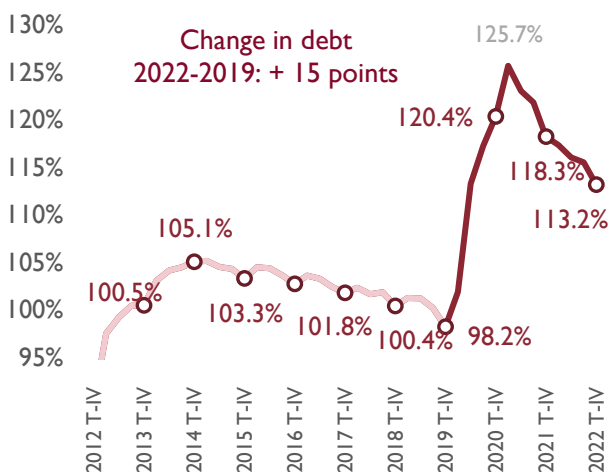


- Spain's debt-to-GDP ratio stood at 113.2% at the end of 2022, a reduction of 5 points over the year and an increase of 15 points compared to the pre-pandemic level.
- After the initial sharp increase triggered by the health crisis, the debt ratio shows a clear downward path. The quarterly profile shows seven consecutive quarters of decline after five quarters of increase, with a total reduction of 12.5 points since the ceiling reached in the first quarter of 2021 (125.7%).
- The reduction in the ratio in 2022 has been significant and higher than the forecasts of the various national and international organisations, including AIReF, as a result, among other factors, of a higher contribution from growth. The contribution of GDP growth to the fall in the ratio was 10.7 points, of which 6 points came from the real part and 4.7 points from the deflator. On the other hand, fiscal factors (mainly deficits) accounted for an increase of 5.7 points, which represents a reduction of one point compared to last year.
- Central Government and Social Security Funds have borne almost all the increase in debt over the past three years, as they have financed most of the pandemic-related expenditures.
- In the short term, the macro-fiscal forecasts published by AIReF in the Initial Budget Report for the Public Administrations project a decrease in the debt-to-GDP ratio of 2.6 points over the level recorded in 2022, which would put the ratio at 110.6% at the end of 2023. In the short term, the macro-fiscal forecasts published by AIReF in the Initial Budget Report for the Public Administrations project a 2.6 points reduction in the debt to GDP ratio on the level recorded in 2022, which would bring the ratio down to 110.6% at the end of 2023. The public deficit will continue to contribute to the increase in debt in a similar way to 2022 and the reduction in the ratio will be mainly supported by nominal GDP growth, where the deflator will make a very significant contribution.
- This forecast improves on the 112.4% forecast presented by the Government in the draft Budget Plan for 2023, which is in line with the latest forecasts of the IMF and the European Commission.
- The year 2022 has been a turning point in the evolution of debt financing costs. The low interest rate environment of recent years has taken a sharp turn in 2022, when central banks around the world have had to react with historic rate hikes in an attempt to curb much higher and more persistent inflation than initially anticipated.
- The rise in yields because of high inflation has been a global phenomenon. In this respect, Spanish debt has maintained its spread over German debt at around 100 b.p., which in historical terms is relatively low.
- After reaching a low in 2021, the average cost of new Treasury issues has risen in 2022 from -0.04% to 1.35%, a value not recorded since 2014.
- Interest expenditure of total General Government has increased by EUR 5,550 million in 2022 to a total of EUR 31,595 million, which represents 2.4% of GDP. In 2022 interest expenditure in nominal terms has consolidated and accelerated the turnaround that started in 2021 after seven continuous years of decline.

- Although the long average maturity of the debt portfolio means that the pass-through of higher issuance rates is gradual, it is worth noting that the sharp increase in the 2022 finance charge was due to the revaluation of the inflation-linked debt portfolio, which contributed more than EUR 8 billion.
- For 2023 the Treasury proposes a similar financing programme to last year's, keeping the net issuance target at the 70 billion euros recorded at the end of 2022. The higher volume of redemptions will imply a 10% increase in gross issuance in 2023, although as a percentage of GDP it is estimated to remain at 18%, a relatively low ratio in historical terms.
- State's debt has a low refinancing risk. Its maturity profile shows financing needs well distributed over the coming 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.
- 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 public debt, increasing its share of total debt by 25 percentage points in recent years to around 35%.
- In the longer term, the reduction of sovereign debt from the ECB's balance sheet may pose a major challenge, not without risk, as it will require the return of a large part of the resident investor base that has been displaced over the last few years.
- The new monetary cycle - with the rapid and intense tightening of financing conditions - coupled with the existing high level of debt, puts the sustainability of public finances at a highly vulnerable starting point.
- In the medium and long term AIReF projects an unfavourable trend in the debt-to-GDP ratio. On the basis of the projections published recently in the "Opinion on the long-term sustainability of General Government", AIReF projects in its baseline scenario a rising debt ratio after an initial period of some stabilisation.
- Incorporating the uncertainty associated with the evolution of macro-fiscal variables, the most favourable scenarios fail to bring the debt ratio below 100% of GDP in the medium term, although they manage to keep the ratio stabilised over a longer period and project lower debt levels in the future.
- The projected deterioration of the primary balance from 2030 onwards as a result of population ageing will mark a turning point in the evolution of the debt ratio, resuming an accelerating upward path.
- High initial indebtedness coupled with unbalanced public accounts will generate unfavourable dynamics in the financial burden even in a scenario of debt cost containment.
- The generation of fiscal space, which is necessary to contain debt dynamics on the one hand and to deal with shocks such as those of recent years on the other hand, requires the design of a medium-term plan to guide public accounts towards a balanced position. Simulations show that the implementation of an early fiscal strategy to contain debt dynamics and the increase in the interest burden will avoid the need for further adjustments in the medium and long run.

