Autoridad Independiente de Responsabilidad Fiscal

Debt Monitor

February 2024

- *The Spanish debt-to-GDP ratio stood at 107.7% at the end of 2023, a reduction of 3.9 points over the year and an increase of 9.5 points on the pre-pandemic level.*

- *The reduction in the ratio in 2023 was mainly due to a high contribution from the GDP deflator. The contribution of growth to the fall in the ratio was 8.8 points, of which 2.6 points were due to real growth and 6.2 points to the deflator. For their part, fiscal factors contributed an increase of 4.9 points, down 0.6 points of GDP on the previous year.*

- *Following the sharp initial increase caused by the pandemic, the debt ratio is on a clear downward path. The quarterly profile shows a downward path over the last 11 quarters, with a cumulative reduction of 17.6 points from the peak reached in the first quarter of 2021 (125.3%).*

- *AIReF's macro-fiscal forecasts project a reduction in the debt ratio this year of 1.4 points of GDP on the level recorded in 2023, which would place the ratio at 106.3% at the end of 2024. The public deficit will continue to contribute to the increase in debt, albeit with a slightly lower contribution than in 2023, and the reduction in the ratio will be mainly supported by the nominal growth in GDP, where the deflator will continue to make a very significant contribution.*

- *This forecast is in line with the forecast presented by the Government in the draft Budgetary Plan for 2024, and is in the range of the latest forecasts of the IMF (104.7%) and the European Commission (106.5%).*

- *The increase in debt financing costs has moderated. Inflation clearly receded in 2023, which has allowed central banks to slow down the tightening of monetary policy after 18 months of continuous interest rate hikes.*

- *Supported by the favourable evolution of inflation and the expected moderation in economic activity, investor expectations have stabilised around a scenario of official rate cuts that would begin in the second quarter of the year. For their part, the monetary authorities are also hinting at cuts in 2024, but with greater caution, until there is a higher degree of confidence in inflation returning to the target level.*

- *In sovereign debt markets, the expected end of the rate hike cycle resulted in a correction in the last part of the year, following the sharp increases in yields observed throughout 2022 and for a good part of 2023. After two years where the yield on Spanish debt has accumulated an average increase of 450 bp, the 10-year yield has fallen by around 100 bp between mid-October and the end of 2023.*

- *However, 2024 has started with a slight rebound in yields, correcting part of the sharp fall recorded in the latter part of 2023, due to a readjustment of expectations in line with a prudent monetary policy strategy announced by the European Central Bank.*

- *The spread of Spain's 10-year bond against the German bond has returned to below 100 bp, falling by 25 points from the 115 points recorded in October.*

- *After reaching a low in 2021 of -0.04%, the average cost of new Treasury issues has risen in 2023 to 3.44%, a figure not seen since 2011. This higher issuing cost has also generated a turning point in the average cost of the State debt portfolio, which has increased from its all-time low of 1.64% to 2.09%.*

- *Total General Government interest expenditure has risen by just over €8.5bn from a low in 2020 to a total of €33.76bn in the third quarter of 2023. Even though the Treasury has had to place its debt at higher rates, lower inflation has allowed expenditure to grow at a more moderate rate in 2023 (around 6%), compared with the strong upturn in 2022 (21%).*

- *The high average maturity of the debt portfolio, which means that higher interest rates are passed through gradually, together with the strong growth of the economy, has made it possible for the financial burden measured as a percentage of GDP to have grown very moderately to stand at 2.3% of GDP.*

- *This new interest rate environment implies a vulnerability for the sustainability of public finances, given the high debt that will have to be refinanced at significantly higher rates.*

- *For 2024, the Public Treasury proposes a borrowing schedule similar to that of last year, reducing net issues by €10bn to €55bn. Gross issuance is expected to be €257.57bn, about 2% higher than in 2023. However, as a percentage of GDP it remains at 17%, a relatively low ratio by historical standards, representing a low refinancing risk in normal circumstances.*

- *The maturity profile of the State debt shows well-distributed financing needs over the next few years, with moderate maturities in the short term and a granular distribution in the medium and long term, with no concentration of repayments in any one year.*

- *In 2024, the Treasury will continue to promote the diversification of the investment base in a context of a reduction in the European Central Bank balance sheet. The noteworthy trends observed in the distribution of Spanish public debt in 2023 include the high interest of households in Treasury Bills, now accounting for a third of total holdings. The reduction in the Bank of Spain's debt holdings is in line with the European Central Bank's announcements on the reduction of its balance sheet.*

- *The reform of the EU's economic governance has come a long way from the launch of the first public consultation by the European Commission in February 2020 up to February 9th, 2024, when the trilogue negotiation between Parliament, the Council Presidency and the Commission finally concluded.*

- *Medium-term Fiscal-Structural Plans become the main element setting out the fiscal strategy for each Member State. These Plans must be submitted no later than September 20th, 2024.*

- *Pending the final wording of the reform, AIReF has been conducting exercises to illustrate the adjustment that would need to be made. In this regard, according to the macro-fiscal projections of the October 2023 Budgetary Plan, an annual linear adjustment of 0.64 points of GDP over the period 2025-2028, up to a cumulative total of 2.56 points, would meet the requirements of the new framework.*

Debt (GDP), quarter-on-quarter evolution

Source: INE and Bank of Spain

The Spanish debt-to-GDP ratio stood at 107.7% at the end of 2023, a reduction of 3.9 points over the year and an increase of 9.5 points on the pre-pandemic level. In monetary terms, public debt continued to grow in 2023 to reach €1.58tn. However, the rate of debt growth was lower than that of nominal GDP, which led to a reduction in the ratio. The quarterly profile shows a downward path over the last 11 quarters, with a cumulative reduction of 17.6 points from the peak reached in the first quarter of 2021 (125.3%).

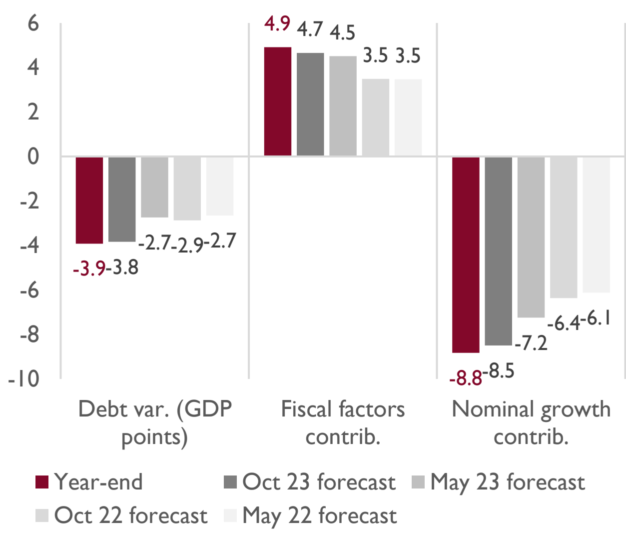
By sub-sector, the debt of the Central Government and the Social Security Funds has increased by 11.2 points in the last four years, while the debt ratio of the Autonomous Regions (ARs) has fallen by 1.4 points to 22.3% of GDP. For their part, Local Governments have reduced their debts slightly to 1.6%.

