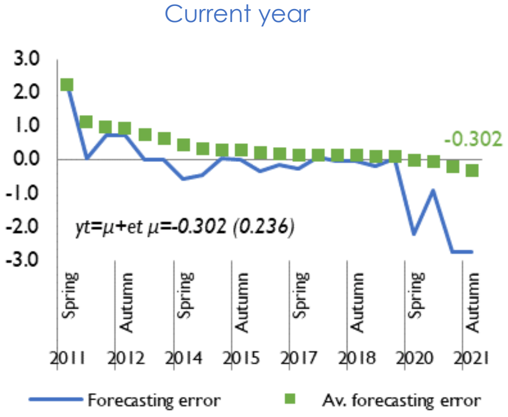
Current year

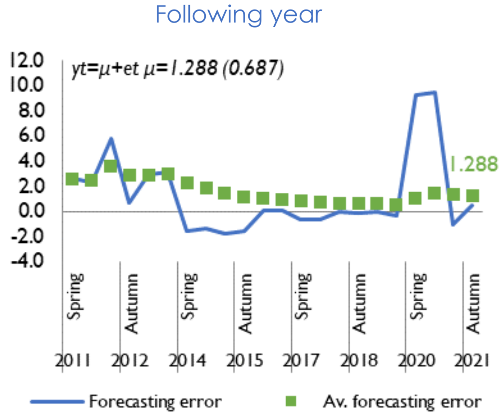
Following year





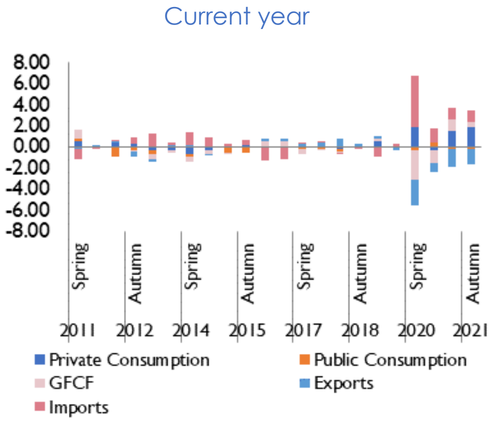
Employment

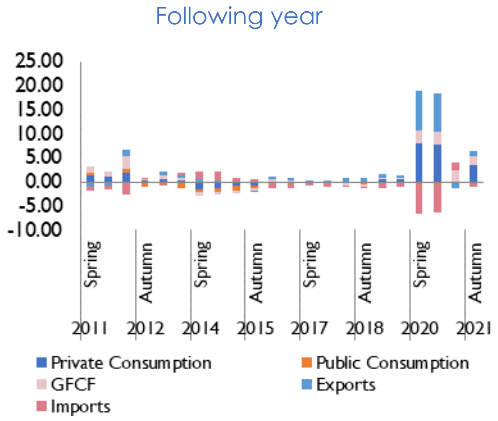




Source: AIReF and Ministry of Economic Affairs and Digital Transformation

CONTRIBUTIONS OF THE DEMAND PROPONENTS TO THE GDP ESTIMATE ERROR





Source: AIReF

TABLE 1. TESTS OF BIAS SIGNIFICANCE AND BIAS EQUALITY

		Current year		Following year	
		Bias [p-value]	T [p-value]	Bias [p-value]	T [p-value]
Gross Domestic Product	*Government*	0,1385 [0,2844]		1,5104 [0,0846]	
	AIReF	0,1842 [0,1428]	0,4146 [0,6852]	2,3655 [0,1294]	0,7269 [0,4824]
	Bank of Spain	0,0359 [0,7352]	2,2941 [0,0322]	1,4200 [0,0999]	0,3429 [0,7351]
	European Commis	-0,0572 [0,6475]	2,8895 [0,0088]	1,4073 [0,1474]	0,1920 [0,8499]
	FUNCAS Panel	-0,0023 [0,9845]	2,5655 [0,0180]	1,3152 [0,1256]	1,0304 [0,3145]
		Bias [p-value]	T [p-value]	Bias [p-value]	T [p-value]
Private Consumption	*Government*	0,4743 [0,0765]		1,7303 [0,0693]	
	AIReF	0,5806 [0,0693]	0,8463 [0,4127]	2,8382 [0,0886]	0,2122 [0,8359]
	Bank of Spain	0,5451 [0,1071]	-0,5267 [0,6039]	1,6746 [0,0858]	0,1653 [0,8703]
	European Commis	0,0786 [0,7346]	2,1666 [0,0425]	1,4558 [0,1761]	0,2780 [0,7842]
	FUNCAS Panel	0,2452 [0,2812]	1,7198 [0,1002]	1,6331 [0,0866]	0,4212 [0,6779]
		Bias [p-value]	T [p-value]	Bias [p-value]	T [p-value]
Public Consumption	*Government*	-0,7431 [0,0192]		-1,6071 [0,0014]	
	AIReF	0,0498 [0,8727]	-1,8565 [0,0862]	-1,0955 [0,0625]	-0,0651 [0,9492]
	Bank of Spain	-0,8044 [0,0085]	0,3018 [0,7658]	-1,2249 [0,0165]	-0,7977 [0,4340]
	European Commis	-0,5467 [0,0956]	-1,1443 [0,2660]	-1,1273 [0,0029]	-2,0735 [0,0528]
	FUNCAS Panel	-0,4999 [0,0711]	-1,3041 [0,2063]	-0,9696 [0,0274]	-2,1097 [0,0471]
		Bias [p-value]	T [p-value]	Bias [p-value]	T [p-value]
