

Revising the European Fiscal Framework

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1. Introduction

During the pandemic crisis, the fiscal rules of the Stability and Growth Pact have been temporarily suspended, invoking the general escape clause. Returning to a strict implementation of the pre-pandemic European fiscal framework in 2023 would require excessive fiscal adjustments, especially for countries with high legacy debt, and would allow limited space for spending on desirable public investment projects and on expenses that contribute to European public goods. A revision of the European fiscal framework should take into consideration three developments.

First, the global macroeconomic environment is largely different from the one prevailing in the years when the existing fiscal rules were initially conceived. The current environment is characterized by low natural interest rates and a high world demand for safe assets. In this environment, monetary policy is more often constrained in its ability to achieve macroeconomic stabilization by the effective lower bound on nominal interest rates. This creates a larger need for coordination between fiscal and monetary policy. Lower interest rates also reduce the cost of servicing debt, freeing up fiscal space. A new framework should aim to make good use of this fiscal space, designing robust rules that allow the use of fiscal policy to fight recessions, move the economy away from the effective lower bound, and help normalize monetary policy, while, at the same time, guiding countries to rebuild fiscal space during expansions.

The second development is the launch of the Next Generation EU (NGEU) programme. On the governance side, the experience with the national recovery and resilience plans so far, makes us optimistic about the capacity of the EU to mobilize resources for growth-friendly public investments. In particular, it points to (1) the ability to achieve fruitful cooperation and oversight in the relation between national governments and European institutions; (2) the potential of successfully exploiting the complementarity between investment and pro-growth reforms; (3) the definition of common objectives of EU policy to determine areas of intervention (for example, the green and digital transition). On the market side, the experience with Next Generation

EU debt issuances confirms the existence of a strong demand for safe European debt instruments.

The third development is the urgent need of significant amount of spending if EU countries are to reach the ambitious targets they are setting themselves in many areas. These include the fight against climate change; defence; industrial policy, including semiconductors; public health; international aid.

The suspension of the fiscal rules until the end of 2022 provides a good window of opportunity to define a renewed European fiscal contract that addresses these challenges. The new rules should preserve a primary objective of debt sustainability, but, at the same time, allow for a stronger pro-growth stance, which, in the long term contributes to sustainability itself.

We propose a two-pronged reform effort. First, a debt management plan, that is, a plan to transfer a portion of national debts accumulated during the pandemic from the balance sheet of the European Central Bank to a European debt management agency. The pandemic was an extraordinary and exogenous common shock, so there is no risk of moral hazard associated with this plan, while there are substantial benefits, both in terms of reduced funding costs for EU countries and in terms of normalizing the conduct of monetary policy.

Second, a revision of the existing fiscal rules based on a medium-term debt anchor with a speed of adjustment that depends on the share of spending devoted to public investment, to contribute to European public goods, and to fight recessions. The target would be implemented through a spending rule.

These two pieces, combined, can contribute to a coherent European strategy to foster durable growth and sustainable public finances.

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2. Debt Management

We turn here to the first part of our proposal: the plan to move a portion of national debts under the umbrella of a European Debt Management Agency (EDA).

In the last decade, there have been many proposals aimed at addressing a basic issue for the EU, namely, the lack of a large central fiscal entity issuing euro-denominated government debt.¹ There are various dimensions to this problem, on both the finance and the macroeconomic side, but a common theme is that there is a large potential demand for government-issued, euro-denominated safe assets. The demand for supranational debt is strong even for securities that lack joint and several intergovernmental guarantees and/or a credit enhancement mechanism. Compare, for example, the bonds issued by the European Stability Mechanism (ESM) with those recently issued by the EU in the context of NextGenerationEU (NGEU). The ESM sits on a large amount of paid-in capital, as it could repurchase 70% of its bonds at nominal value. For this reason, it is not surprising that ESM bonds enjoy a AAA rating. The NGEU bonds issued by the EU also attract a AAA rating and trade at prices identical to ESM bonds, even though they are not protected by mutual guarantees or by a cash buffer. What secures the EU bonds in the investors' eyes is solely the EU capacity to extract payments from participating member states.²

This situation hints at an untapped potential for the EU to intermediate debt: moving a share of national tax streams and a share of national debts under the umbrella of a European entity, protected by the enforcement capacity of the EU, can increase the financing capacity of the whole area.

The two main benefits of the plan in our view are: (1) reducing debt costs for the whole Union, and thus increasing the safety of the existing stock of European debt; and (2) helping the operations of the ECB in debt markets.

In past years, the ECB has taken the main respon-

sibility to ensure the stable functioning of European government debt markets. The creation of a European Debt Agency would complement the ECB's work on the fiscal side. The scheme would favor a gradual shift over time in the composition of the ECB's assets away from a preponderant exposure to country risk towards a more standard configuration – characteristic of the ECB's peer central banks – that by and large contemplates holdings of riskless bonds. These benefits could materialize in the near future, if monetary policy required a scaling down of the ECB bond purchase programs, as it would allow the ECB to proceed in that direction without having to worry about destabilizing national debt markets.

We now turn to the description of the plan and then address some possible criticisms.

A. Debt transfers and contributions. The debt management plan would consist of a gradual transfer of a portion of national public debts to a European Debt Management Agency.³ The Agency would receive contributions from national governments to cover future interest payments. The debt would clearly not be eliminated. However, the fact that it will be intermediated by the European Agency will produce a reduction in the debt burden, given that the Agency will be able to issue debt at more favorable conditions than highly indebted countries.

The idea is to acquire each country's "Covid debt", measured by the increase in the debt-to-GDP ratio experienced by each country in 2020 and 2021. The first two columns in Table 1 report current projected numbers for the member countries' total debt at the end of 2021 and each country's Covid debt. If one wanted to expand the scope of the plan, an alternative to consider is to include not only Covid debt but also debt accumulated during the 2008-09 recession—also the result of a large, common, exogenous shocks. The third column of Table 1 reports debt accumulated in those two years for each country. In the calculations below, we work under the assumption that only Covid debt is included in the plan.

A.1. Acquisitions. In practice, the acquisition would take place over a period of five years, with the Agency acquiring an amount of debt—as a fraction of GDP—equal to 1/5 of the target acquisition each year. The EDA would purchase the debt at market prices and

¹ See Leandro and Zettelmeyer (2019) for an excellent overview of different options.

² The debt service protection scheme behind NGEU borrowing relies on (1) repayments from member states for the loan component, and (2) EU own resources for the grant component. For the latter, repayments will be covered by their gross national income (GNI)-based contributions and by new EU own resources. Should a member state not fulfill its financial obligations, the Commission could undertake several steps. First, the Commission would strive to meet the financing needs through active cash management and recourse to short-term borrowing. Should these means prove insufficient, the Commission could call more resources from other member states on a pro rata basis, while not exceeding their yearly share of 0.6 of GNI and, more importantly, without increasing their ultimately liabilities. The last resort measure would be to follow the standard process for infringement of EU law. None of these steps envisages an unlimited assumption of liability by the other countries.

³ The European Stability Mechanism could take on this role, or a new agency could be created.