Debt (GDP), quarterly evolution



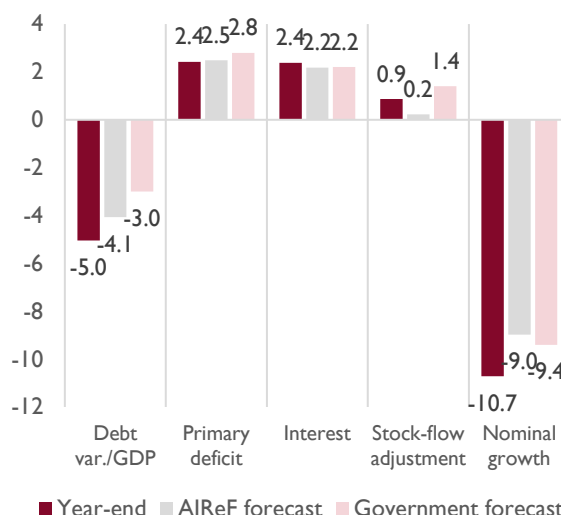
Source: INE and Bank of Spain

Spain's debt-to-GDP ratio stood at 113.2% at the end of 2022, a reduction of 5 points over the year and an increase of 15 points compared to the pre-pandemic level. In monetary terms, public debt continued to grow in 2022 to reach 1.503 trillion euros. However, the pace of debt growth has been lower than that of nominal GDP, leading to a reduction in the government debt ratio. The quarterly profile shows seven consecutive quarters of decline in the ratio after five quarters of increase, falling 12.5 points from the ceiling reached in the first quarter of 2021 (125.7%).

The reduction in the ratio in 2022 has been significant and above the forecasts of the various national and international organisations, including AIReF, as a result, among other factors, of a higher contribution from growth. Nominal GDP has grown by 10.0% in 2022. The contribution of growth to the fall in the ratio was 10.7 points, of which 6 points came from the real part and 4.7 points from the deflator. On the other hand, fiscal factors (mainly deficits) have contributed an increase of 5.7 points, which represents a reduction of one point compared with last year.

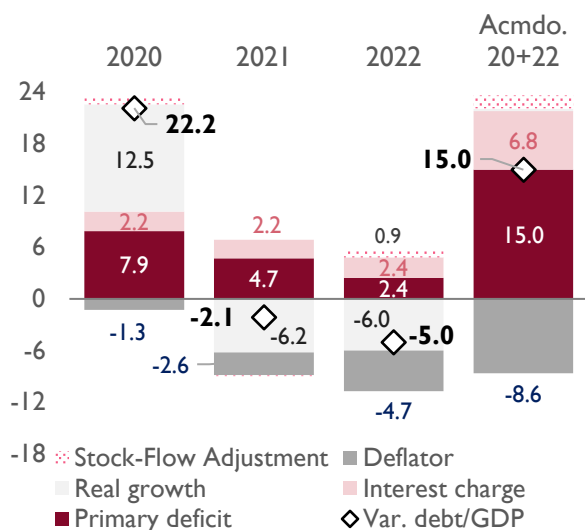
AIReF estimated a reduction in the ratio of 4.1 GDP points compared with the 5 finally recorded. The point difference corresponds to the underestimation of the contribution of GDP growth to the reduction in the ratio (1.7 points) which has been offset by a greater positive contribution from interest and the stock-flow adjustment (2 and 7 tenths of a point respectively).

Debt ratio reduction in 2022 and contributions (GDP points)



Source: AIReF

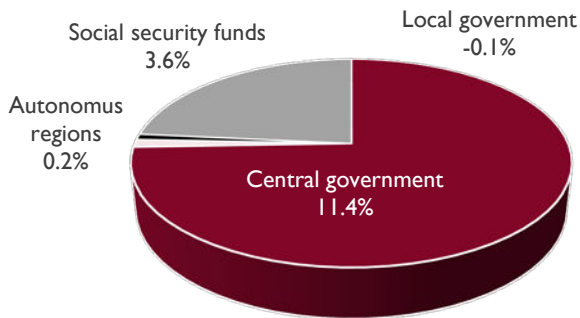
Contribution to the change in debt (GDP points)



Source: Bank of Spain, INE and AIReF

After the initial sharp increase caused by the pandemic, the debt ratio is clearly on a downward path. The contraction of the high public deficit resulting from the health crisis together with the rebound in activity and much higher than expected inflation have managed to correct about one third of the increase in the first year of the pandemic, putting the ratio on a clear downward path. Of the 15-point increase in the ratio over the last three years, the public deficit has made a positive contribution of 21.8 points, which has been partially offset by the GDP deflator of 8.6 points, while the contribution of real growth has been practically nil over this period.