The reduction in the ratio in 2023 was significant and was mainly the result of a high contribution from the GDP deflator. Nominal GDP grew by 8.6% in 2023. The contribution of growth to the fall in the ratio was 8.8 points, of which 2.6 points came from the real part, and 6.2 points from the deflator. For their part, fiscal factors (mainly deficit) provided an increase of 4.9 points, down by 0.6 points of GDP on the previous year.

The evolution of the ratio has been in line with the latest forecasts of the various national and international organisations, including AIReF. For 2023, AIReF estimated a reduction in the ratio of between 2.7 and 3.8 points of GDP during the different forecast windows, in line with the 3.9 points finally recorded. The underestimation of the contribution of GDP growth to the reduction in the ratio has been offset by an underestimation of the greater positive contribution of fiscal factors.

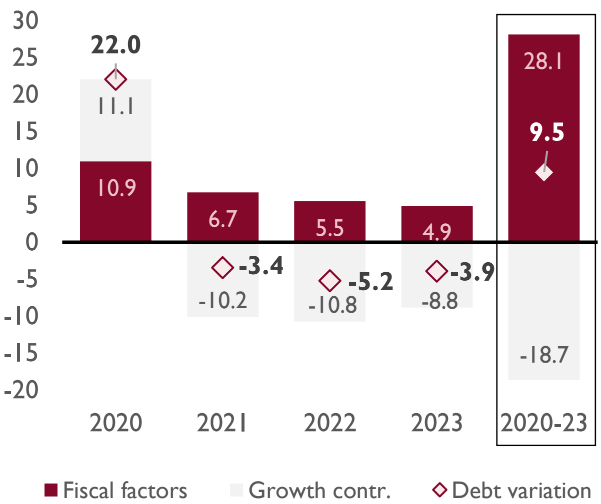
Following the sharp initial increase caused by the pandemic, the debt ratio is on a clear downward path. Some correction of the high public deficit together with much higher than expected growth and inflation have managed to correct approximately two thirds of the increase in debt caused by the pandemic, placing the ratio on a clear downward path. Of the 9.5 points of increase in the ratio over the last four years, fiscal factors (deficit plus other changes in debt) have made a positive contribution of 28.1 points. This has been partially offset by the contribution of nominal growth (18.7 points), where the GDP deflator has contributed 14.9 points and real growth 3.8 points.

AIReF's forecast history for the change in the debt ratio in 2023 and its contributions



Source: AIReF

Contribution to the change in debt (GDP points)

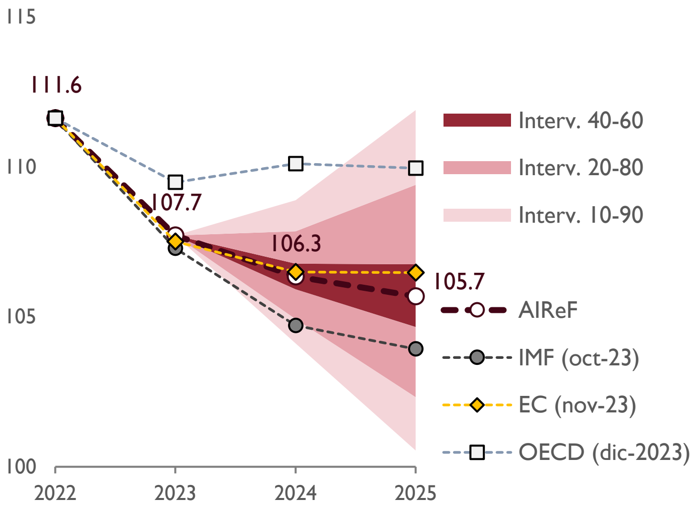


Source: Bank of Spain, INE and AIReF

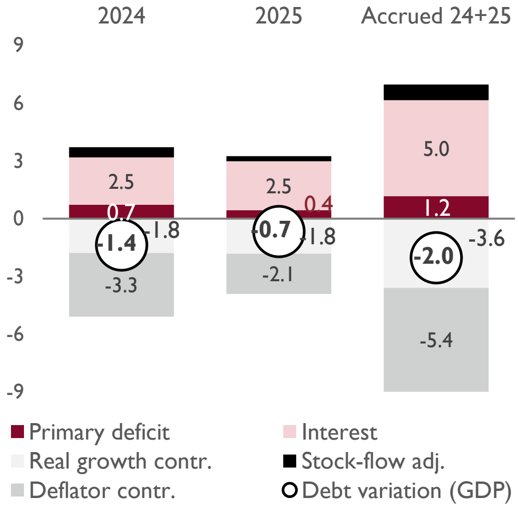
Short-term forecasts

AIReF's macro-fiscal forecasts project a reduction in the debt ratio this year of 1.4 points of GDP on the level recorded in 2023, which would place the ratio at 106.3% at the end of 2024. This forecast is in line with the forecast presented by the Government in the draft Budgetary Plan for 2024, and is in the range of the latest forecasts of the IMF (104.7%) and the European Commission (106.5%), although somewhat further away from the forecast projected by the OECD (110.1%). The public deficit will continue to contribute to the increase in debt, albeit with a slightly lower contribution than in 2023, and the reduction in the ratio will be mainly supported by the nominal growth in GDP, where the deflator will make a very significant contribution.

Debt forecasts (% GDP)



Contributions to the change (GDP points)

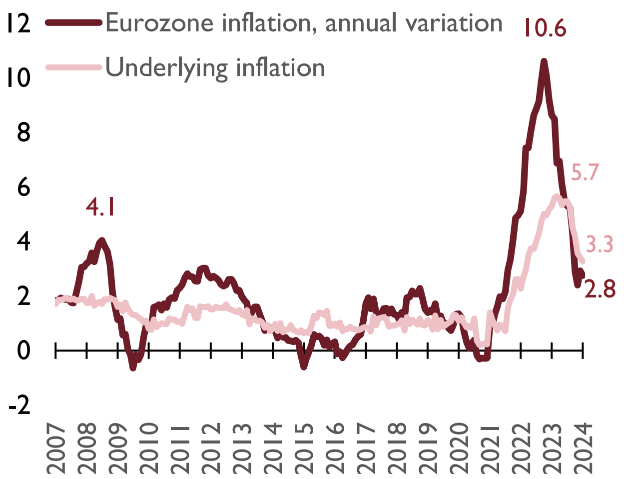


Source: AIReF, IMF, European Commission, OECD and Government

Inflation and interest rates

Inflation clearly receded in 2023. After setting an all-time high in 2022, inflation fell significantly in 2023, approaching central bank benchmark levels, although a final correction to 2% is expected to be much more gradual.