Gross Fixed Capital Formation	*Government*	-0,6061 [0,4776]		3,1926 [0,0198]	
	AIReF	-0,5374 [0,7370]	-0,1397 [0,8910]	5,0843 [0,0339]	-0,8358 [0,4211]
	Bank of Spain	-1,1259 [0,1550]	1,8326 [0,0811]	2,9014 [0,0286]	0,3344 [0,7414]
	European Commis	-0,7452 [0,3369]	-0,1969 [0,8459]	1,9421 [0,1391]	0,7379 [0,4701]
	FUNCAS Panel	-0,7808 [0,1869]	0,4877 [0,6308]	2,3834 [0,0575]	1,2523 [0,2242]
		Bias [p-value]	T [p-value]	Bias [p-value]	T [p-value]
Exports	*Government*	-0,6379 [0,2138]		2,9378 [0,0529]	
	AIReF	-0,7533 [0,5011]	-0,2986 [0,7699]	4,3191 [0,1159]	0,8401 [0,4187]
	Bank of Spain	-0,3102 [0,4465]	-0,8092 [0,4275]	2,7829 [0,0822]	0,2595 [0,7978]
	European Commis	-0,2334 [0,5481]	-1,0078 [0,3256]	3,2173 [0,0616]	0,8893 [0,3856]
	FUNCAS Panel	-0,3567 [0,2933]	-0,8059 [0,4293]	2,3242 [0,1300]	2,6889 [0,0137]
		Bias [p-value]	T [p-value]	Bias [p-value]	T [p-value]
Imports	*Government*	-1,3544 [0,1242]		2,3984 [0,0820]	
	AIReF	-1,0328 [0,5727]	-0,4409 [0,6666]	4,5291 [0,0397]	-0,2275 [0,8242]
	Bank of Spain	-0,8300 [0,1571]	-0,8275 [0,4173]	2,5905 [0,0952]	-0,2400 [0,8126]
	European Commis	-1,1049 [0,0529]	-0,8583 [0,4009]	1,9774 [0,2159]	-0,0591 [0,9535]
	FUNCAS Panel	-0,9624 [0,0856]	-0,8445 [0,4079]	2,1500 [0,1380]	0,6012 [0,5542]
		Bias [p-value]	T [p-value]	Bias [p-value]	T [p-value]
Employment	*Government*	-0,3022 [0,2140]		1,2883 [0,0747]	
	AIReF	-0,7807 [0,0348]	0,7945 [0,4412]	-0,1556 [0,9287]	1,3477 [0,2048]
	Bank of Spain	-0,2854 [0,4257]	-0,0476 [0,9625]	1,2033 [0,1001]	0,3157 [0,7553]
	European Commis	-0,3220 [0,1118]	-1,0159 [0,3218]	0,7556 [0,3389]	0,4902 [0,6299]
	FUNCAS Panel	-0,2049 [0,3611]	-0,7365 [0,4696]	0,8610 [0,2408]	1,5626 [0,1331]

Source: AIReF, Ministry of Economic Affairs and Digital Transformation, Bank of Spain, European Commission and FUNCAS.