Debt increase (GDP points) between 2022 and 2019 by sub-sector

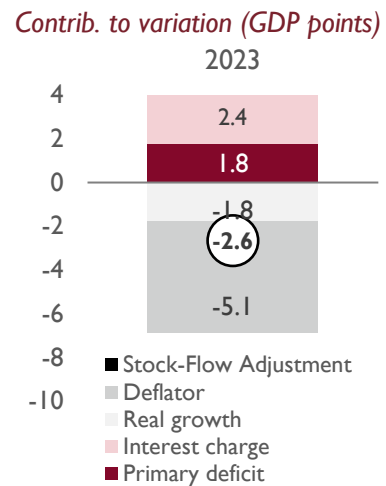
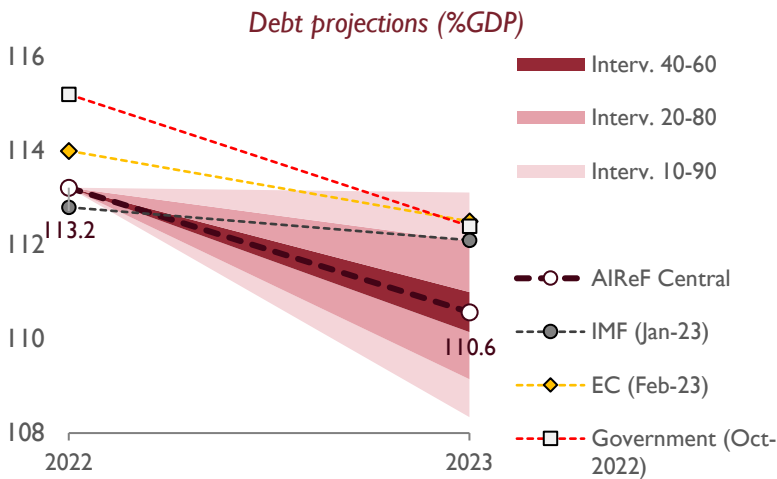


Source: Bank of Spain

Central Government and the Social Security Funds have borne practically all the increase in debt in the last three years, as they have financed most of the expenditure associated with the pandemic. Extraordinary transfers and the non-pass-through of the fall in tax revenue to the Autonomous Regions have cushioned the increase in Autonomous Regions debt ratio, which has risen by only 0.2 percentage points to 23.9% of GDP. For their part, Local Governments saw a very slight reduction in their debt of 0.1 percentage point.

Short-term forecasts

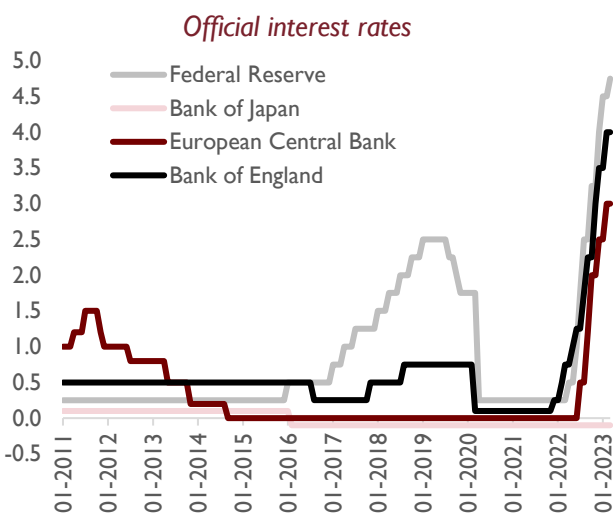
AIReF's macro-fiscal forecasts project a decrease in the debt-to-GDP ratio for this year of 2.6 points on the level recorded in 2022, which would bring the ratio to 110.6% at the end of 2023. This forecast improves on the 112.4% presented by the Government in the draft Budget Plan for 2023, which is in line with the latest forecasts of the IMF and the European Commission. The public deficit will continue to contribute to the increase in debt in a similar way to 2022 and the reduction in the ratio will be supported mainly by nominal GDP growth, where the deflator will make a very notable contribution.



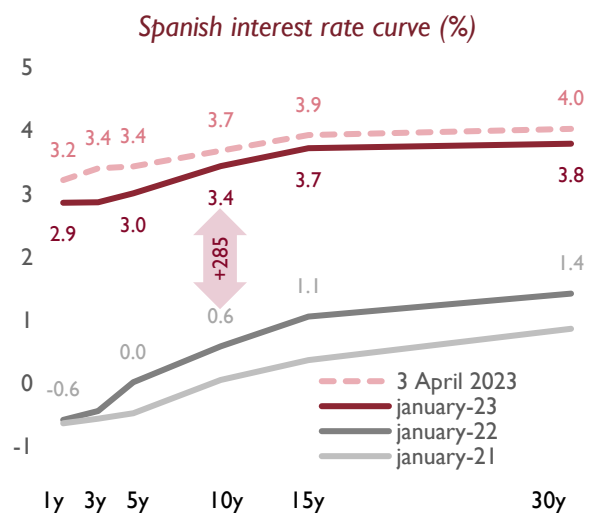
Source: AIReF, IMF, European Commission and Government.

Changes in the cost of financing and debt burden

The year 2022 has been a turning point in the evolution of debt financing costs. The low interest rate environment of recent years has taken a sharp turn in 2022, when central banks around the world have had to react with historic rate hikes in an attempt to curb much higher and more persistent inflation than initially anticipated. Bond markets have been quick to incorporate this scenario, with rises in the year of more than 250 basis points across all parts of the yield curve.