Harmonised inflation in the euro area



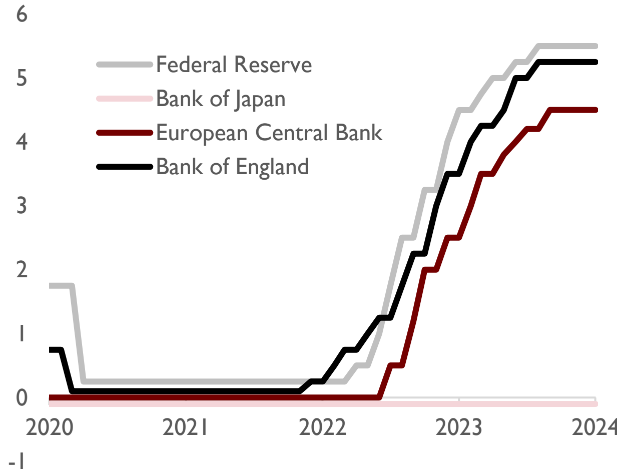
Source: Eurostat

Headline inflation in the euro area started the year at 2.8%, with a clear and ongoing trend of deceleration after reaching an all-time high in October 2022 (10.6%). With a five-month lag behind the headline index, core inflation joined the trend, ending the year at 3.3%, falling 2.4 points from March. Average expected inflation (euro area) in the next five years has fallen by a few tenths of a percentage point to stand at 2.2%. Long-term inflation expectations already priced in, measured using the 5Y-5Y method (expected average inflation over a 5-year period starting 5 years from now), remain stable at 2.3%.

After 18 months of continuous interest rate hikes, central banks have gone into pause mode. Over 2022 and 2023, interest rates rose by 525 and 450 basis points in the US and the euro area, marking an unprecedented episode both for the speed of the increases and for their size. The favourable evolution of inflation has led to a shift in monetary policy, in what is expected to be a plateau phase, with monetary policy remaining restrictive for an extended period of time, closely linked to the evolution of the price level.

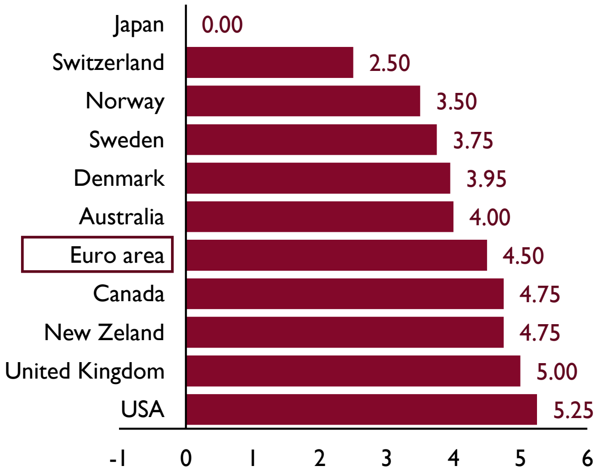
Inflation and interest rates

Official interest rates



Source: Central banks of the US, Euro, Japan and England

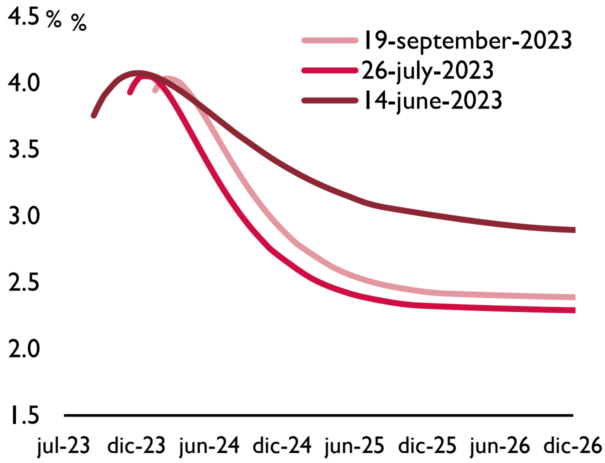
Interest rates, cumulative change in 2022 and 2023



Source: Refinitiv

Markets price in rate reductions in 2024. Investor expectations have stabilised around a scenario in which both the Fed and the ECB would cut rates as early as the second quarter, with cumulative reductions of between 100 and 150 bp over 2024 as a whole. This optimistic view is supported by good inflation data and the expected moderation in economic activity. Central banks are also hinting at cuts in 2024, but with greater caution. Monetary authorities will not move rates until they have a high degree of confidence that inflation will return to the target level, as tailwinds such as energy base effects may disappear over the coming months. Despite their improvement, core inflation indicators are at higher levels and are falling at a slower rate.

Expected ECB deposit facility rate (*)



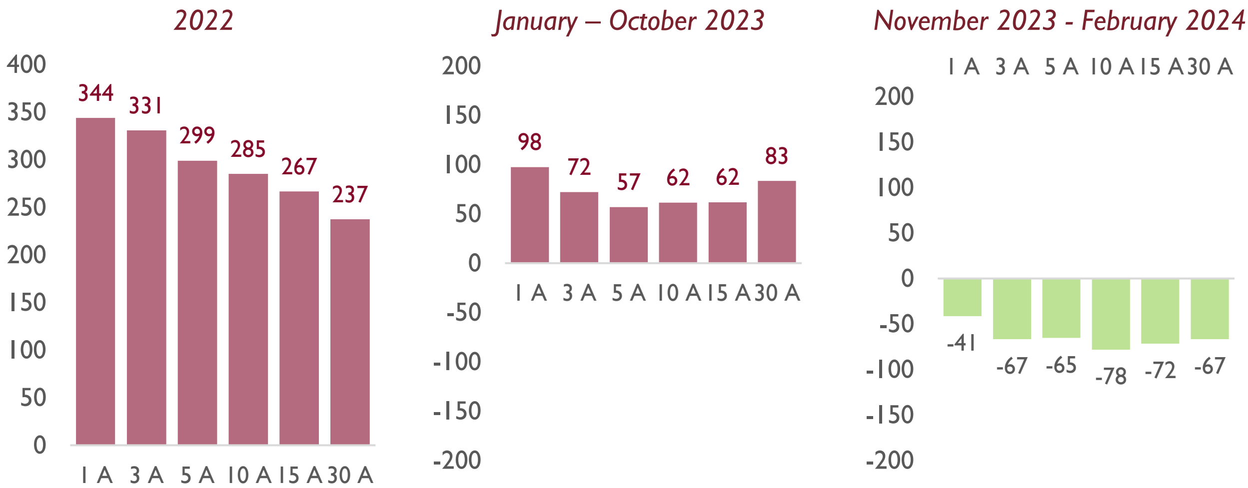
(*) Discounted through the instantaneous forward curve of the OIS

Source: Refinitiv and AIReF

Evolution of the cost of financing

Following the sharp increases in sovereign debt yields in 2022, which continued in a more moderate manner over much of 2023, the expected end of the rate hike cycle led to a correction in the latter part of 2023. After two years in which the yield on Spanish debt had accumulated an average increase of 450 bp, between mid-October and the end of the year the yield on the 10-year debt of Italy, Spain, France, Germany and Portugal fell by 130, 105, 100, 90 and 85 bp, respectively. Outside the euro area, US debt yields have also fallen sharply, by 100 bps.