TABLE 2. DETERMINATION OF LARGE, SIGNIFICANT AND SYSTEMATIC ERRORS

Current year

Variable	Block	Row	2017 Spring	2017 Autumn	2018 Spring	2018 Autumn	2019 Spring	2019 Autumn	2020 Spring	2020 Autumn	2021 Spring	2021 Autumn
Gross Domestic Product		OBSERVED	3.1	3.1	2.6	2.6	2.0	2.0	-10.8	-10.8	5.1	5.1
	FORECAST	Government	2.7	3.1	2.7	2.6	**2.2**	2.1	-9.2	**-11.2**	**6.5**	**6.5**
		Panel [average]	2.6	3.1	2.7	2.7	2.2	2.2	-9.5	-12.0	6.0	6.2
		Panel [1st Quartile]	2.5	3.1	2.7	2.6	2.1	2.1	-10.3	-12.7	5.6	6.0
		Panel [3rd Quartile]	2.8	3.2	2.8	2.7	2.2	2.3	-8.5	-11.5	6.4	6.4
	FORECAST ERROR	Government	-0.345	0.048	0.118	0.018	0.289	0.150	1.639	-0.361	1.371	1.371
		Panel [average]	-0.405	0.086	0.164	0.093	0.233	0.245	1.306	-1.130	0.826	1.072
		Panel [1st Quartile]	-0.552	0.048	0.118	0.018	0.156	0.150	0.562	-1.837	0.471	0.860
		Panel [3rd Quartile]	-0.260	0.105	0.218	0.118	0.250	0.347	2.339	-0.661	1.254	1.321
Private Consumption		OBSERVED	2.4	2.4	2.3	2.3	0.9	0.9	-12.1	-12.1	4.6	4.6
	FORECAST	Government	2.6	2.5	**2.0**	2.3	1.9	**0.9**	**-8.8**	-12.6	7.3	8.0
		Panel [average]	2.5	2.5	2.3	2.3	2.0	1.6	-10.9	-13.7	6.8	7.7
		Panel [1st Quartile]	2.4	2.5	2.2	2.2	1.9	1.5	-11.3	-14.9	6.2	6.6
		Panel [3rd Quartile]	2.7	2.6	2.4	2.3	2.1	1.8	-9.0	-12.6	7.5	8.9
	FORECAST ERROR	Government	0.174	0.117	-0.294	0.006	1.015	-0.020	3.339	-0.461	2.666	3.366
		Panel [average]	0.135	0.162	0.004	-0.030	1.066	0.674	1.224	-1.604	2.193	3.036
		Panel [1st Quartile]	-0.003	0.117	-0.122	-0.128	0.980	0.580	0.839	-2.796	1.576	1.951
		Panel [3rd Quartile]	0.280	0.217	0.106	0.006	1.180	0.880	3.139	-0.461	2.903	4.281
Public Consumption		OBSERVED	1.6	1.6	2.1	2.1	2.3	2.3	3.8	3.8	3.1	3.1
	FORECAST	Government	0.8	0.9	**1.1**	1.9	1.9	**2.0**	**2.5**	**6.3**	**2.5**	2.5
		Panel [average]	1.0	1.1	1.4	1.8	2.0	1.9	4.9	4.7	3.7	2.8
		Panel [1st Quartile]	0.7	0.9	1.2	1.7	1.8	1.7	4.3	4.0	3.0	2.4
		Panel [3rd Quartile]	1.1	1.2	1.5	2.0	2.3	1.9	6.0	5.8	4.3	3.0
	FORECAST ERROR	Government	-0.816	-0.666	-1.027	-0.227	-0.446	-0.346	-1.336	2.464	-0.572	-0.572
		Panel [average]	-0.605	-0.497	-0.749	-0.284	-0.326	-0.492	1.040	0.911	0.631	-0.244
		Panel [1st Quartile]	-0.894	-0.666	-0.927	-0.427	-0.594	-0.646	0.418	0.164	-0.088	-0.689
		Panel [3rd Quartile]	-0.459	-0.409	-0.670	-0.127	-0.046	-0.446	2.164	1.936	1.228	-0.067
Gross Fixed Capital Formation		OBSERVED	5.0	5.0	5.3	5.3	2.7	2.7	-11.4	-11.4	4.3	4.3
	FORECAST	Government	**2.8**	4.2	**4.7**	**5.3**	4.0	3.1	-25.5	-17.5	**10.3**	7.1
		Panel [average]	3.3	4.2	4.4	4.8	3.9	3.4	-20.6	-17.8	7.3	6.7
		Panel [1st Quartile]	2.9	4.0	4.1	4.4	3.6	2.8	-25.5	-20.3	5.5	5.6
		Panel [3rd Quartile]	3.7	4.4	4.6	5.1	4.1	3.9	-17.5	-15.4	8.5	7.4
	FORECAST ERROR	Government	-2.194	-0.811	-0.565	0.035	1.384	0.446	-14.134	-6.134	5.959	2.759
		Panel [average]	-1.752	-0.821	-0.907	-0.481	1.242	0.711	-9.215	-6.456	2.928	2.321
		Panel [1st Quartile]	-2.152	-1.011	-1.211	-0.865	0.946	0.149	-14.134	-8.983	1.181	1.257
		Panel [3rd Quartile]	-1.322	-0.600	-0.640	-0.169	1.459	1.212	-6.104	-4.038	4.140	3.022