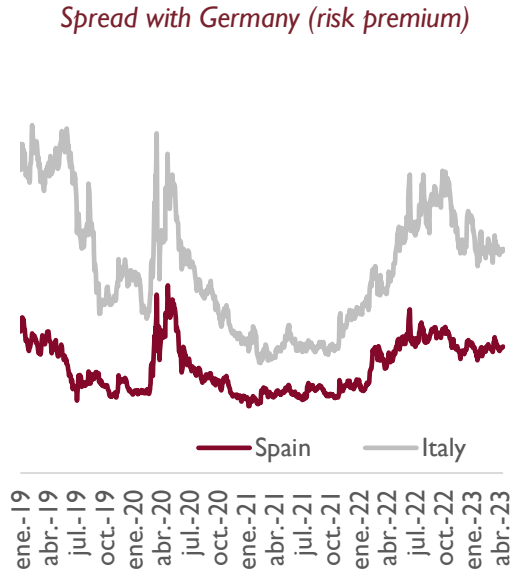


Source: ECB and Refinitiv

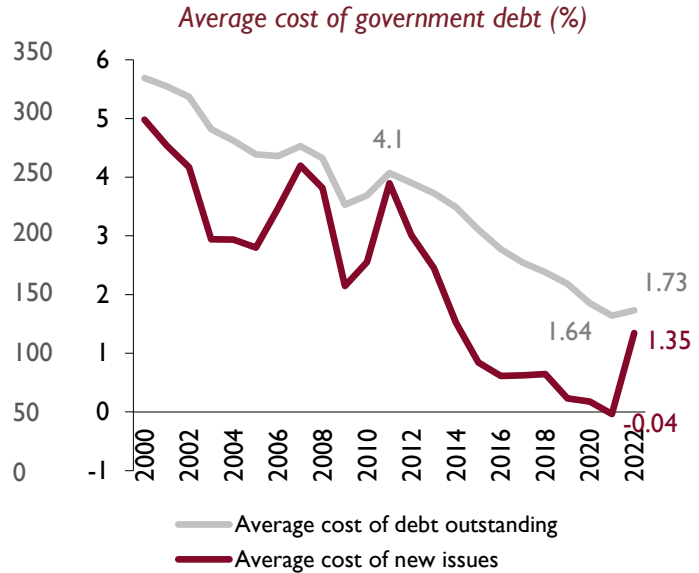


The rise in yields as a result of high inflation has been a global phenomenon. And in this respect it is worth noting that Spanish debt has maintained its spread over German debt at around 100 b.p., which in historical terms is relatively low.

After reaching a low in 2021, the average cost of new Treasury issues has risen in 2022 from -0.04% to 1.35%, a value not recorded since 2014. This higher cost of issuance has also generated a turning point in the average cost of the State's debt portfolio, which has risen from its historical low of 1.64% to 1.73%.

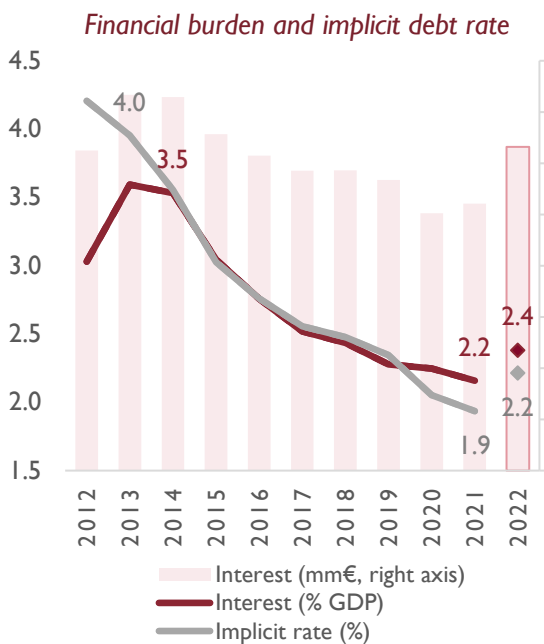


Source:Refinitiv

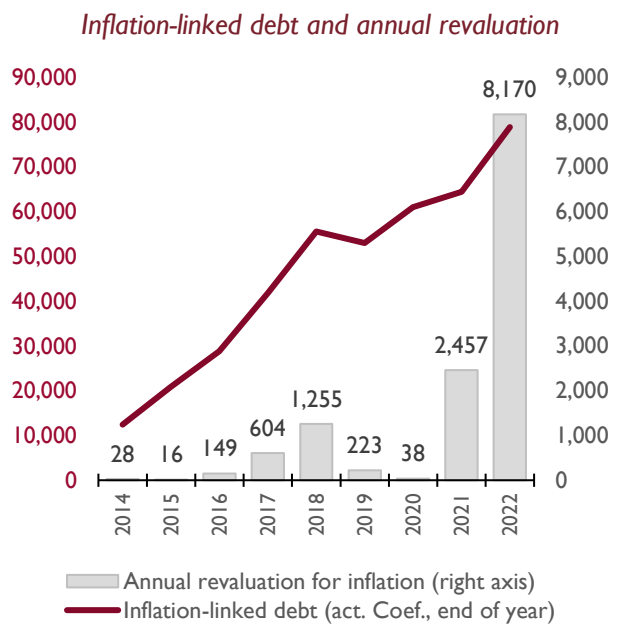


Source: Treasury, IGAE, AIReF

Interest expenditure of total General Government has increased by EUR 5,550 million in 2022 to a total of EUR 31,595 million, or 2.4% of GDP. In 2022 interest expenditure in nominal terms has consolidated and accelerated the turnaround that started in 2021 after seven continuous years of decline. Although the long average maturity of the debt portfolio means that the pass-through of higher issuance rates is gradual, it is worth noting that the sharp increase in the interest burden in 2022 was due to the revaluation of the inflation-linked debt portfolio, which amounted to more than EUR 8 billion. On the other hand, the strong growth of the economy has made it possible for the financial burden measured as a percentage of GDP to grow more moderately in 2022, registering a turning point after a continuous reduction for eight years.



Source: Treasury, IGAE, AIReF

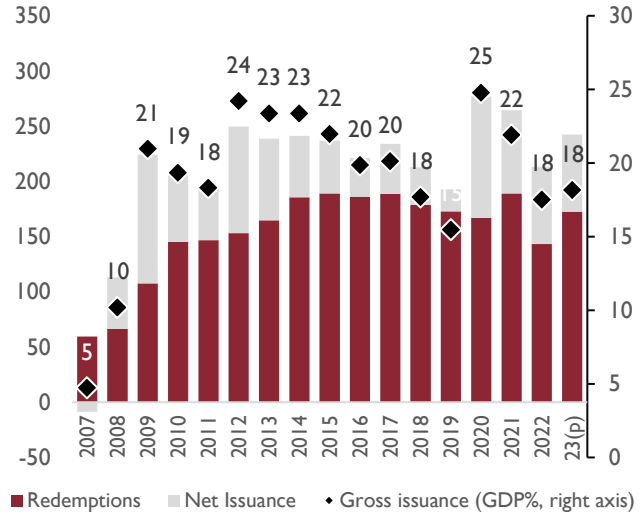


For 2023 the Treasury proposes a similar financing programme to last year's, maintaining the net issuance target at the 70 billion euros observed at the end of 2022. The higher volume of redemptions will imply a 10% increase in gross issuance in 2023, although as a percentage of GDP it is estimated to remain at 18%, a relatively low ratio in historical terms, representing a low refinancing risk. The Treasury's funding strategy envisages that all net funding will be obtained through the issuance of medium and long-term instruments, with negative net issuance of short-term instruments.