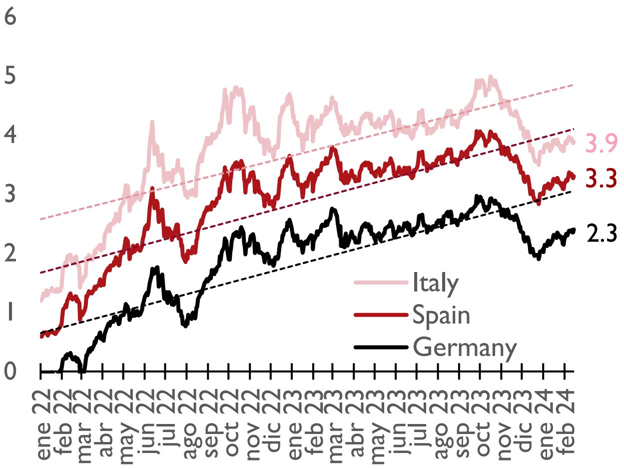
Change in Spanish bond yields (bp)



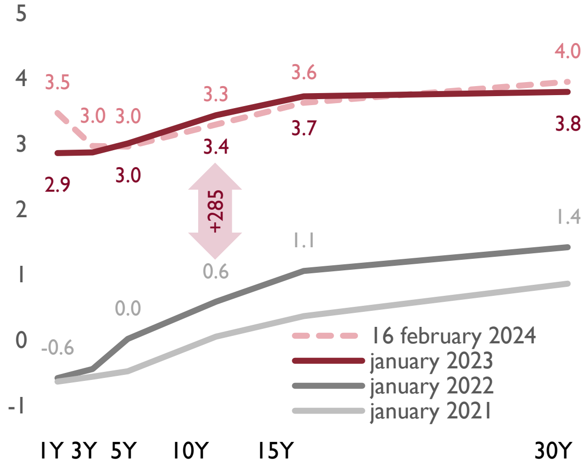
Source: Refinitiv and AIReF

2024 has started with a slight upturn in yields, readjusting part of the sharp fall recorded in the last part of 2023. After the sharp correction that took place over just two months, sovereign yields have risen to somewhat higher levels, thereby responding to a readjustment of expectations in line with a prudent monetary policy strategy.

Yield on 10-year debt (%)



Spanish interest rate curve (%)

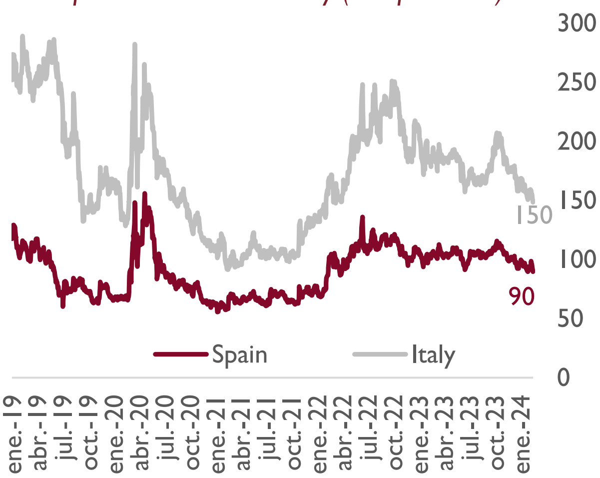


Source: ECB and Refinitiv

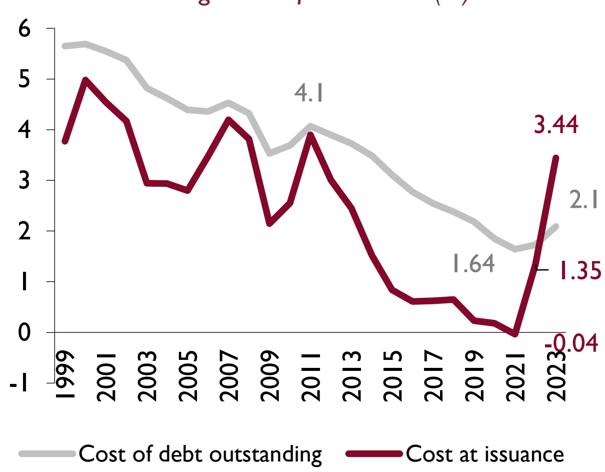
The evolution of debt yields so closely linked to inflation has been a global phenomenon. Spain's spread *vis-à-vis* Germany fell back below 100 bp, down 25 points from the 115 recorded in October. In the cases of Italy and Greece, the spread narrowed even further (55 and 50 bp), bringing the yield on Greek debt very close to that of Spain. The spread of Spanish debt *vis-à-vis* Italy and Portugal has narrowed by 30 and 20 bps to 65 and 20 points.

After reaching a low in 2021 of -0.04%, the average cost of new Treasury issues rose in 2023 to 3.44%, a figure not seen since 2011. This higher issuing cost has also generated a turning point in the average cost of the State debt portfolio, which has increased from its all-time low of 1.64% to 2.09%.

Spread vis-à-vis Germany (risk premium)



Average cost of State debt (%)



Source: Refinitiv

Source: Public Treasury

Total General Government interest expenditure has risen by just over €8.5bn from a low in 2020 to a total of €33.76bn in the third quarter of 2023. In 2023, interest expenditure in nominal terms continued to increase, thus continuing with the change in trend that began in 2021 after seven continuous years of reductions. Even though the Treasury has had to place its debt at higher rates, lower inflation has allowed expenditure to grow at a more moderate rate in 2023 (around 6%), compared with the strong upturn in 2022 (21%). The high average maturity of the debt portfolio, which means that higher interest rates are passed through gradually, together with the strong growth of the economy, has made it possible for the financial burden measured as a percentage of GDP to grow very moderately to reach 2.3% of GDP. Looking ahead, this new interest rate environment implies a major vulnerability for the sustainability of public finances, given the high debt that will have to be refinanced at significantly higher rates.