Following year

Variable	Block	Row	2017 Spring	2017 Autumn	2018 Spring	2018 Autumn	2019 Spring	2019 Autumn	2020 Spring	2020 Autumn	2021 Spring	2021 Autumn
Gross Domestic Product		OBSERVED	3.1	3.1	2.6	2.6	2.0	2.0	-10.8	-10.8	5.1	5.1
	FORECAST	Government	2.4	2.3	**2.5**	**2.3**	2.4	2.3	1.9	1.8	6.8	**9.8**
		Panel [average]	2.3	2.3	2.3	2.7	2.4	2.3	1.9	1.8	6.2	7.3
		Panel [1st Quartile]	2.3	2.2	2.2	2.6	2.3	2.2	1.9	1.8	5.6	6.0
		Panel [3rd Quartile]	2.5	2.4	2.4	2.8	2.4	2.4	2.0	1.9	6.9	8.1
	FORECAST ERROR	Government	-0.613	-0.752	-0.123	-0.282	0.450	0.350	12.776	12.639	1.671	4.671
		Panel [average]	-0.702	-0.745	-0.262	0.109	0.438	0.352	12.774	12.680	1.109	2.163
		Panel [1st Quartile]	-0.792	-0.806	-0.348	0.062	0.350	0.294	12.732	12.639	0.471	0.871
		Panel [3rd Quartile]	-0.567	-0.652	-0.189	0.194	0.450	0.450	12.839	12.756	1.820	2.929
Private Consumption		OBSERVED	2.4	2.4	2.3	2.3	0.9	0.9	-12.1	-12.1	4.6	4.6
	FORECAST	Government	2.6	2.6	**2.4**	**1.8**	1.8	1.9	**1.6**	**1.2**	**4.7**	**10.7**
		Panel [average]	2.4	2.4	2.1	2.3	1.9	1.8	1.8	1.5	7.0	7.7
		Panel [1st Quartile]	2.1	2.1	1.9	2.2	1.8	1.8	1.6	1.4	5.4	6.3
		Panel [3rd Quartile]	2.6	2.6	2.3	2.4	2.0	2.0	1.9	1.7	8.1	8.9
	FORECAST ERROR	Government	0.177	0.217	0.116	-0.494	0.880	0.980	13.699	13.339	0.066	6.066
		Panel [average]	-0.015	0.001	-0.186	0.015	1.028	0.918	13.891	13.669	2.343	3.057
		Panel [1st Quartile]	-0.258	-0.283	-0.386	-0.094	0.880	0.880	13.739	13.539	0.766	1.666
		Panel [3rd Quartile]	0.203	0.217	0.013	0.127	1.083	1.107	14.039	13.839	3.510	4.293
Public Consumption		OBSERVED	1.6	1.6	2.1	2.1	2.3	2.3	3.8	3.8	3.1	3.1
	FORECAST	Government	**0.9**	0.9	**0.7**	**0.7**	1.2	1.7	1.5	1.5	1.8	**2.6**
		Panel [average]	1.1	0.7	1.0	1.1	1.3	1.7	1.6	1.6	1.0	1.3
		Panel [1st Quartile]	0.9	0.7	0.7	0.8	1.1	1.4	1.3	1.4	-0.6	0.3
		Panel [3rd Quartile]	1.5	1.2	1.4	1.5	1.5	1.9	1.8	1.8	3.5	2.2
	FORECAST ERROR	Government	-0.666	-0.666	-1.387	-1.427	-1.146	-0.646	-2.336	-2.336	-1.272	-0.472
		Panel [average]	-0.469	-0.879	-1.089	-1.001	-1.046	-0.680	-2.257	-2.235	-2.035	-1.804
		Panel [1st Quartile]	-0.641	-0.890	-1.384	-1.327	-1.271	-0.946	-2.553	-2.471	-3.687	-2.806
		Panel [3rd Quartile]	-0.091	-0.366	-0.769	-0.677	-0.847	-0.446	-2.036	-2.036	0.398	-0.872
Gross Fixed Capital Formation		OBSERVED	5.0	5.0	5.3	5.3	2.7	2.7	-11.4	-11.4	4.3	4.3
	FORECAST	Government	4.6	4.2	**2.6**	**3.4**	**4.4**	4.4	3.5	3.0	**16.7**	**14.2**
		Panel [average]	4.3	4.0	3.4	4.0	3.9	4.3	3.4	3.2	8.1	10.2
		Panel [1st Quartile]	3.9	3.6	2.9	3.7	3.7	3.8	2.9	2.8	5.1	6.5
		Panel [3rd Quartile]	4.9	4.7	3.9	4.4	4.1	4.6	3.7	3.5	10.8	12.7
	FORECAST ERROR	Government	-0.362	-0.811	-2.617	-1.865	1.746	1.746	14.876	14.366	12.359	9.859
		Panel [average]	-0.665	-1.014	-1.832	-1.243	1.244	1.628	14.797	14.546	3.800	5.818
		Panel [1st Quartile]	-1.090	-1.436	-2.377	-1.604	1.008	1.146	14.266	14.184	0.778	2.140
		Panel [3rd Quartile]	-0.135	-0.361	-1.320	-0.820	1.467	1.946	15.091	14.888	6.416	8.309