Treasury financing in 2022 and 2023 (€ billion)

(billions euros)	Initial fore. 2022	Execution 2022	Forecast 2023
Net Issuance	75.0	70.1	70.0
Gross Issuance	237.5	232.6	256.8
Medium and long term			
Gross Issuance	148.1	143.2	172.5
Redemptions	68.1	68.1	97.5
Net Issuance	80.0	75.1	75.0
Letras del Tesoro			
Gross Issuance	89.4	89.3	84.3
Redemptions	94.4	94.4	89.3
Net Issuance	-5.0	-5.1	-5.0

Treasury net borrowing (€ billion and % of GDP)

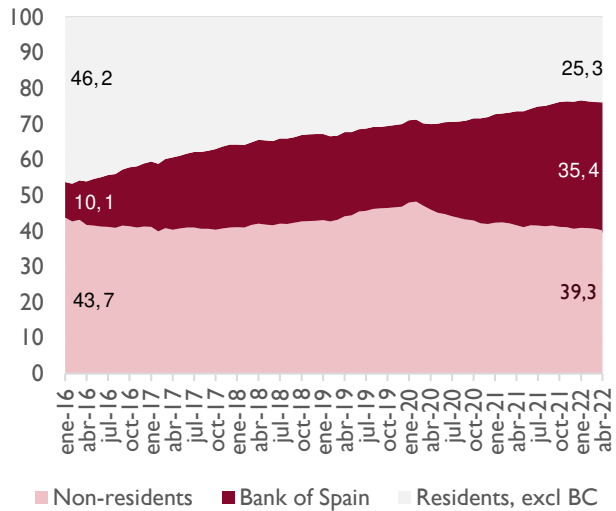


Source: Treasury, AIReF

After the peak of the pandemic, with gross issuance amounting to 25% of GDP, gross borrowing requirements are in line with those recorded in the last decade following the upturn of the financial crisis. Looking ahead, gross borrowing requirements in monetary terms are projected to stabilise and to decline as a share of GDP. The decline in net borrowing - linked to a process of deficit reduction - will be partly offset by higher repayments associated with a much higher level of debt.

Over the last few years, the ECB has made net purchases of Spanish debt amounting to more than 100% of net financing 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 public debt, increasing its share of total debt by 25 points in the last five years to around 35%. This increase in holdings has led to a shift of part of the resident investor base, with non-resident investment remaining stable at just under 40%. In the long term, the reduction of sovereign debt on the ECB's balance sheet may pose a major challenge, not without risk, as it will require the return of a large part of the resident investor base that has been displaced over the last few years.

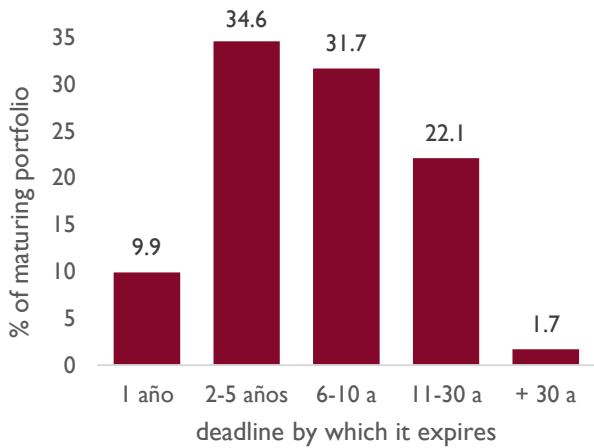
Government debt holdings by type of investor (%)



Source: Bank of Spain

Maturity profile

Maturity profile of government debt (Dec-22)
(percentage of portfolio and maturity)



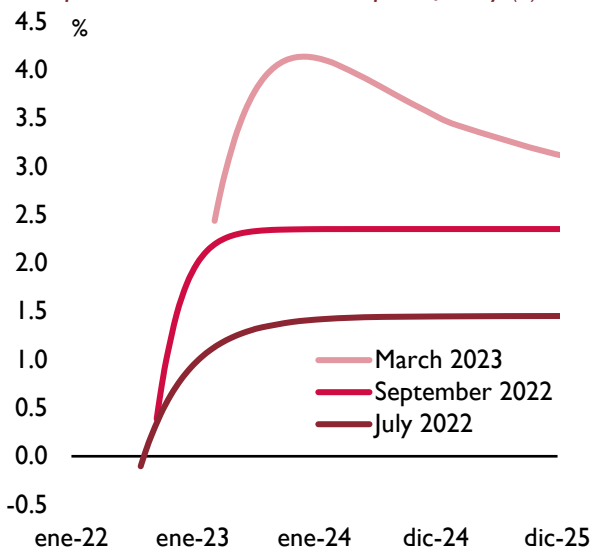
State's debt has a low refinancing risk. The maturity profile of the State's debt shows financing needs well distributed over the coming years, with moderate maturities in the short term and a granular distribution in the medium and long term, with no concentration of maturities in any one year.