Table 1. Total Debt and Covid Debt by Country

Country	Total Debt (2021)	Covid Debt	2008-09 Debt
Austria	82.8	12.3	14.8
Belgium	113.9	15.8	12.9
Cyprus	107.7	13.7	0.3
Estonia	17.7	9.3	3.4
Finland	71.2	11.7	7.6
France	115.3	17.8	18.5
Germany	72.2	12.6	9.0
Greece	197.9	17.4	23.6
Ireland	55.2	-2.2	37.7
Italy	153.5	19.2	12.7
Latvia	48.8	11.8	28.4
Lithuania	46.0	10.1	12.1
Luxembourg	25.8	3.8	7.9
Malta	61.3	19.3	4.4
Netherlands	57.8	9.1	13.8
Portugal	126.9	10.1	15.1
Slovakia	61.5	13.3	6.0
Slovenia	78.5	12.9	11.7
Spain	119.6	24.1	17.5

Note: Covid Debt is the change in the debt-to-GDP ratio between the beginning of 2020 and the end of 2021 (the latter taken from the Fall 2021 Draft Budgetary Plans). 2008-09 Debt is the change between the beginning of 2008 and the end of 2009.

finance the purchase with issuances of EDA debt. At the moment of purchase, the EDA would cancel the country's bond and replace it with a commitment by the country to pay a flow of contributions to the EDA budget. To make an example, take the case of Italy. The second column of Table 1 shows a Covid debt accumulated of 19% of GDP. So, according to the baseline plan, the agency will acquire debt equal to 3.8% of GDP in each year from 2022 to 2026. In the years after the fifth, the Agency will acquire Italian debt so as to keep its debt at 19% of Italian GDP. The Agency would pay for the sovereign bonds acquired with newly-issued Agency bonds, using reference market prices for EU bonds of similar maturities. After the Agency bonds reach maturity, the Agency will refinance them on the market.⁴

The ECB has accumulated large holdings of national public debts in recent years. A good way of implementing the plan in its first five years would be to conduct a sequence of off-market securities swaps between the Agency and the National Central Banks (NCBs) that make up the Eurosystem. This would be a favor-

⁴An alternative option would be to design an Agency with only a transitory role, both in its acquisitions and in its debt issues. In that case the speed of the Agency's phasing out will have to be coordinated with the debt reduction paths of each country.

able development from the point of view of the ECB, removing a large portion of its current portfolio of national sovereign bonds and replacing it with EU bonds.⁵ This would further reinforce the capacity of the ECB to conduct an independent monetary policy, both by expanding the supply of European debt instruments that are the natural tool for ECB purchases, and by helping separating monetary operations from European debt management interventions, which effectively belong to the fiscal realm. To give a practical example of these advantages, in coming months the ECB is poised to scale back its pandemic bond purchases. The plan would allow the ECB to proceed in that direction with fewer concerns about potential side effects on individual sovereign debt markets, as the Agency would be able to continue its debt acquisitions independently of the ECB monetary policy stance.

A.2. Contributions. The contributions that countries would owe to the agency, in exchange for the acquisition, would be calibrated to cover the net needs of the EDA associated with managing the debt of each given country, keeping the ratio of debt to country GDP constant, after the initial transition period. The formula to calculate the contributions is $(r - g)d$, where r is the interest rate on the European debt issued by the Agency, g is the growth rate of the country's GDP, and d is the EDA debt issued in proportion to the country's GDP. The logic for this way of computing contributions is that each year, following the initial acquisition, the agency will issue fresh debt to acquire more national bonds, so as to keep the cumulated acquisitions of national bonds equal to a fraction d of the country's GDP.

The choice of r in the calculation of the transfer would be conservative, using a steady state scenario in which rates go back to levels higher than today's.⁶ This would allow the Agency to accumulate liquid reserves. The rate g would be equal to each country's potential growth (to avoid procyclicality of the contributions). Given existing borrowing costs for highly indebted countries, the cost of the fiscal contributions to the Agency would be substantially lower than the current interest payments on the same stock of debt.

⁵This solution would make it easier for the ECB to stay within the limit on its holdings of sovereign bonds, now set at 33% of the issuer's total debt. At the same time, it would require a decision by the Governing Council of the ECB to increase the maximum purchasable share of supranational debt issuers—now set at 50% of the issuer's debt—so as to allow it to absorb the Agency's debt.

⁶In the calibration reported below as an example, we use as a reference rate the average rates for German debt between 1999 and 2014 and add 20 basis points, obtaining $r = 1.6\%$.

For example, in a baseline calibration for the Italian case, the contributions would be roughly 38% of Italy's current interest expenses on the same stock of debt.⁷ The contributions would be revised at regular intervals of five years by the EDA's governing body. The same body would decide how to employ the EDA surplus – whether to save it in reserves, to rebate it to participating countries, or to direct it to joint EU projects.

The gains under the plan come from the expectation that debt issued under the EDA would trade at conditions close to those faced by the safest national debt in the area. This implies that the contributions and the use of the EDA surplus can be designed to yield Pareto gains for all countries involved.⁸ Where do these gains come from? There are basically three reasons for favorable credit conditions for EU debt. One is that EU debt will earn liquidity and safety premia relative to national debts, as it becomes the reference form of euro-denominated government debt. The second is that the EU will employ its enforcement capacity towards member states to assure investors of the reliability of the flow of future contributions. However, we are aware that there is a third, less desirable, channel, as favorable conditions may also come from an implicit perception of mutualization, even though the scheme does not imply joint and several guarantees. We believe the scheme should be designed to rely on the two first channels only, while minimizing the risk of 'back-door mutualization'. This can be done in three ways: by frontloading contributions, choosing a conservative r , and accumulating a liquidity buffer; by considering the use of dedicated sources of fiscal revenue instead of generic contributions; and, last but not least, by embedding the scheme in a solid fiscal governance framework. The last argument clearly points to an important element of complementarity between the two parts of our proposal.⁹

B. Governance. Under this plan the Agency would have resources to purchase new issuances of countries' debt as old debt comes to maturity, so as to keep

⁷ Considering the first year acquisition, 3.8% of 2021 Italian GDP is equal to 68 billions of debt acquired. Using $r = 1.6\%$ and a potential growth rate of $g = 0.75\%$ the contribution would be set at 0.58 billion. Current interest expenses on 68 billions of debt are about 1.51 billion.

⁸ Namely, it is plausible that the borrowing costs of the EDA would be slightly worse than those of some AAA-rated countries, like Germany, as now EU bonds do trade at a small spread relative to German bonds. The contributions of these countries can easily be adjusted to ensure that no country loses from participating to the scheme.

⁹ Some incentives could be built in the governance of the EDA, as continued participation to the EDA scheme could be made conditional on compliance with the fiscal rules.

its holdings of national debt growing at the same rate as EU GDP. Therefore, the Agency will become a permanent element of the set of EU fiscal institutions and will require an appropriate governance structure.

The statutory process for managing the scheme would foresee periodic reviews—say every five years. In these reviews the governments will have to define plans on how to use the Agency's budget surplus, how to manage debt purchases and issuances, and how to manage its liquid reserves.

Given the conservative assumptions used to define the countries' contributions, the Agency will be running a surplus as long as rates remain low,¹⁰ and will accumulate a sizeable stock of liquid reserves. This accumulation would spur a debate on the appropriate size of future contributions. There are essentially three options: (1) cut back on the contributions or, equivalently, rebate some of the reserves accumulated back to the participating countries; (2) maintain the accrued war chest as an increased safety buffer; (3) assign the surplus to funding additional centralized spending.

Using some of the Agency's resources for centralized spending can be justified by the fact that the Agency is offering, on behalf of the Union, an intermediation service to highly indebted countries—reducing their exposure to crises and lightening their debt costs. Therefore, a fraction of the intermediation margin could go to the general EU budget. After all, it is the financial strength of the EU and the efficiency of its mechanisms to monitor national public finances that make this intermediation possible.