For 2024, the Public Treasury proposes a borrowing schedule similar to that of last year, reducing net issues by €10bn to €55bn. For the fourth consecutive year, net borrowing will be obtained through the issuance of medium and long-term instruments, contributing to the objective of maintaining the average maturity of the portfolio. Medium- and long-term maturities are expected to increase to €118.12bn. Accordingly, gross issuance is likely to rise to €173.12bn. There will be no net issuance of Treasury Bills in 2024, so gross issuance will be very similar to that of 2023, with an expected figure of €84.45bn. In aggregate terms, gross issuance is expected to be €25.57bn, about 2% higher than in 2023, although as a percentage of GDP it remains at 17%, a relatively low ratio by historical standards, representing a low refinancing risk.

In 2024, the Public Treasury will continue to receive funds from the Next Generation EU programme and to promote the diversification of the investment base in a context of a reduction in the European Central Bank balance sheet. In 2024, in addition to the fourth disbursement already requested, further transfers and loans will be received in accordance with the timeline of the Recovery Plan and its Addendum, including the pre-financing of the REPowerEU programme. Furthermore, the Treasury will continue to promote the diversification of the investment base through the issuance of green bonds and inflation-linked bonds.

The Treasury has begun the year with the placement of two 10- and 30-year bonds that have broken historical records. So far this year, the Treasury has made two 10- and 30-year syndicated issues worth €15bn and €6bn that have broken historical records. The 10-year bond attracted record demand of over €138bn, the highest demand in its history for any of its bonds. The demand for over €83.7bn of the 30-year bond represents the largest recorded for a Treasury issue at this term. Syndicated issues help to extend the diversification of the investor base and make it possible to discriminate placement among quality investors.

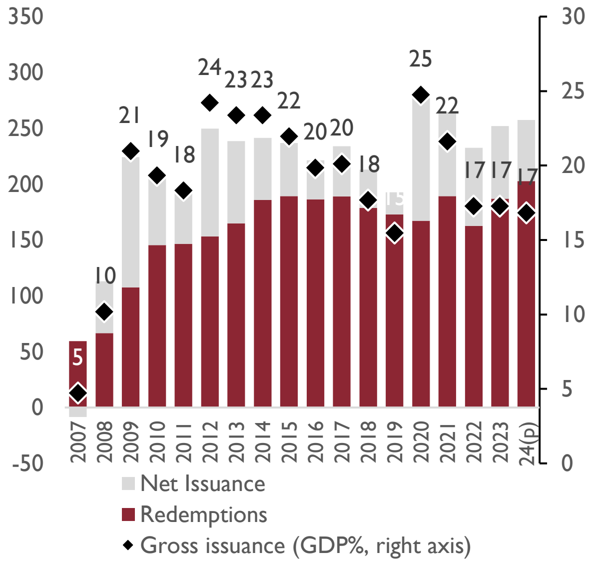
State debt has a low refinancing risk. The maturity profile of the State debt shows well-distributed borrowing needs over the next few years, with moderate maturities in the short term and a granular distribution in the medium and long term, with no concentration of maturities in any one year.

Treasury borrowing in 2023 and 2024 (€bn)

(billions euros)	Initial fore. 2023	Execution 2023	Forecast 2024
Net Issuance	**70.0**	**65.1**	**55.0**
Gross Issuance	**256.8**	**252.0**	**257.6**
Medium and long term			
Gross Issuance	172.5	167.5	173.1
Redemptions	97.5	97.5	118.1
Net Issuance	75.0	70.0	55.0
Letras del Tesoro			**0.0**
Gross Issuance	84.3	84.4	84.5
Redemptions	89.3	89.3	84.5
Net Issuance	-5.0	-4.9	0.0

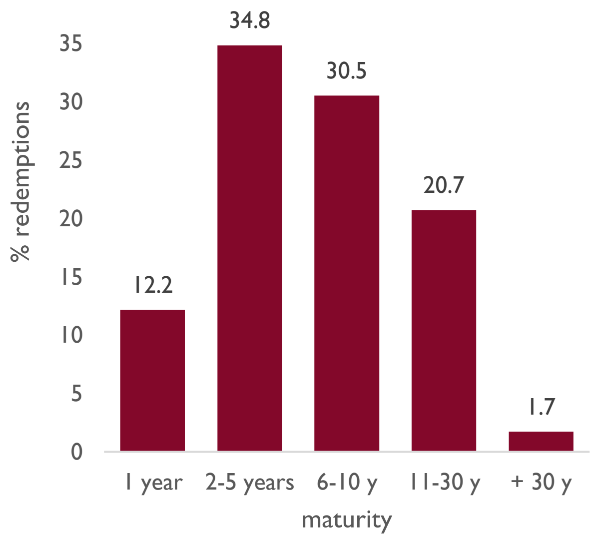
Source: Treasury

Treasury borrowing needs (€bn and % GDP)



Source: Treasury and AIReF

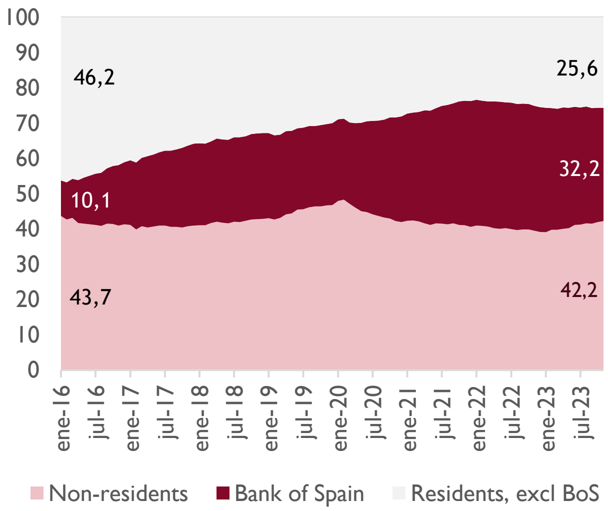
Maturity profile of State debt (Jan-24)
(percentage of redemptions and maturity)



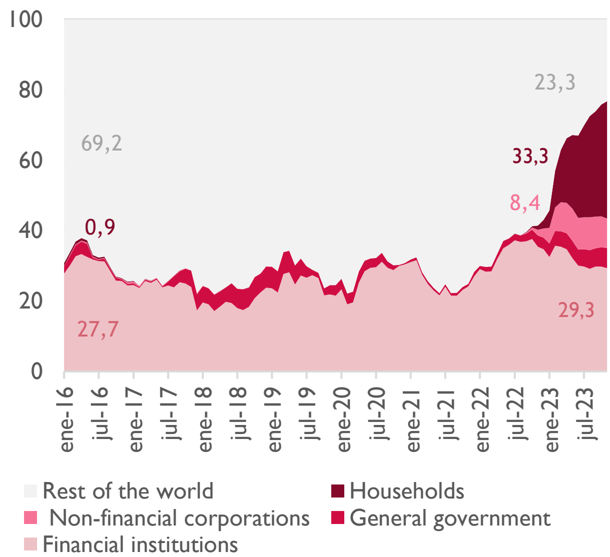
Source: Treasury and AIReF

The noteworthy trends observed in the distribution of Spanish public debt during 2023 include the high interest of domestic investors in Treasury Bills, as well as the orderly reduction of the Bank of Spain's debt holdings in line with the European Central Bank's announcements on quantitative tightening. The gradual reduction in the balance sheet of the European Central Bank is being well absorbed by the market, favoured by a strong investor appetite. Foreign investors have increased their holdings of State Debt throughout 2023, remaining above 40% of the total debt. This increase has been concentrated in medium- and long-term bonds, with a reduction in their holdings of Treasury Bills in favour of domestic investors. Particularly significant last year was the high level of retail investors' interest in Treasury Bills. They became the leading holder, with a record increase of €22bn up to November 2023. As a result, as of that date, households account for a third (33.3%) of the total holdings of bills. They are the leading type of investor in this segment, with an amount of €24bn.