Source: Treasury and AIReF

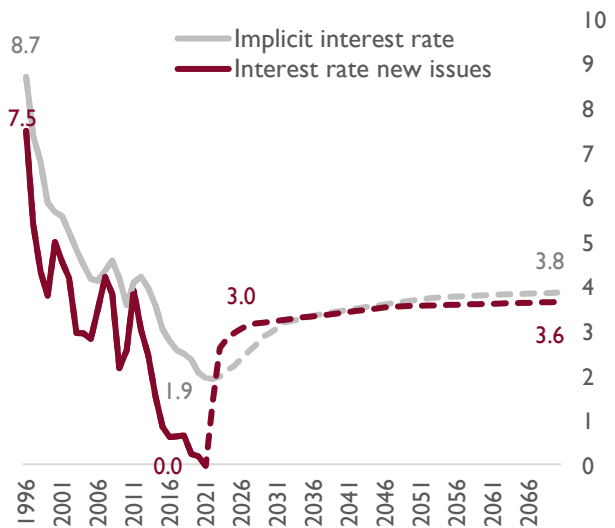
The new monetary cycle - with the rapid and intense tightening of financing conditions - coupled with the high level of existing debt, places the sustainability of public finances at a highly vulnerable starting point. Inflation developments, higher and more persistent than initially anticipated by central banks, have made it necessary to intensify the tightening of monetary policy, resulting in sharp rises in global sovereign bond yields and in financing expectations for the coming years. This new interest rate environment implies a high vulnerability for the sustainability of public finances, given the high debt that will have to be refinanced at significantly higher rates. A relatively rapid return from a low of 0% in 2021 to average new issuance rates of 3% is expected in the coming years. These interest rate developments are generating a turning point in the average total cost of debt, which will start an upward path from a low of 1.9% to around 3% in the medium term.

Long-term sustainability

Expected rate on the ECB's deposit facility (*)



Projected average issuance rate and implicit rate (%)



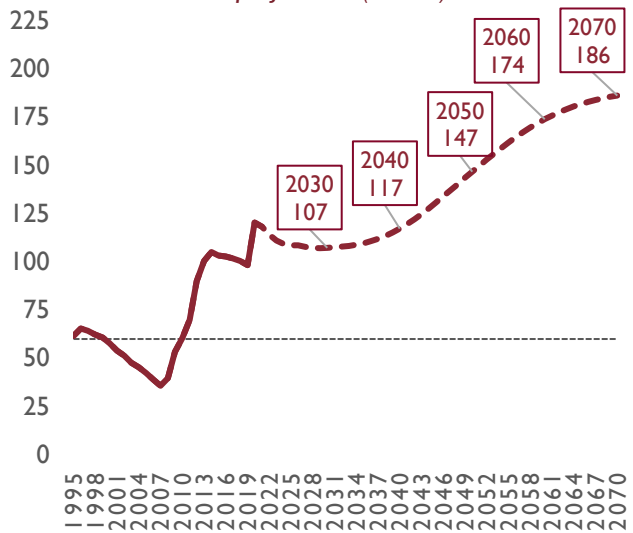
(*) Discounted through the instantaneous forward curve of the OIS.

Source: Refinitiv and AIReF

Source: AIReF, Opinion on the sustainability of the general government sector. Long-term sustainability of public administrations

In the medium and long term AIReF projects an unfavourable trend in the debt to GDP ratio. On the basis of the growth projections, fiscal variables and interest rates published recently in the "[Opinion on the long-term sustainability of general government: the impact of demographics](#)", AIReF projects a rising debt ratio in its baseline scenario after an initial period of some stabilisation. The foreseeable increase in spending on pensions, healthcare and long-term care as a result of population ageing is one of the main challenges for the sustainability of public finances in the medium and long term. Higher structural expenditure that is not covered by additional revenues will lead to a very significant increase in debt from historically very high levels.

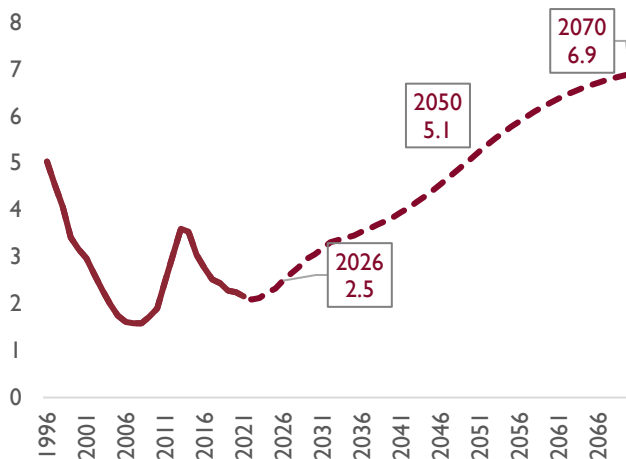
Debt projections (%GDP)



Source: AIReF, Opinion on the sustainability of the general government sector. Long-term sustainability of public administrations

Long-term sustainability

Projected interest expenditure (%GDP)

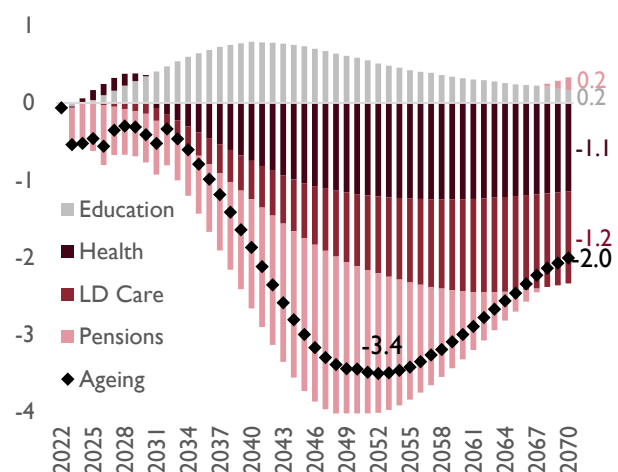


Source: AIReF, Opinion on the sustainability of the general government sector. Long-term sustainability of public administrations

The high initial indebtedness coupled with unbalanced public accounts will generate unfavourable dynamics in the financial burden even in a scenario in which the cost of debt is contained. In its long-term baseline scenario, AIReF projects interest expenditure as a proportion of GDP that will gradually and steadily increase from 2.4% of GDP in 2022 to around 7% in the long term.