C. Discussion. We see the plan as having several advantages. First, it would create additional fiscal space by reducing the cost of debt. The plan would not cancel national debt, but it would replace it with an obligation to the EDA. The implication for the aggregate of EU countries is a reduction in the cost of debt, which does increase fiscal space for the Union. From the point of view of the fiscal rules, the national bonds eliminated by EDA acquisition would be removed from national debt and the new debt issued by EDA would be recorded as EU debt. This is analogous to what happens to the EU debt issued to finance the grant portion of NGEU. That debt is also eventually backed by countries' tax proceeds, but it is not recorded as national debt by Eurostat.

¹⁰ Contributions from Member States will exceed the Agency's interest payments net of revenue from new debt issued.

Second, we see this proposal as complementing and strengthening the ECB's role. In past years, the ECB has turned to purchases of national debt to avoid segmentation of debt markets, to prevent the risk of multiple equilibria, and to pursue quantitative easing. All of these have been highly desirable developments, but it is useful to plan ahead for situations in which the needs of monetary policy may require a reduction in purchases. In such a situation, the objective of reduced segmentation in non-crisis times is better pursued by a plan based on the issuance of EU debt. The plan leaves more freedom to the ECB and helps remove country risk from NCBs' balance sheets.

More generally, we see a benefit in terms of clarifying the fiscal and monetary dimensions of EU risk sharing. Reichlin et al. (2021) recently argued in favor of moving beyond a status quo of 'constructive ambiguity' in terms of fiscal and monetary responsibilities inside the euro area. We see our proposal as going in that direction.

We also view our proposal as an additional step in the direction of a fiscal union. Dealing with the burden of high legacy debt in some member states is a strategic issue that a successful fiscal union should tackle, not unlike other challenges that will require joint investment efforts in the future.

There are two main concerns with our proposal. First, the fact that contributions to the EDA may be perceived as senior to servicing of national debt, and thus worsen the standing of national debt on the markets. While it is true that payments to the EDA will most likely be considered *de facto* senior by financial markets, we do not think that on net this would negatively impact national debt markets. The fact that we did not see increases in high-debt countries' spreads on the dates when various details of NGEU debt issuance transpired suggests that, even though a portion of national revenues was now implicitly preferentially directed to servicing new European debt, this was not perceived as worsening these countries' capacity to service their own national debt. Our interpretation of these facts is that when the central fiscal capacity of the EU is strengthened, it tends to have positive repercussions on the member states' repayment capacity, exceeding the potential negative effect due to the seniority of EU claims on member states.

Second, there is a concern that acquiring the debt that is currently held by NCBs would imply short-run costs for member states. In the current setup, national

debts held by the ECB are essentially not a burden for countries since the interest they pay on that debt is rebated back to them. Our proposal, instead, requires a contribution of $r - g$, which would be positive for some countries. While this is true, it relies on the ECB continuing its asset purchases indefinitely.

We believe there are substantial gains from the safety of knowing that there is a long-term solution to reduce national debt that does not rely on the ECB rolling over its asset purchases indefinitely. Furthermore, with respect to the increase in short run outlays for countries, note, first, that the resources transferred to the EDA by member states could also be rebated back to participating countries; and second, in the current low-rate environment, the EDA could issue zero coupon debt at medium maturities and effectively have zero cash needs in the near future, so member contributions could be designed to essentially replicate the zero burden of ECB-held debt in the transition phase. Overall, the plan dominates an alternative in which the ECB remains the sole central actor with the capacity to acquire national debts, and its gradual implementation leaves flexibility in how the balance sheet of the ECB is adjusted over time.

Before concluding this Section, it is worth to relate our proposal to other approaches to creating safe assets. The main difference with proposals based on pooling and tranching of existing national debt (Brunnermeier et al., 2017; Brunnermeier et al., 2012; Wendorff and Mahle, 2015)¹¹ is that the EDA would work more like a government than like a financial fund: its capacity to repay debt is based on its capacity of raising fiscal revenues and it rests explicitly on the EU enforcement capacity towards member states. The advantage of this approach is that it aims more directly at strengthening the fiscal capacity of the euro area. Incidentally, this design also means that the EDA would, in principle, require no capital contributions (paid-in or callable) as its fundamental asset would be given by the present value of future member transfers.

3. Fiscal Rules

A revision of the existing set of fiscal rules should have three objectives.

The first objective is to simplify. The current set of fiscal rules comes from the accumulation over the years of a series of reform efforts that leave us with a system

¹¹ Proposals closer to our approach here include Corsetti et al. (2015), Micossi and Avgouleas (2021), Ubide (2015), and Zettelmeyer (2017)

that is cumbersome and not transparent. This implies that there is always a substantial interpretative effort on the side of the Commission when examining Member States' proposed budget laws. When disagreements arise, the negotiations end up focusing too little on substantive trade-offs of economic policy and too much on formal notions of compliance. Moreover, the existing set of rules relies heavily on national measures of the output gap and on measures of the elasticity of various budget items to the output gap. Measurement issues with the output gap are well-known and, not surprisingly, output gap measures have become an occasional point of contention in the Commission's evaluation of national budget laws.

The second objective is to have rules that are realistic in their aims and whose objectives of debt reduction are shared by member countries as contributing to European financial stability. This calls for a clear target, that is easy to communicate and share with citizens, and that citizens can easily use to evaluate ex post the job done by their elected officials.

The third objective is to give more room to national fiscal authorities for stabilization purposes, for public investment, and for spending that contributes to European public goods, while still ensuring debt sustainability. This is desirable for three reasons: the cost of debt is currently low; fiscal support during recessions can limit medium-run scars to potential growth; public investment can both directly promote growth, which in turns helps debt sustainability, and be a complement to structural reforms. Aiming for more counter-cyclical rules is also beneficial as it implies rules that encourage rebuilding fiscal space during economic expansions, leaving member countries better prepared for future unexpected events.

We believe these objectives can be achieved by designing rules that focus squarely on a medium-term target for the debt-to-GDP ratio, to be achieved by a single instrument: a multi-year ceiling on net primary spending. This combination of target and instrument is in line with several proposals circulated recently.¹² A crucial part of our proposal is to integrate in this system a form of golden rule to incentivize certain forms of public spending.

We identify two categories of public spending the EU needs to promote: public investment that is beneficial for the long-run growth prospects of the country; and

expenditures that contribute to European public goods that benefit future generations. We label them "spending for the future." The issue of what goes under this label and how it is monitored is discussed in Section C.4.

The golden rule we propose has two elements, one in the spending rule, one in the debt target. In the spending rule we give preferential treatment to the flow of spending for the future, by not subjecting it to the spending ceiling. However, this is only an incomplete incentive, because even though the flow is not constrained by the ceiling, it still adds to debt accumulation. We therefore provide an additional adjustment mechanism, by changing the speed of future debt adjustments in function of the investments made in the past. In this way investing today has a weaker constraining effect on future fiscal policy. The details of this scheme are described below.

A. The medium-run debt target. The existing Stability and Growth Pact includes a debt rule that requires each member state to achieve a long run debt-to-GDP target of 60% at a speed of adjustment of 1/20 per year. This debt rule is so removed from reality for highly indebted European countries, as to be *de facto* useless. For example, the existing debt rule would require for Italy a debt reduction of almost 5 percentage points of GDP per year under current conditions. This lack of realism is the reason why the debt level has not played a more central role in the practical implementation of the SGP in past years.