Holdings of government debt by investor type (%)



Holdings of Treasury Bills by investor type (%)



Source: Bank of Spain

New European governance framework and some preliminary simulations of the necessary adjustment

The **reform of EU economic governance appears to be nearing completion.** If so, a new fiscal framework anchored in debt sustainability could come into force over the course of 2024. A transitional provision would set the dates for the first round of fiscal-structural plans, so that Member States will submit their plans no later than September 20th, 2024.

The reform has come a long way from the launch of the first public consultation by the European Commission in February 2020 to the legislative proposal presented in April 2023. This proposal was the starting point of the negotiation within the Council, which concluded with the Agreement of December 20th, 2023. The trilogue negotiations between the Parliament, the Council Presidency and the Commission were finally concluded on February 9th. This means that – aside from the procedure for formal approval by the Plenary and the Council – the final version of the economic governance reform has now been agreed. Although the final texts are not yet known, below is a summary of the main milestones of the reform process and an approximation of the resulting adjustment for the Spanish economy. AIReF will publish an Opinion on the new European framework once the final texts are known.

Pending the final wording of the reform, AIReF has been carrying out tentative exercises to illustrate the adjustment that would need to be undertaken to comply with the elements that have been consolidated in the different stages of the negotiation. The European Commission launched two public consultations[1] and, finally, in April last year published a proposal to reform the preventive and corrective arms of the SGP, as well as the national fiscal frameworks directive. Once the Commission proposal was published in April 2023, the negotiation of the reform began in the Council – mainly conducted under the Spanish Presidency. This negotiation concluded with the Agreement of December 20th. In parallel with the conclusion of the Agreement in the Council, the European Parliament (EP) also agreed on its negotiating position in December.

[1] The first in February 2020 suspended after the outbreak of Covid, the second in October 2021

The main aspects of the reform proposal by the Commission to determine the adjustment to be made are:

1. **Medium-term Fiscal-Structural Plans become the main fiscal commitment element.** Proposed by the Member States within a common framework, they include fiscal adjustment paths that reflect national preferences. Unlike the current Stability or Convergence Programmes, they are fixed for a four-year horizon. The annual update of the medium-term planning documents therefore disappears, and they can only be amended in exceptional circumstances. In their place, each year the Member States will submit a Progress Report in the spring that will reflect the progress made in achieving the path committed to.
2. **Fiscal commitments will be translated into a path of primary expenditure net of revenue measures**, specifically calibrated for each country. The expenditure path thus becomes the only relevant indicator for the purposes of *ex-post* fiscal supervision in the EU.
3. **This expenditure path should ensure that debt converges (and/or remains) at prudent levels and the deficit is reduced (and/or remains) below 3%.**
4. **In addition, when calibrating the expenditure path, it must satisfy *ex-ante* some common safeguards,** including that the public debt should fall over the Plan period, the fiscal effort during that same period should be at least proportional to the total adjustment that needs to be made and the growth in net expenditure should not exceed the medium-term GDP growth rate.
5. The **period of the adjustment (not of the Plan) can be extended up to seven years** if the Member State commits to a set of reforms and investments, which must be specific and verifiable, that support growth and fiscal sustainability, addressing priorities identified at the EU level.
6. **There are no "golden rules",** as no special consideration is given to any kind of nationally financed expenditure, beyond interest and cyclical unemployment expenditure, which are traditionally excluded from expenditure rules as their evolution is outside the decision-making power of governments and fiscal authorities.
7. **Lastly, the Commission proposal provides for the creation of a control account in which deviations (above or below) of the observed net primary expenditure in relation to the committed expenditure are recorded**. If the deviations exceed a certain threshold – 0.3 points of GDP in one year or 0.6 points cumulatively – the Commission will prepare the report for the possible opening of an Excessive Deficit Procedure (EDP)[2]. In the event that an EDP is opened, the corrective path of net primary expenditure will entail a minimum annual adjustment of 0.5 points of GDP in structural terms and will be at least as demanding as the one committed to by the Member State, correcting the accumulated deviations.

The changes proposed by the Council with regard to these aspects of the Commission proposal mainly affect the safeguards and the special consideration of some nationally financed expenditure items.

1. With regard to the **safeguards** to be met by the calibration of the *ex-ante* expenditure path, the amendments introduced by the Council are as follows:
   - The safeguard relating to the maximum growth of net primary expenditure is eliminated;
   - The safeguard relating to debt reduction is reformulated, distinguishing between those countries whose debt exceeds 90% and those which stand between 60% and 90% of GDP, and
   - A new deficit-related safeguard is introduced. According to this last safeguard, the annual structural effort in primary terms must be at least 0.4 pp if the adjustment is made in four years and 0.25 pp if it is extended to seven years. In addition, the adjustment must continue until the Member State reaches a structural balance of -1.5% of GDP, in addition to ensuring a downward debt trajectory with a sufficient degree of plausibility.

[2] Article 126(3) TFEU report

2. In addition, the Council introduces the **special consideration of some expenditure items**, albeit limited in scope and always with regard to the corrective arm of the SGP. Specifically, it is established that the increase in investment in defence will be taken into account when the Commission proposes the opening of an Excessive Deficit Procedure (EDP). Furthermore, the minimum annual effort in the case of an EDP will be calculated in primary terms (i.e. net of the increase in interest expenditure) during the period 2025-2027.

Although the publication of the final texts resulting from the Agreement between the three institutions is still pending, the outlines point to three significant amendments that have finally been introduced in the last phase of negotiations with the European Parliament:

- For fiscal supervision purposes, national co-financing of EU funds would be excluded from the calculation of the net primary expenditure indicator, without limits
- Deficit and debt safeguards would be maintained with the calibration agreed in the Council
- Member States would have to submit their first medium-term fiscal-structural plans by September 20th, this year.