The projected deterioration in the primary balance from 2030 onwards as a result of population ageing will mark a turning point in the evolution of the debt ratio, resuming an accelerating upward path. Although throughout the present decade the debt dynamics have been relatively favourable - with an initial reduction supported by strong nominal growth and a certain stabilisation thereafter - the decade of the 2030s will, according to AIReF's projections, mark a turning point in the evolution of the ratio. Stabilised nominal growth of 3% and a rising average interest rate on debt would generate rapid growth in the debt ratio that would accelerate over the next 15 years.

Contributions to the change in the primary balance of ageing components



Source: AIReF, Opinion on the sustainability of the general government sector. Long-term sustainability of public administrations

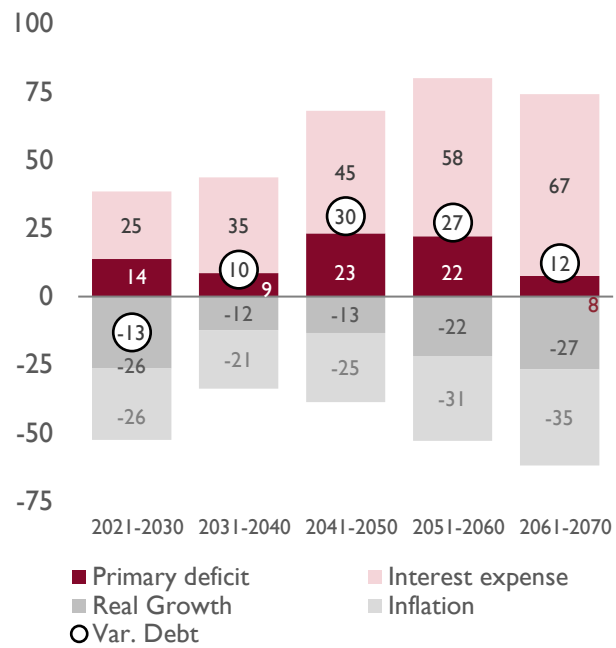
According to AIReF's long-term projections, the biggest increase in debt will take place in the 2040s. In the inertial scenario, an increasing financial burden, even considering that interest rates on new issues and the average portfolio rate stabilise at around 3.5%, coupled with the deterioration of a primary deficit -which according to the long-term scenario will peak in the middle of the century- would generate a 30-point increase in the ratio in the 2040s.

Despite the favourable evolution of the primary balance projected in the 2050s as a result of population dynamics, debt accumulation would continue at a high rate. The decrease in expenditure associated with population dynamics would not be able to offset the increase in interest expenditure in the early years, with the total deficit reaching its peak in the middle of the decade.

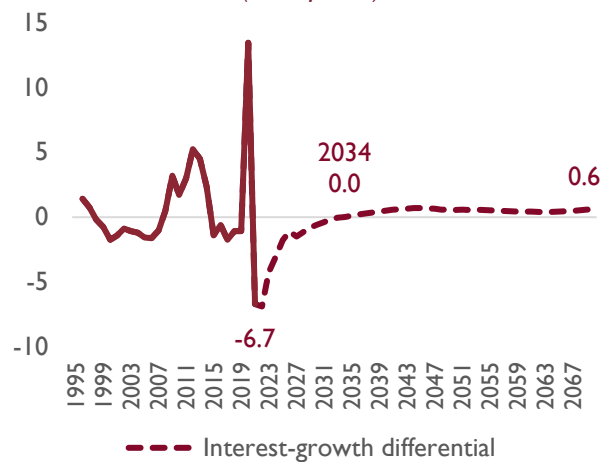
At the end of the 2060s the primary balance will reach equilibrium according to AIReF's long-term projections, an equilibrium that will be insufficient to halt the increase in the debt ratio. The high debt burden, which continues to rise to 6.9% of GDP, will contribute to the increase in the debt ratio, which is starting to slow down due to the improvement in the primary balance. In this decade the increase in the ratio is 12 points and will bring the debt ratio to 186% of GDP in 2070.

The interest rate differential on growth ("snowball effect") will turn positive in 2034, thus aggravating the dynamics of the ratio, which will require the generation of a primary surplus to halt its growth.

Contribution to the change in the debt ratio by decade (GDP points)



Interest-growth differential, contribution to debt change (GDP points)