A reform that centers on a debt anchor must be accompanied by a revision of the long-run target and/or of the speed of adjustment in existing legislation. Here we focus on changing the speed of adjustment.

We consider a rule that keeps the long-run target for the debt-to-GDP ratio at $d^* = 60\%$, but sets a medium-term debt target, \hat{d}_{t+10} , the debt-to-GDP ratio in 10 years, based on a speed of adjustment towards d^* that is sensitive to the composition of past spending.

We take the current level of the debt to GDP ratio d_t and decompose it in two parts $d_t = d_{F,t} + d_{S,t}$, the first is the fast-speed portion $d_{F,t}$, and the second is the slow-speed portion $d_{S,t}$. The medium-term target for the debt-to-GDP ratio is then set to:

$$\frac{\hat{d}_{t+10} - d_t}{10} = \beta \cdot (d_{F,t} - d^*) + \gamma \cdot d_{S,t} \quad [1]$$

Choosing two different parameters β and γ , with $\beta > \gamma$, implies that the larger is the slow portion

¹²Andrieu et al. (2015), Bénassy-Quéré et al. (2018), Darvas et al. (2018), European Fiscal Board (2018, 2019, 2020), and Martin et al. (2021). Maduro et al. (2021) give a detailed analysis of the legal avenues by which reform efforts can be pursued.

of debt, the lower is the speed of adjustment required. The parameters β and γ in our baseline calibration are set to $\beta = 0.05$ and $\gamma = 0.02$.¹³

The slow-speed part is computed adding two elements: the debt accumulated in response to crises and the debt accumulated to finance spending for the future. Including debt accumulated in crisis years is motivated by the desire to avoid premature consolidation coming out of recessions. To define crisis debt we simply measure the increase in the debt-to-GDP ratio in years in which the escape clause is active. Including spending for the future is part of our golden rule scheme and is justified by two arguments: such spending has a positive impact on medium-term growth and/or it will benefit future generations. The fast-speed part is the residual stock of debt.

The distinction between slow-speed and fast-speed debt does not mean that there are two different types of government bonds or that government bonds issued in different years are treated differently. The rule requires distinguishing the two components of the debt-to-GDP ratio only for the purpose of computing the desired speed at which debt must be reduced in future years. The financing strategy of the government is independent of the rule.

Moreover, the distinction between the two components of debt does not change the fact that debt needs to be reduced. If, for example, a country increases its spending to curb carbon emissions in a given year and this increases the deficit, the country still needs to reduce its debt-to-GDP ratio in the following years. However, the speed at which the reduction needs to occur is lower than in the case in which the same deficit had been used to finance other forms of spending.

Numerical simulations presented in the Annex show that overall this rule would imply speeds of adjustment in debt-to-GDP ratios that are feasible and in line with projected budgets of Member States in the coming years. In particular, for France, Italy, and Spain the deficits in current budgetary plans are below those required by the rule by less than 0.3 percentage points of GDP, both in 2023 and 2024.

Nonetheless, it is important to recognize that no nu-

merical rule is perfect and that in the future the rule may require excessive adjustments for some country, in some circumstances. We therefore propose a governance process by which a member country can request a weakening of the rule. Namely, if a member country finds that the rule requires an excessive fiscal effort, as measured by the increase in the primary balance in the coming 3 years, the country can request a slower speed and therefore a higher target \hat{d}_{t+10} . The request would be based on a review of cyclical indicators (growth, unemployment, inflation, etc.) both for the country considered and for the Euro area as a whole. The request will also take in consideration the capacity of the ECB to provide monetary support and whether the ECB is constrained by the effective lower bound. In response to the country's request, the Commission will consider granting a temporary reduction of the adjustment speed. This mechanism can allow additional room for fiscal stimulus in situations in which the ECB is falling short of its inflation target.

Of course, the additional tool that ensures flexibility in case of a deep recession is the use of the general escape clause, which has proved so useful during the pandemic crisis. The fact that debt accumulated during the escape clause is counted towards the slow-adjusting portion, would help ensure a smoother transition after the clause is lifted.

The logic of a multi-speed system is coherent with the debt management plan of Section 2: that plan implies that the portion of debt acquired by the European Debt Management Agency is effectively considered zero-speed debt and hence not used in the calculation of the medium-term national debt targets.

B. Spending rule. The medium-term debt target is achieved using a single instrument: a spending rule.

The spending rule defines a ceiling for the growth rate of primary expenditure net of interest payments, automatic stabilizers, and spending-for-the-future items. The exclusion of spending-for-the-future items from the ceiling is the other component of our golden rule scheme.

As argued above, the two pieces of the golden rule go together: the spending rule part gives countries space to increase public investment, the two-speed rule ensures that higher investment today does not trigger a fast readjustment in the immediate future.

The ceiling is chosen so that the economy achieves in 10 years the medium-term debt target, \hat{d}_{t+10} . The ceiling is revised every 3 years. The projections made

¹³In the case $d_F < d^* \leq d$ the expression in square brackets is replaced by $\gamma(d - d^*)$; if $d < d^*$ the expression is replaced by zero and the target is $\hat{d}_{t+10} = d_t$. The law of motion of the slow component is

$$d_{S,t} = (1 - \gamma)d_{S,t-1} + \text{qualifying expenses,}$$

so the parameter γ is also used as the implicit depreciation rate for the slow component.

to check the achievement of the debt target in 10 years, would be made under realistic assumptions about the future evolution of output growth, fiscal revenues, automatic stabilizers, interest rates, spending-for-the-future items, and stock-flow adjustments. The country's government will make these projections, which are then certified by a national Independent Fiscal Council (IFC). The IFC therefore certifies that these projections are based on credibly parametrized structural macro models and are consistent with information from forecasting models.

When the country implements tax reforms that affect future tax revenues, the spending ceiling is adjusted to take into account the change in revenue projections due to the new legislation. However, in making revenue projections, governments should not be allowed to use future contingent tax change clauses, to avoid non-credible backloading of the fiscal effort.

As discussed above, projections for budget items excluding net spending are based on realistic point estimates of future values. An alternative approach, considered in some proposals, is to replace realistic projections for revenues and other budget items, with projections "at potential" to choose a spending path that would ensure reaching the target \hat{d} in normal circumstances. We find this approach too sensitive to the way in which the potential path is computed and sensitive to an unobservable variable. We also find it less appealing in terms of communication and transparency, given that, under our approach, the projected path for the debt-to-GDP ratio in the coming 3 years can be explicitly communicated to the citizens and constitutes a realistic benchmark against which they can evaluate realized policies. The same objective of realism is behind our choice of setting the horizon of the medium-term debt target to 10 years, so that the calculations made in the spending rule rely less on more uncertain long run paths.

A delicate choice is how often the spending ceiling should be revised. A natural solution would be to synchronize the setting of the ceiling with the term of a government, making it part of the government political plans.¹⁴ However, the different duration of government terms in different countries can make this route difficult. For these reasons, here we opt for a common 3-year term.

¹⁴This happens, for example, in the Dutch model in which the spending ceiling is an integral part of the party platforms and of electoral competition, see Vierke and Masselink (2017).

C. Discussion. We now turn to discussing some advantages and possible criticisms of the proposal rule. We start from describing the rationale behind each component of the rule and discuss the rule's advantages in terms of simplicity, communicability, counter-cyclicality, and flexibility. We then focus on the economic rationale behind the golden rule and discuss the labelling of different types of spending and investments. Finally, we conclude with a discussion of the choice of parameters.