			Current year										Following year									
Exports		OBSERVED	5.0	5.0	2.3	2.3	2.3	2.3	-20.2	-20.2	14.7	14.7	5.0	5.0	2.3	2.3	2.3	2.3	-20.2	-20.2	14.7	14.7
Exports	FORECAST	Government	**5.5**	6.2	4.8	3.2	2.7	1.7	**-27.1**	-22.7	9.2	10.0	**5.7**	**5.7**	**4.9**	**5.1**	4.6	3.4	2.8	2.3	11.6	**18.0**
Exports	FORECAST	Panel [average]	4.6	6.2	4.4	2.9	2.6	1.6	-21.0	-21.6	10.1	10.9	4.9	4.7	4.2	4.9	4.3	3.6	2.8	2.4	11.4	13.8
Exports	FORECAST	Panel [1st Quartile]	4.2	5.9	3.8	2.5	2.0	1.4	-25.6	-24.0	8.0	8.9	4.7	4.2	3.9	4.5	4.0	3.3	2.2	2.1	9.3	11.1
Exports	FORECAST	Panel [3rd Quartile]	4.9	6.4	4.9	3.3	3.0	1.9	-16.5	-19.8	11.1	12.2	5.3	5.0	4.8	5.0	4.7	4.2	3.4	2.6	14.0	15.6
Exports	FORECAST ERROR	Government	0.513	1.172	2.525	0.925	0.429	-0.583	-6.904	-2.504	-5.536	-4.736	0.622	0.672	2.614	2.825	2.317	1.117	22.985	22.496	-3.136	3.264
Exports	FORECAST ERROR	Panel [average]	-0.439	1.158	2.168	0.592	0.344	-0.639	-0.777	-1.412	-4.676	-3.859	-0.131	-0.299	1.969	2.613	2.057	1.286	22.967	22.580	-3.300	-0.967
Exports	FORECAST ERROR	Panel [1st Quartile]	-0.828	0.872	1.550	0.225	-0.243	-0.883	-5.404	-3.778	-6.739	-5.836	-0.320	-0.826	1.665	2.225	1.743	1.017	22.375	22.345	-5.441	-3.633
Exports	FORECAST ERROR	Panel [3rd Quartile]	-0.090	1.392	2.650	1.064	0.765	-0.353	3.671	0.360	-3.661	-2.559	0.280	-0.069	2.525	2.750	2.462	1.880	23.571	22.817	-0.736	0.876
Imports		OBSERVED	4.7	4.7	3.5	3.5	0.7	0.7	-15.8	-15.8	13.9	13.9	4.7	4.7	3.5	3.5	0.7	0.7	-15.8	-15.8	13.9	13.9
Imports	FORECAST	Government	4.3	4.4	4.1	**4.0**	3.1	**0.1**	**-31.0**	-20.0	10.3	**10.3**	**6.7**	**6.7**	4.1	4.1	4.2	3.8	2.9	2.0	9.3	**17.1**
Imports	FORECAST	Panel [average]	3.9	4.7	4.1	3.1	3.3	1.0	-22.7	-18.9	10.3	11.4	5.8	5.1	4.1	4.3	4.1	3.8	3.3	2.6	9.6	12.5
Imports	FORECAST	Panel [1st Quartile]	3.4	4.4	4.0	2.6	2.7	0.4	-28.1	-21.5	8.5	10.3	5.5	4.5	3.4	3.9	3.6	3.2	2.7	2.0	7.0	9.0
Imports	FORECAST	Panel [3rd Quartile]	4.7	5.1	4.5	3.6	3.6	1.2	-17.9	-17.7	12.3	12.4	6.1	5.5	4.7	4.6	4.5	4.1	3.6	3.1	12.4	14.9