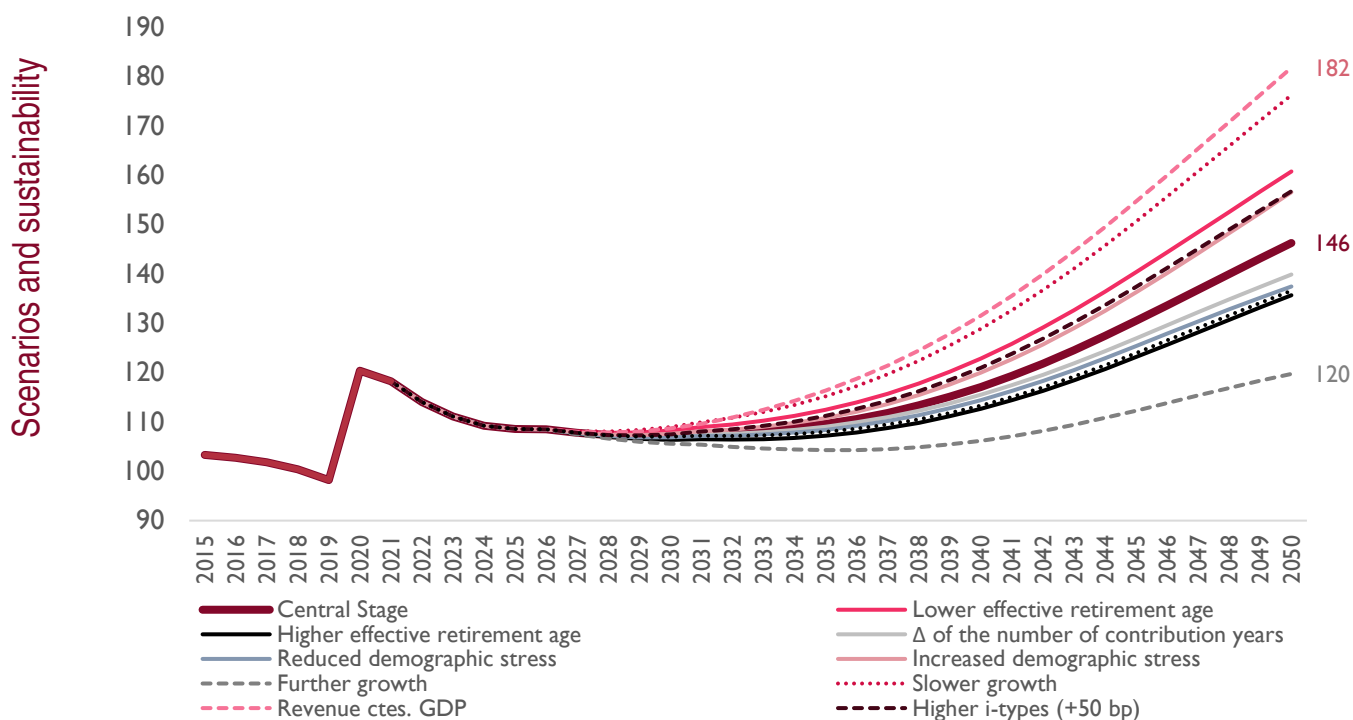


Source: AIReF, Opinion on the sustainability of the general government sector. Long-term sustainability of public administrations

Macro-fiscal projections in the medium and long term present a high degree of uncertainty that needs to be incorporated into the analysis of the sustainability of public finances. Given the high uncertainty in the evolution of the demographic, economic and fiscal variables in the medium and long term and their potential impact on the sustainability analysis, AIReF draws up projections based on alternative scenarios. These scenarios put forward different hypotheses on the evolution of variables related to the institutional elements of the pension system, demographics, the economy, public revenue and interest rates. AIReF has published an interactive tool that shows for each scenario the evolution path up to 2050 of the public debt ratio, total revenue and expenditure, the primary balance and the total balance, interest expenditure and the implicit rate of debt, expenditure on ageing and its components (expenditure on pensions, health, education and long-term care), expenditure on pensions, education and long-term care, the public debt ratio, the primary balance and the total balance and the implicit rate of debt, education and long-term care, number of pensions and average pension, coverage ratio and dependency ratio, total population and working age population, migration, life expectancy and fertility, real GDP and GDP per capita, labour force participation rate, productivity, taxes on production, income, corporations, and social security contributions.

Beyond the uncertainty associated with the evolution of macro-fiscal variables, the scenarios drawn up by AIReF show an unfavourable trend in the long-term dynamics of the debt ratio, placing the sustainability of public finances in a position of vulnerability. The scenarios that imply a more favourable evolution with respect to the baseline scenario (higher growth, lower demographic stress, lower interest rates, higher effective retirement age) do not manage to bring the debt ratio down below 100% of GDP in the medium term, although they do manage to keep the ratio stabilised for a longer period and project lower debt levels in the future. A more unfavourable evolution with respect to the baseline scenario, reflected in the scenarios of lower growth, higher demographic stress, higher interest rates and lower effective retirement age, imply a more compromised dynamic for long-term sustainability, given the high stock of current debt and the accelerating impact that higher debt levels generate on the financial burden.

Debt projection scenarios (%GDP)



Source: AIReF, Opinion on the sustainability of the general government sector. Long-term sustainability of public administrations

The generation of fiscal space, which is necessary to reduce the current level of debt and to address future shocks such as those that have occurred in recent years, requires the design of a medium-term plan to guide public accounts towards a balanced budget. A gradual and sustained adjustment towards a balanced budget within a reasonable time horizon will generate a path to reduce the debt ratio to more prudent levels, containing the financial burden and generating the necessary fiscal space to address future challenges, both of a known nature, such as ageing and global warming issues, and of an unpredictable nature.

The simulations show that implementing an early fiscal strategy to contain debt dynamics and the rising interest burden will avoid further adjustments in the medium to long run. Regardless of the time profile of the adjustment, the simulations shown in the recently published "[Opinion on the long-term sustainability of general government](#)" show that with a fiscal adjustment of between 0.3 and 0.45 p.p. sustained over 10 or 4-7 years respectively, debt in ten years would be at a more moderate level and with a clear downward dynamic. This is essential to cope with the age-related expenditure pressures that will materialise in the next decade. Conversely, if adjustments were not addressed in the coming years, containing debt dynamics in the 2030s would require much higher adjustments as they would need, on the one hand, to offset the rising dynamics of public debt caused by additional ageing expenditure and, on the other hand, to generate an improvement in the primary balance to put debt on a downward trajectory.