C.1. Advantages of a debt target, a ten-year horizon, and a spending rule. There are several advantages of basing a fiscal rule on a medium-run debt target using a spending rule as an instrument.

Debt target First, the debt-to-GDP ratio is easy to measure and easy to communicate. Debt sustainability fundamentally means that the stock of debt grows at a pace that is consistent with investors' willingness to absorb it. A rule by which the government balance is adjusted when the debt stock increases is a natural way of ensuring that this condition is satisfied.¹⁵

Second, targeting a given reduction in debt-to-GDP gives automatically a rule that is sensitive to changes in expectations regarding interest rates and GDP growth (r and g). Consider the basic dynamic equation for the debt-to-GDP ratio:

$$d_{t+1} - d_t = \frac{r - g}{1 + g} d_t + \text{primary deficit.}$$

If a country sets its objective in terms of a given reduction of the debt-to-GDP ratio, the expression on the left-hand side, a lower value of $r - g$ immediately translates into larger feasible levels of the primary deficit.¹⁶ This is in line with the argument by Blanchard (2019) that low levels of $r - g$ should be taken into account in evaluating countries' available fiscal space.¹⁷

Third, setting an objective in terms of the debt-to-GDP ratio presents a country with a clear intertemporal trade-off, since debt accumulation today requires fiscal adjustment in the future, while debt reduction today

¹⁵Bohn (1991, 1998).

¹⁶The argument easily extends to a ten-year debt target, with the advantage that the country can use realistic projections about r and g in that interval of time.

¹⁷Other proposals, such as Blanchard et al. (2020) and Martin et al. (2021), make an additional step. They argue that low levels of $r - g$ also affect long-run fiscal sustainability calculations, so low values of $r - g$ should also affect the target value of debt to GDP d^* that a country aims to reach. However, given substantial uncertainty about the long-run paths of r and g , and given how hard it is to evaluate what is the maximum sustainable primary balance that a country can politically sustain, and given also that high debt countries in the EU have faced confidence crises in the past, we find it harder to embed this second step in the rules.

is rewarded with more future fiscal space. Some proposed amendments of the existing rules suggest introducing compensation accounts across budget shortfalls in different years that essentially enforce a similar intertemporal logic. Using a debt target for this purpose is the natural choice.

Ten-year horizon The main advantage of averaging over a ten-year period is that it helps to smooth the fiscal effort required to reach a certain amount of debt reduction. Numerical simulations show that increasing the horizon used for the projections – say, from 10 to 15 or 20 years – and keeping all else equal implies a smaller adjustment in the primary balance required in the initial year. The reason is that when we do projections with a constant growth rate of spending, primary surpluses tend to be increasing over time. Then, with a longer horizon, we end up averaging higher primary surpluses in future years with the current one. In other words, there is more back-loading of the fiscal effort, which allows for a more gradual adjustment.¹⁸

The benefits of smoothing are especially important for a country coming out of a recession causing revenue shortfalls, as a relatively long horizon prevents premature fiscal adjustments. On the other hand, for a country experiencing a period of temporarily booming revenues, the fact that the rule requires averaging over time only allows a gradual increase in spending. In sum, the smoothing properties of the medium-term target have counter-cyclical benefits.

Given the benefits highlighted above, a natural question is why not use an even longer horizon. For example, simulations of a suggested rule by the European Fiscal Board (2020) consider medium-term rules with a horizon of 15 or 20 years (see their Figure 5.11). The main downside of making the horizon too long is that we may rely too much on more uncertain forecasts farther into the future.

Spending Ceiling The main advantage of using a spending ceiling is in terms of countercyclicality: since tax revenues are sensitive to the state of the business cycle, a rule based on the budget balance would require an adjustment of spending in a recession. Current rules focus on the cyclically adjusted balance to correct for this, but that is reliant on the use of measures of the output gap that have proved unreliable over

the years.¹⁹ An additional advantage of a multiyear spending ceiling comes from the fact that it provides a higher degree of predictability in budgeting.

C.2. Simplicity and communication. The system of rules described has two advantages in terms of simplicity and communication. The first is that focusing on a realistic objective of debt reduction makes it easy to communicate and to monitor by the general public. In particular, it is crucial that the level of debt-to-GDP to be reached in the coming 3 years becomes a heavily advertised and visible element in the public communication of the government budget proposals. It is important that the communication focuses on the 3-year-ahead projection of the debt-to-GDP ratio, because that is an objective that would be achieved under current projections. This number is easy to compute, relatively hard to manipulate, and one with which the general public is broadly familiar. This observation also reinforces our view that projections should be based on realistic forecasts, rather than on potential output.

The second advantage of our proposal is that it emphasizes a central trade-off between medium-term debt reduction and short-term budget adjustment. This is the economically significant trade-off that a policy maker should focus on, when choosing an appropriate fiscal stance. A plan that focuses on an explicit balance between these two sides of the problem should facilitate communication between national policy makers and European institutions.

Even though our proposal is considerably simpler compared to the current rules, other proposals such as Claeys et al. (2016) move even further in the direction of simplicity by not relying at all on forecasts. Their proposal is to set the growth of public spending equal to potential growth minus a mechanical debt correction term. While we value simplicity, we think that modelling and forecasting are unavoidable parts of fiscal planning. The radical proposal of Blanchard et al. (2020) advocates dropping numerical rules altogether in favour of stochastic debt sustainability models, precisely on the grounds that each country is different and has different prospects at any point in time. While we prefer a rules-based approach, we believe that medium-term forecasts, with all their limitations, are a good way of tailoring a rule to countries' specific situations.

C.3. Flexibility and countercyclicality . Our proposal underlines the importance of smoothing fiscal efforts

¹⁸Numerical simulations in a deterministic environment show that a multi-year debt reduction target rule is approximately equivalent to a simple inertial rule for spending x_t of the type $x_t = \rho x_{t-1} - \delta d_t$ for some values of the coefficients ρ and δ .

¹⁹See e.g., Coibion et al. (2018), Darvas et al. (2018).

across time. However, an objection could be that the current system of rules does already partially address the trade-off between debt adjustment and fiscal smoothing. In the part where compliance with the Medium-Term Budgetary Objective (MTO) is assessed, the Commission can consider a country compliant as long as a certain amount of fiscal effort is made in the direction of satisfying the MTO. We think, however, that a more transparent approach, in which the smoothing is explicitly part of the way in which budget projections are evaluated, is preferable. Furthermore, as already discussed, the way in which the output gap is used in existing rules is widely acknowledged to give very imperfect countercyclical properties.

In addition to using spending ceilings as an instrument, the other elements of our proposal that provide counter-cyclicalities are (1) the fiscal smoothing implicit in the medium-term target, which we discussed above; (2) the three-year revision of spending growth paths; and (3) the fact that increases in debt during recessions go in the slow-adjusting component of debt. As anticipated, however, no numerical rule is perfect, and it is possible that in some circumstances a country may be required an excessive fiscal effort. For this reason, we propose leaving room for a formal procedure by which a country can ask for a reduced speed of debt adjustment. Of course, the general escape clause can also be used.

C.4. Spending for the future. We have argued in favor of a fiscal framework that favors public investment and spending that contribute to European public goods under the label "spending for the future". It is useful to lay down the economic rationale for the special treatment of these two spending categories.