Imports	FORECAST ERROR	Government	-0.331	-0.263	0.646	0.546	2.398	-0.640	-15.222	-4.222	-3.636	-3.636	2.030	2.037	0.667	0.646	3.460	3.060	18.714	17.778	-4.636	3.164
Imports	FORECAST ERROR	Panel [average]	-0.738	0.064	0.612	-0.334	2.516	0.227	-6.935	-3.161	-3.635	-2.583	1.113	0.439	0.617	0.804	3.345	3.077	19.038	18.340	-4.295	-1.393
Imports	FORECAST ERROR	Panel [1st Quartile]	-1.305	-0.263	0.547	-0.835	1.960	-0.313	-12.322	-5.760	-5.403	-3.612	0.884	-0.122	-0.028	0.493	2.860	2.460	18.453	17.778	-6.936	-4.932
Imports	FORECAST ERROR	Panel [3rd Quartile]	0.074	0.467	1.021	0.146	2.860	0.460	-2.110	-1.892	-1.681	-1.536	1.433	0.862	1.285	1.146	3.760	3.360	19.363	18.851	-1.536	0.937
Employment		OBSERVED	2.8	2.8	2.5	2.5	2.3	2.3	-7.5	-7.5	6.7	6.7	2.8	2.8	2.5	2.5	2.3	2.3	-7.5	-7.5	6.7	6.7
Employment	FORECAST	Government	**2.6**	**2.9**	2.5	2.5	2.1	2.3	-9.7	-8.4	4.0	4.0	2.2	2.2	**2.5**	2.4	**2.3**	2.0	**1.8**	**2.0**	**5.7**	**7.2**
Employment	FORECAST	Panel [average]	2.3	2.7	2.4	2.4	1.9	2.2	-8.2	-8.1	3.7	4.9	2.1	2.1	2.0	2.3	2.0	1.9	1.7	1.6	4.7	3.3
Employment	FORECAST	Panel [1st Quartile]	2.2	2.7	2.3	2.4	1.8	2.1	-10.0	-9.1	2.4	4.0	1.9	1.9	1.8	2.3	1.9	1.9	1.5	1.6	2.9	2.1
Employment	FORECAST	Panel [3rd Quartile]	2.5	2.8	2.5	2.5	2.1	2.3	-6.0	-6.2	4.6	5.5	2.2	2.2	2.2	2.4	2.2	2.0	1.7	1.7	5.6	5.2
Employment	FORECAST ERROR	Government	-0.263	0.087	-0.025	-0.025	-0.163	0.037	-2.220	-0.920	-2.742	-2.742	-0.613	-0.613	-0.025	-0.125	0.037	-0.263	9.280	9.480	-1.042	0.458
Employment	FORECAST ERROR	Panel [average]	-0.506	-0.085	-0.094	-0.115	-0.329	-0.054	-0.715	-0.597	-3.056	-1.886	-0.713	-0.708	-0.520	-0.188	-0.242	-0.333	9.139	9.114	-2.089	-3.403
Employment	FORECAST ERROR	Panel [1st Quartile]	-0.619	-0.123	-0.225	-0.125	-0.484	-0.160	-2.520	-1.592	-4.392	-2.742	-0.906	-0.951	-0.771	-0.231	-0.363	-0.363	8.980	9.052	-3.851	-4.654
Employment	FORECAST ERROR	Panel [3rd Quartile]	-0.321	-0.013	0.000	-0.025	-0.163	0.037	1.455	1.274	-2.142	-1.242	-0.582	-0.588	-0.369	-0.105	-0.038	-0.263	9.205	9.180	-1.117	-1.542