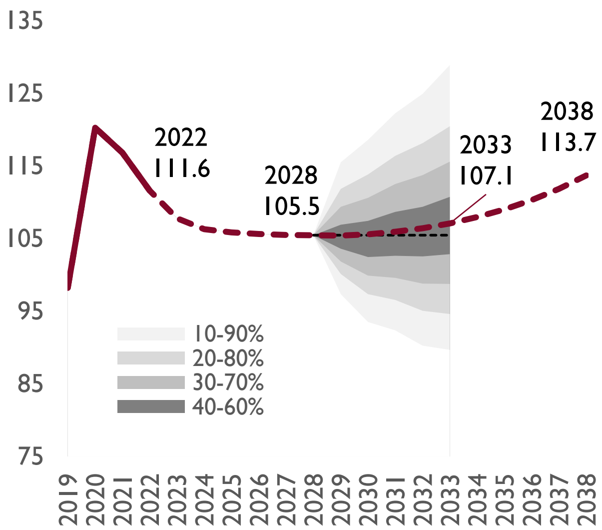
Pending the final wording of the reform, AIReF has been carrying out tentative exercises to illustrate the adjustment that would need to be undertaken in order to comply with the elements that have been consolidated in the different stages of the negotiation. That is, for a country whose debt exceeds 60%, the path of primary expenditure net of revenue measures must guarantee *ex-ante* that:

(i) once the adjustment period is over, the debt trajectory remains on a plausible downward path;
(ii) the deficit is reduced and kept below 3%;
(iii) the annual effort is at least proportional during the adjustment period and greater than a certain size;
(iv) the debt is reduced over that same period, and
(v) the structural deficit does not exceed a certain threshold.

The central element in the adjustment calibration revolves around what it means for the debt trajectory to remain on a "plausible downward path". In this regard, the regulation provides for the creation of a future working group on debt sustainability analysis where methodological issues and assumptions to be considered will be discussed. For the first round of structural plans, the assessment of plausibility will follow the methodology used in the "*Debt Sustainability Monitor 2022*" (DSM) published by the European Commission.

The concept of uncertainty is built by considering two complementary elements: (i) stochastic debt projections and (ii) deterministic scenarios that consider a more unfavourable evolution of certain assumptions or variables. The following must be fulfilled for it to be considered that the debt path shows a downward trajectory:

Baseline scenario of debt evolution with uncertainty bands as from 2028



Source: AIReF

i. Stochastic projections: the path must show a downward trajectory with at least 70% probability in the five years after the end of the adjustment period.

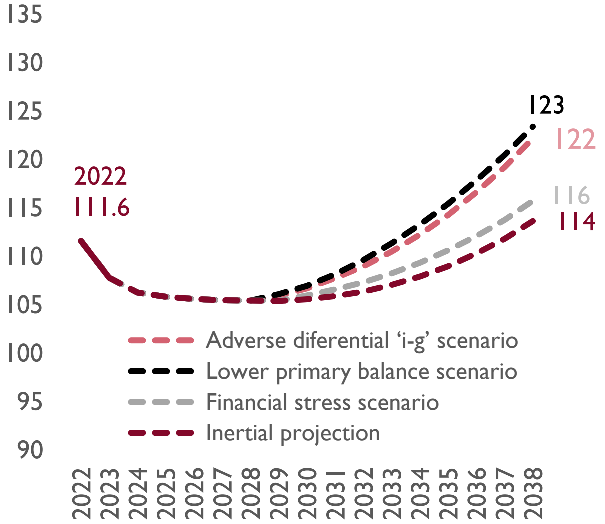
Considering the four-year adjustment period 2025-2028, the debt ratio five years later (in 2033) should be below the starting level (105.5% in 2028) with a degree of probability of at least 70%. In the baseline projection, the ratio stands at 107.1%. This value not only does not imply a reduction, but shows that the debt ratio has a 54% probability of rising. A ratio of 92% would need to be reached to fulfil the condition. This would imply **an annual linear adjustment of the primary balance of 0.49 GDP points over four years**, to a total of 1.96 points cumulatively.

ii. **More unfavourable deterministic scenarios: the path should show a downward trajectory in the ten years after the end of the adjustment period under more pessimistic assumptions on the factors determining the evolution of the ratio.** The variables on which the shock is defined and its calibration are defined in the DSM 2022, giving rise to the following scenarios:

1) "Financial stress" scenario
2) Adverse interest rate-growth rate ("i-g") differential scenario
3) Lower (structural) primary balance scenario

The shocks are introduced in the year following the adjustment period (2025-2028), that is, from 2029 onwards, projecting the debt ratio on the basis of these most adverse assumptions.

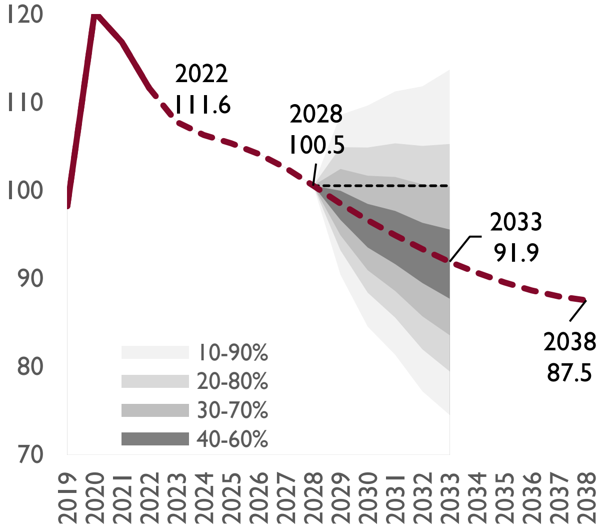
Baseline scenario of debt evolution and more unfavourable scenarios as from 2028



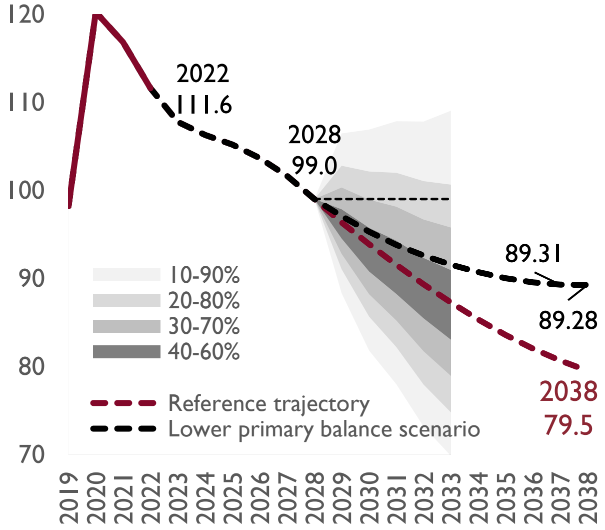
Source: AIReF

We will consider the path to be downward when the debt ratio in 2038 (2028+10 years of projection) is lower than that of the previous year under the most adverse scenario, which in this simulation coincides with the lower (structural) primary balance scenario. This condition will imply an **annual linear adjustment of the primary balance of 0.64 GDP points over four years**, up to a total of **2.56 cumulative points**.