Public investment should be prioritized because it contributes to potential output growth and enhances the asset side of the government's balance sheet.²⁰

Expenditures that contribute to European public goods, on the other hand, should be included in "spending for the future" to the extent that they contribute to the welfare of future generations. Our view is that such forms of spending also have future benefits, although benefits that take more the form of insurance against future disasters.²¹

The green transition provides a good example of spending that contributes to the welfare of future generations, without necessarily increasing potential output growth. Policies that reduce greenhouse emissions are desirable because they reduce the risk of catastrophic events in the future. However, they can create current social costs, e.g., by displacing workers in high-emission sectors, increasing the need for fiscal transfers. These transfers are an example of non-investment spending that can be reasonably included in "spending for the future" as it is spending that makes it possible to pursue costly policies today, whose benefits will accrue to future taxpayers.²²

The difficult question is how to identify specific spending projects that are included in "spending for the future," limiting the scope for opportunistic mislabeling of other expenditures. The experience of the NGEU can provide a useful blueprint, both by defining specific areas of intervention, chosen at EU level, and by defining a monitoring and enforcement system. If countries want to include some spending project in the favored category, they will accept an increased degree of scrutiny by the Commission and possible forms of conditionality. The threat of suspending transfers in the NGEU if some milestones are not met would be replaced here by the threat of losing favored status for the spending project.²³

To get a sense of the incentives for a country to keep a spending project in the favored category notice that, given the calibration above, if a spending of, say, 10 million euros is included in favored spending, it reduces the future speed of debt adjustment and, therefore, it frees up resources in next year's budget by 0.3 million.²⁴

Darvas and Wolff (2021) recently proposed a "green golden rule" to exclude green public investment from the calculations of both public deficit and public debt in the years going forward. Our approach is similar in

type of investment, and favoured-speed debt financing would be granted to different degrees. In fact, the same ideal system would allow for multiple speeds for any investment spending, depending on its long-term benefits. Choosing to have only two speeds is just to reduce the complexity of the system.

²⁰Note that this does not imply that the green transition should only be financed through debt. Finding dedicated sources of EU fiscal revenue is certainly desirable, but we think it is likely that the fiscal resources needed will exceed the additional revenues. We also think that it is correct to think of the green transition as an inter-temporal, inter-generational choice, for which partial debt financing is appropriate.

²³For some categories, it may also be useful to refine the scheme by allowing some spending to be only partially included in "spending for the future," by introducing a system of differential weights.

²⁴The difference between the β and γ parameters, times the investment amount. The reductions in future years will be gradually smaller, as the calculations for the slow-moving part include depreciation of past expenditures.

²⁰Some forms of public investment produce directly revenue streams (e.g., highway tolls), but here we mostly have in mind the indirect effects on potential growth and thus on future tax revenues (Blanchard and Giavazzi, 2004). Aghion and Mhammedi (2021) offer recent arguments on the long-run growth benefits of some forms of public investment.

²¹In an ideal system, a separate form of cost-benefit analysis would be done for this

spirit and would produce similar outcomes for green investment. The difference is that in their proposal the speed of adjustment due to past green spending is effectively set to zero, by excluding it completely from the calculation of public debt.

The version of the golden rule proposed here can be interpreted as a first step in the direction of including measures of the government net worth in fiscal rules, as, for example, advocated by Gaspar, Harris and Tie-man.²⁵ The idea is that public investment adds both to the asset and to the liability side of the government balance sheet. Our two-speed design implicitly captures a repayment rule that is sensitive to the net worth effects of investment spending.

The definition of the slow-adjusting portion of debt in terms of cumulated, discounted values of past investments and other favored expenses means that the slow-adjusting part has the nature of a stock variable and requires defining an initial condition, when the system is started. The choice of this initial condition has significant effects on the way the rule would work in the initial years. Since it seems hard to do any type of retrospective reconstruction of what past investment would have fallen in the favored category, a reasonable solution is either to start at zero (as we do in our simulations) or to use a conventional value, proportional to the country's GDP.

D. Choice of parameters. The choice of parameters is hard and, in particular, the choice of the long-run target d^* is especially fraught. The value of 60% in the existing legislation is a conventional number that came from basically looking at an average across EU members in the late 1980s (Buti and Gaspar, 2021). There are good economic reasons for revising that number, as low interest rates make higher debt levels sustainable for a given primary surplus. Some proposals (Martin et al., 2021) argue for country-specific debt objectives. While we sympathise with the economic argument behind those proposals, we see some risks in the exercise of computing these country-specific targets, especially insofar as they require identifying some maximum safe level of debt that requires taking a stance on the maximum politically sustainable primary surplus – something extremely hard to quantify – and can end up focusing market expectations on risky thresholds.²⁶ A simpler, more practical approach

seems to be the European Stability Mechanism's recent proposal of just switching to 100% (Francóva et al., 2021). In our numerical experiments, we have stayed with 60%, to minimise the need to revise the existing legislation, and have found speed parameters that yield reasonable adjustments. Moving to 100% would just make it easier to find acceptable speed parameters.

Turning to the choice of speed parameters, β and γ , our approach is to experiment with different values and look at simulations under different scenarios. In a baseline calibration, we have experimented with $\beta = 0.05$ and $\gamma = 0.02$, obtaining reasonable paths of debt reduction for highly indebted countries, which would be compatible with current budgetary plans.

4. Conclusions

The EU fiscal framework is in need of reform. A reform of the fiscal rules should have two main objectives: to ensure sustainability while giving the needed space to fiscal policy as a macro stabilization device; and to protect desirable forms of spending, including public investment and spending that promotes common European goals.

We have proposed a rule that focuses explicitly on stabilizing the debt-to-GDP ratio and that provides countercyclicality and a gradual fiscal adjustment by aiming for a medium-term target. The rule is designed to incentivize desirable forms of spending and to promote European cooperation on these objectives.

The debt management plan is a natural complement to the new rules, as it gives highly indebted countries a better starting point in their debt-reduction effort. The plan has the additional benefits of reducing aggregate funding costs for EU countries, contributing to deepen the market for EU debt, and freeing up space in the ECB balance sheet.

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level.

²⁵See IMF (2018).

²⁶Whereas our medium-term approach implicitly allows for some degree of country-specific differentiation, as argued above, without focusing on the maximum debt

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Annex: Simulations

Table 2. Required Adjustments by Country

Country	Total Debt (2022)	Slow-adjusting	Fast-adjusting	Covid Debt	Required speed of Adjustment
Austria	79.1	7.1	59.8	12.3	0.007
Belgium	114.3	9.6	88.9	15.8	0.030
Cyprus	100.9	23.9	63.4	13.7	0.016
Estonia	19.7	4.7	5.8	9.3	—
Finland	71.3	8.9	50.7	11.7	—
France	113.5	12.6	83.1	17.8	0.026
Germany	71.2	5.1	53.5	12.6	—
Greece	190.4	26.0	147.0	17.4	0.037
Ireland	51.9	38.7	15.4	-2.2	—
Italy	149.4	12.7	117.5	19.2	0.035
Latvia	51.7	14.7	25.2	11.8	—
Lithuania	45.6	7.6	27.9	10.1	—
Luxembourg	26.6	8.5	14.3	3.8	—
Malta	61.8	3.3	39.1	19.3	—
Netherlands	57.7	14.6	34.0	9.1	—
Portugal	122.8	25.0	87.7	10.1	0.030
Slovakia	61.5	11.4	36.9	13.3	—
Slovenia	77.5	17.4	47.2	12.9	0.005
Spain	115.1	27.3	63.7	24.1	0.013

Note: Debt over GDP is taken from countries' Fall 2021 draft budgetary plans. Pandemic debt is computed as the difference between the debt to GDP ratio at the end of 2021 (projected) and at the beginning of 2020. Slow-adjusting debt is the debt accumulated during the 2008–09 recession and that accumulated during the 2011–13 recession, depreciated at a rate of γ . The fast-adjusting part is the entire debt, minus the slow-adjusting part and the pandemic debt. The required speed of adjustment is defined as the annual change in d required by the rule in 2023, divided by $d - d^*$.