Bold indicates that the error is large and shaded that it is also unjustified, i.e. that it is important.
Source: AIReF and Ministry of Economic Affairs and Digital Transformation.

TABLE 3. LARGE AND SIGNIFICANT ERRORS

		2012		2013		2014		2015		2016		2017		2018		2019		2020		2021	
		Spring	Autumn	Spring	Autumn	Spring	Autumn	Spring	Autumn	Spring	Autumn	Spring	Autumn	Spring	Autumn	Spring	Autumn	Spring	Autumn	Spring	Autumn
Current year	Gross Domestic Product	-	-	LARGE	-	LARGE	-	LARGE	**IMPORT.**	-	**IMPORT.**	-	-	-	-	**IMPORT.**	-	-	LARGE	**IMPORT.**	**IMPORT.**
	Private Consumption	LARGE	LARGE	-	-	LARGE	-	-	-	LARGE	-	-	-	**IMPORT.**	-	-	LARGE	LARGE	-	-	-
	Public Consumption	LARGE	-	-	-	-	-	**IMPORT.**	**IMPORT.**	-	-	-	-	**IMPORT.**	-	-	LARGE	**IMPORT.**	**IMPORT.**	LARGE	-
	Gross Fixed Capital Formation	-	LARGE	-	-	-	LARGE	LARGE	LARGE	**IMPORT.**	**IMPORT.**	**IMPORT.**	-	LARGE	LARGE	-	-	-	-	**IMPORT.**	-
	Exports	-	**IMPORT.**	-	-	-	**IMPORT.**	-	-	-	-	**IMPORT.**	-	-	-	-	-	LARGE	-	-	-
	Imports	-	LARGE	-	LARGE	-	-	-	-	**IMPORT.**	**IMPORT.**	-	-	-	**IMPORT.**	-	**IMPORT.**	LARGE	-	-	**IMPORT.**
	Employment	-	-	-	-	-	-	LARGE	-	-	-	LARGE	**IMPORT.**	-	-	-	-	-	-	-	-
Following year	Gross Domestic Product	**IMPORT.**	LARGE	-	LARGE	-	-	-	-	LARGE	LARGE	-	-	LARGE	**IMPORT.**	-	-	-	-	-	**IMPORT.**
	Private Consumption	-	LARGE	LARGE	-	-	-	LARGE	LARGE	LARGE	-	-	-	LARGE	**IMPORT.**	-	-	LARGE	LARGE	LARGE	**IMPORT.**
	Public Consumption	-	LARGE	-	LARGE	-	LARGE	LARGE	LARGE	**IMPORT.**	**IMPORT.**	**IMPORT.**	-	**IMPORT.**	**IMPORT.**	-	-	-	-	-	LARGE
	Gross Fixed Capital Formation	-	LARGE	LARGE	LARGE	-	LARGE	-	LARGE	**IMPORT.**	-	-	-	**IMPORT.**	**IMPORT.**	**IMPORT.**	-	-	-	**IMPORT.**	**IMPORT.**
	Exports	**IMPORT.**	LARGE	**IMPORT.**	**IMPORT.**	-	-	-	-	-	**IMPORT.**	**IMPORT.**	**IMPORT.**	**IMPORT.**	**IMPORT.**	-	-	-	-	-	**IMPORT.**
	Imports	-	LARGE	**IMPORT.**	LARGE	LARGE	-	-	-	-	-	**IMPORT.**	**IMPORT.**	-	-	-	-	-	-	-	**IMPORT.**
	Employment	**IMPORT.**	LARGE	LARGE	LARGE	-	-	-	-	LARGE	LARGE	-	-	LARGE	-	LARGE	-	**IMPORT.**	**IMPORT.**	LARGE	LARGE

I = Significant Errors, G=Large Errors.
Source: AIReF

ANNEX II. ERROR CORRECTION MODELS

LONG-TERM EQUATION		SHORT-TERM EQUATION	
PRIVATE CONSUMPTION			
Gross disposable income of households and NPISHs (volume) (log)	0,4261	Gross disposable income of households and NPISHs (volume) (dlog)	0,0764
Household financial wealth. Volume (log)	0,0967	Total lending to households. Volume (dlog)	0,1161
Household wealth. Volume (log)	0,0936	Employment rate (differences)	0,0059
Total lending to households. Volume (log)	0,0511	Dummy 2013q1	-0,0104
Long-term interest rates. Real (levels)	-0,0042	Long-term error	-0,2430
Constant	1,5492	Constant	0,0022
Sample 2000Q1-2019Q4			
INVESTMENT IN EQUIPMENT			
GDP Volume (log)	0,8623	GDP Volume (dlog)	2,7969
Relative unit labour costs (log)	-0,4220	Productive capacity utilisation (differences)	0,0078
Lending to resident companies. Balance. Real (log)	0,1779	Long-term interest rates. Real (differences, lagged two periods)	-0,0069
Capacity utilisation (levels)	0,0284	Dummy 2013q1_2014q2	0,0209
Effective Corporate Income Tax rate * Dummy before 2008q1	-0,1230	Dummy 2016q3	-0,0443
Effective Corporate Income Tax rate * Dummy after 2008q1	-0,1351	Dummy 2018q2	0,0728
		Long-term error	-0,2309
Sample 1995Q1-2019Q4		Constant	-0,0091
INVESTMENT IN CONSTRUCTION			
Price of square metre Housing INE. Real (log)	0,1812	Price of square metre Housing INE. Real (dlog)	0,1310
Unemployment rate (levels)	-0,0219	Unemployment rate (differences)	-0,0135
Lending to households. Housing. Volume (log)	0,1862	Lending to households. Housing. Volume (dlog)	0,1659
Household financial wealth. Volume (log)	-0,1154	Dummy 1999q1	-0,0375
Construction Industry Climate Index (levels)	0,0005	Dummy 2009q2	-0,0365
Constant	3,9391	Dummy 2014q1	0,0463
		Dummy 2009q4 2012q2	-0,0210
		Long-term error	-0,4563
Sample 1995Q1-2019Q4		Constant	0,0025
EXPORTS			
World Trade in Goods. Volume (log)	0,6560	World Trade in Goods. Volume (dlog)	0,3996
Nominal effective exchange rate vs. developed countries (log)	-0,4452	Nominal effective exchange rate vs. developed countries (dlog)	-0,4782
Relative unit labour costs (log)	-0,7000	Imports of intermediate goods (dlog)	0,1378
Imports of intermediate goods (log)	0,3023	Dummy 2009q1	-0,0387
dummy after 2017q3	0,0513	Dummy 2012q3	0,0256
Constant	5,4213	Long-term error	-0,1663
Sample 2000Q1-2019Q4		Constant	0,0041
IMPORTS			
Import demand. Volume (log)	1,1113	Import demand. Volume (dlog)	1,7451
Relative price of imports (log)	-0,6512	Relative import price (dlog)	-0,2133
Constant	2,5005	Dummy 2009q1	-0,0552
		Dummy after 2010q3	-0,0072
Sample 2000Q1-2019Q4		Long-term error	-0,1485