Adjusted baseline path (0.49 points) showing a downward profile in 2033 with a 70% probability, according to the stochastic projection



Adjusted baseline path (0.64 points) showing a downward profile in 2038 in the most unfavourable deterministic scenario



Source: AIReF

After calibrating the adjustment necessary in four years so that the path of the ratio presents a descending profile, the compliance with the other requirements that the expenditure path must meet, contained in Chapter III, Articles 5-8, of the legislative proposal to reform the preventive arm of the SGP, as agreed in the Council on December 20th (latest version available), is checked.

An adjustment of 0.64 GDP points over four years (2025-2028) will meet the requirements of the technical trajectory:

- **Risk-based requirements (plausibility of a downward path)** ✓

  <u>Stochastic analysis</u>

  - Probability greater than 70% that the debt will be declining by the 5th year after the end of the adjustment (2033)
  - An adjustment of 0.47 points would be sufficient to meet this condition
  - With an adjustment of 0.64 points, the probability rises to 77%

  <u>Stress scenarios:</u>

  - In the most unfavourable scenario, the ratio has to be decreasing at the 10th year after the end of the adjustment (2038).
  - The most demanding scenario is that of "worse primary balance", which requires an adjustment of 0.64 points so that the debt in 2038 is slightly lower than that of the previous year

  <u>Deficit condition:</u>

  - Deficit below 3% over the adjustment period and remaining below this threshold over the medium term
  - The deficit would stand at 0.5% at the end of the adjustment period (2028), increasing slightly to 1.2% in 2038, with an average of 0.7 points in the period 2028-2038

  <u>Linearity of the adjustment as a rule:</u>

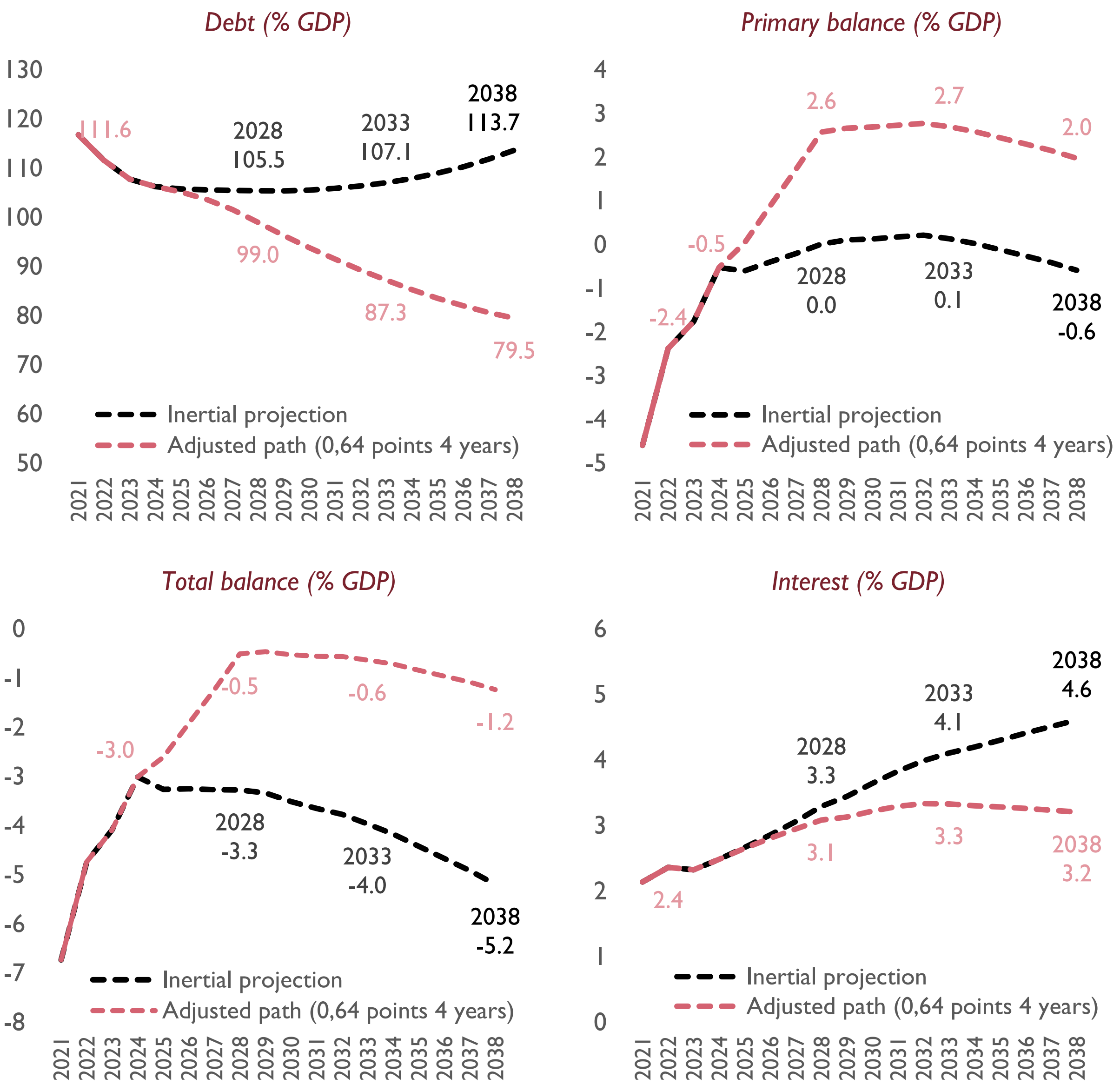
  - The path calibration has been carried out through a constant adjustment during the period

- **Debt safeguard** ✓
  - Average reduction of 1 point of GDP in the period 2025-2028
  - Baseline path: average reduction of 0.21 points, cumulative reduction of 0.83 points
  - Adjusted path: average reduction of 1.81 points, cumulative reduction of 7.26 points

- **Deficit safeguard** ✓
  - Minimum reduction of 0.4 points of the structural primary balance (adjustment of 0.64 > 0.40)
  - Continue thereafter, from 2029 in the case of this simulation, with adjustment to reach a (structural) deficit of 1.5%
  - With a projected deficit at the end of 2028 of 0.5% of GDP – and assuming a closed output gap - it would not be necessary to continue with the adjustment beyond 2028

- In the baseline scenario, the 2038 debt ratio is 6 points higher than the 2023 forecast, standing at 113.7%
- In the adjusted path, the 2038 debt ratio falls by 28 points compared with the 2023 forecast, to stand at 79.5%
- In the most unfavourable scenario, with an adjustment of 0.64 points, the 2038 debt ratio falls by 19 points with regard to the 2023 forecast, to stand at 89.3%, with a level very slightly lower than that of the previous year (2037)

Baseline projection and adjusted path (0.64 GDP points over four years)



Source: AIReF