The simulations reported in the Figures below are produced using as a baseline the projections for nominal GDP, revenues, and interest rates from the Fall 2021 Draft Budgetary Plans, for Italy and France, and forecasts from the Spring 2021 Stability Programs, for all other countries. For future dates beyond the horizon of the Budgetary Plans and Stability Programs, we use projections from the 2020 Debt Sustainability Monitor.

Relative to the baseline, our paths for spending and primary balances are computed assuming GDP and interest rates are exogenous (i.e., setting multipliers to zero) and setting spending paths to satisfy the 10 year debt target according to our rule. In particular, on each year t in which the spending ceiling is reset, the debt target is given by (1) and the growth rate of spending x is chosen so that iterating on the debt law of motion

$$D_s = D_{s-1} \cdot (1 + i_s) + (1 + x)^{s-t} \cdot G_t - T_s,$$

for $s = t + 1, \dots, t + 10$ yields $D_{t+10} = \hat{d}_{t+10} Y_{t+10}$.

To compute slow-speed debt we only include recession debt, and set it to:

$$d_{S,t} = \sum_{\tau \leq t} [w_\tau \cdot (d_\tau - d_{\tau-1})] \cdot (1 - \gamma)^{t-\tau},$$

where w_τ are weights set to 1 for 2008, 0.5 for 2009, 0.5 for 2011, 1 for 2012, and 0.25 for 2013, excluding recession years in which d_t decreased. To set the weights we use the timing of European recessions from the CEPR and use the proportion of quarters spent in recession that year. Covid debt is removed gradually over the first 5 years, by 1/5 of the Covid debt in Table 1 each year.

The red lines plot paths under existing budget plans. The blue lines plot simulated paths under our proposed rule combined with the debt management plan of Section 2. For reference, the dashed blue lines plot simulated paths under our proposed rule, but without including the debt management plan.

To include the debt management plan in the simulations, we assume that for the years 2023 to 2027, each year, at the beginning of the year, a fraction of debt (in proportion to GDP) is removed, according to the numbers in Table 1. Due to the debt management plan, the debt dynamics under the proposal are below the debt dynamics under existing budget programs even though the proposal entails larger deficits. Notice however that to compute the spending rule at time t we compute *future* debt dynamics without the debt management plan. That is, we assume that the debt reduction from d_t to \hat{d}_{t+10} must be achieved only by adjustments in future deficits. The dashed lines show that existing budgetary plans essentially comply with the proposed rule even without the help of the debt plan.