LONG-TERM EQUATION		SHORT-TERM EQUATION	
PRIVATE EMPLOYEES			
GDP Volume (log)	1,8952	GDP Volume (dlog)	1,6044
Working age population. Total (log)	1,9914	Working age population. Total (dlog)	1,7721
Private capital stock (log)	-1,3290	Private capital stock (dlog)	-0,7545
Nominal compensation per private employee (log)	-0,1175	Nominal compensation per private employee (dlog)	-0,4674
Dummy 2009q1 2009q2	0,0313	Dummy 2009q1	0,0239
Dummy 2000q1 2000q3	-0,0178	Dummy 2009q1 2009q2	-0,0143
		Dummy 2008q1	0,0223
		Dummy 2014q2	0,0093
Sample 2000Q1-2019Q4		Long-term error	-0,1654
COMPENSATION PER EMPLOYEE. PRIVATE			
Headline CPI (log)	0,6510	Headline CPI (dlog)	0,2607
Productivity per employee (log)	0,2601	Productivity per employee (dlog)	0,2425
Compensation per employee. Public (log)	0,2100	Dummy 2007q2 2007q4	0,0079
Effective social contribution rate * Dummy after 2008q3 (levels)	0,0021	Dummy 2008q1 2008q3	0,0174
Unemployment rate* Dummy financial crisis	-0,0004	Dummy 2015q3 2018q2	-0,0050
		Long-term error	-0,2397
Sample 1995Q1-2019Q4		Constant	0,0039
GROSS DISPOSABLE INCOME OF HOUSEHOLDS AND NPISHs			
Compensation of employees. Total: Nominal (log)	0,5158	Compensation of employees. Total: Nominal (dlog)	0,6082
Gross Operating Surplus. Households and NPISHs Nominal (log)	0,2720	Gross Operating Surplus. Households and NPISHs Nominal (dlog)	0,2763
PIT proxy rate (levels)	-0,0059	PIT proxy rate (differences)	-0,0078
Different Social Benefits STK. Nominal (log)	0,1728	Different Social Benefits STK. Nominal (dlog)	0,1326
Constant	1,3199	Long-term error	-0,7003
Sample 1999Q1-2019Q4			
CORE CPI			
GDP Volume (log)	0,2925	GDP Volume (dlog)	0,0682
Effective VAT rate (levels)	0,0229	Unemployment rate (differences)	-0,0002
Unit labour costs (log)	0,6308	Effective VAT rate (differences)	0,0018
Dummy 2012q1 2012q4	0,0299	Dummy 2009q1 2010q2	-0,0044
		Dummy after 2013q2	-0,0034
		Long-term error	-0,0398
Sample 1997Q1-2019Q4		Constant	0,0087
HEADLINE CPI			
		Core CPI (dlog)	1,0651
		Brent ein € = Brent* €/$ exchange rate (dlog)	0,0195
		Dummy 1999q2	-0,0082
Sample 1997Q1-2019Q4		Dummy 2009q2	-0,0059
GDP DEFLATOR			
		Headline CPI (dlog)	0,3263
		House Price INE. Nominal (dlog, lagged one period)	0,0801
		IPRI capital goods (dlog, lagged three periods)	0,7134
		Dummy12q4.	-0,0094
		Dummy13q1.	0,0138
Sample 2000Q1-2019Q4		Dummy15q1.	0,0087