Fig. 1. France

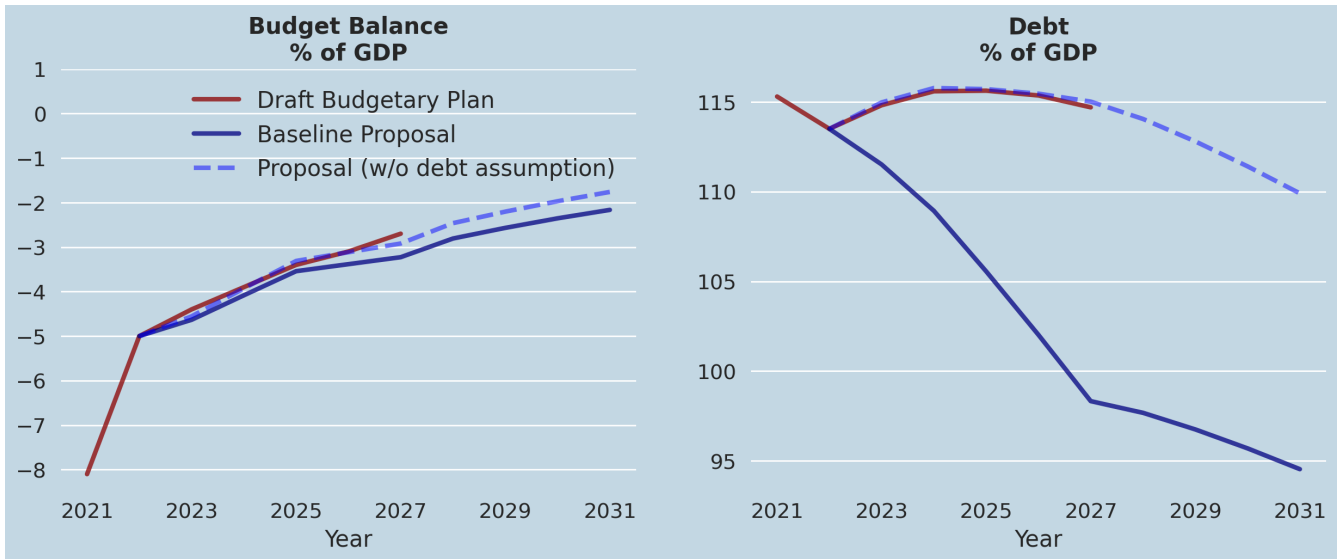


Fig. 2. Germany

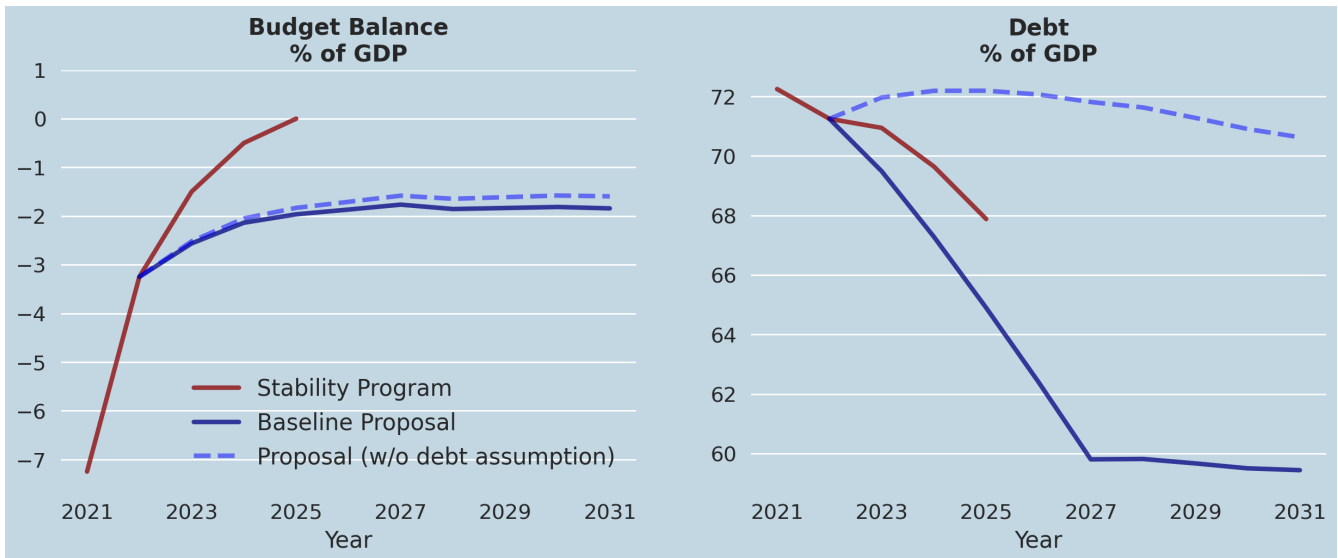


Fig. 3. Greece

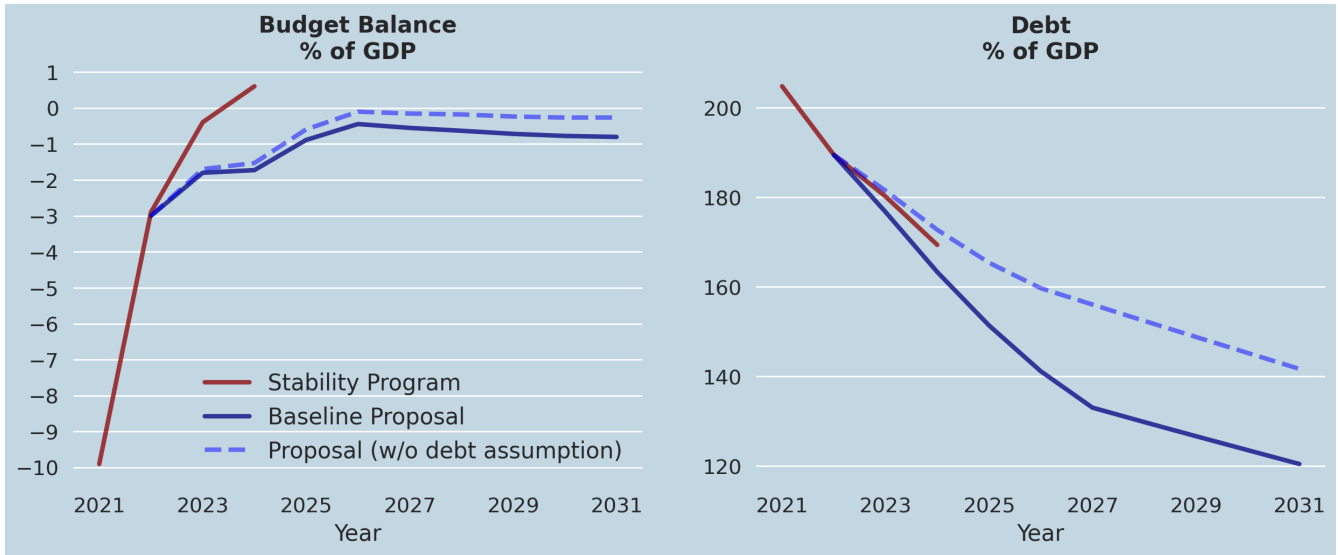


Fig. 4. Italy

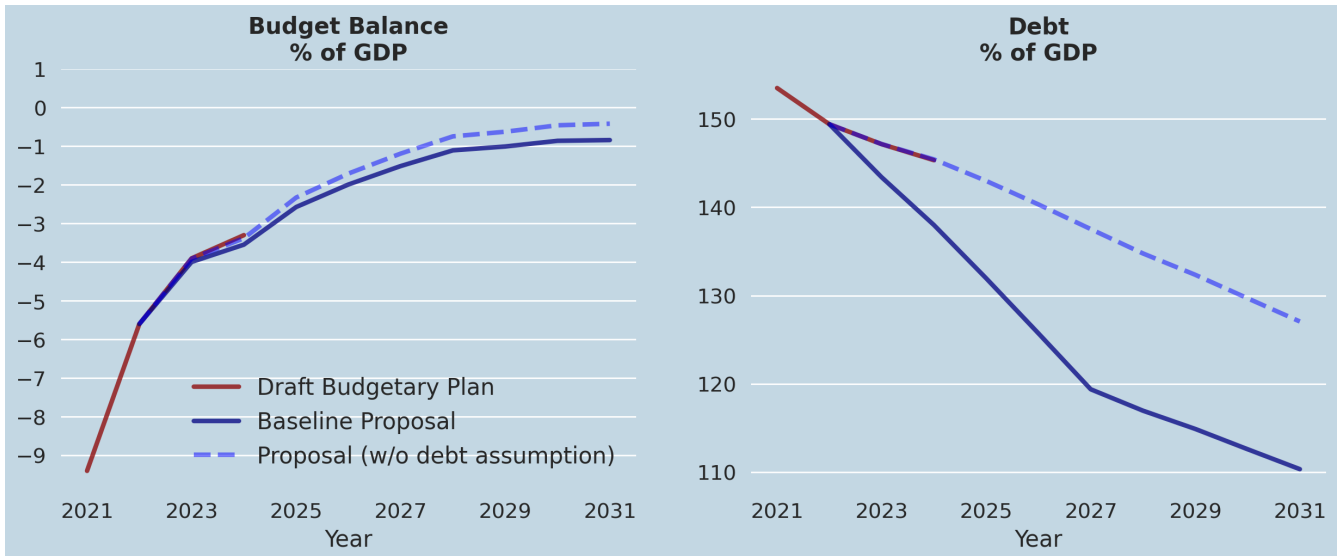


Fig. 5. Portugal

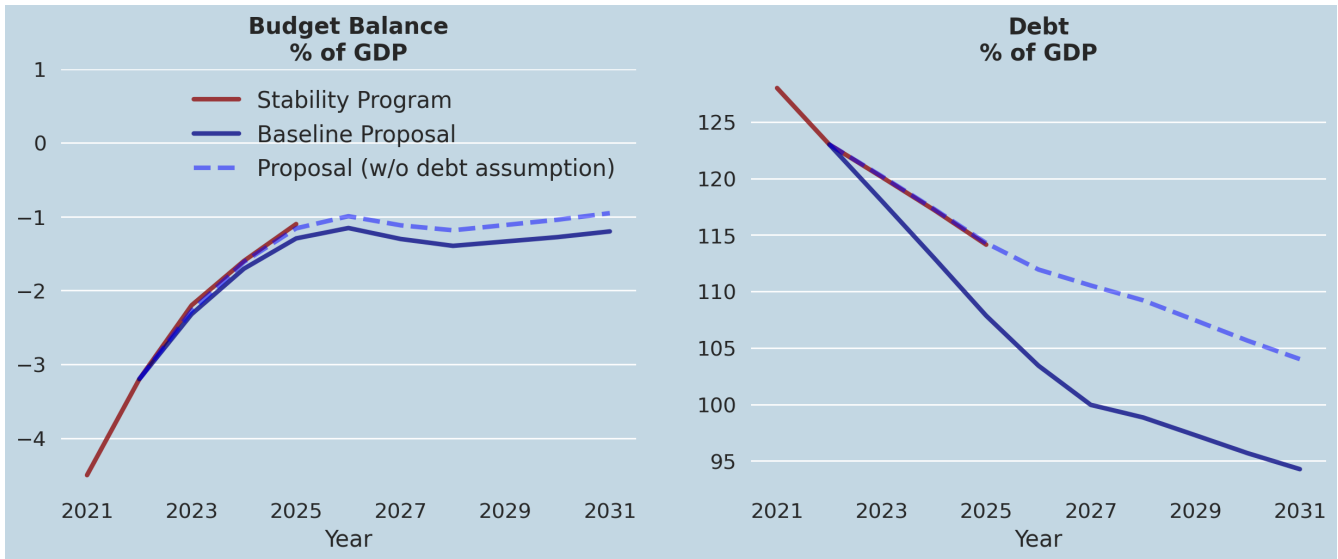


Fig. 6. Spain

