Assessment of the EU fiscal framework

Updating estimates of the cost of non-Europe
Assessment of the EU fiscal framework: Updating estimates of the cost of non-Europe

Without effective coordination of fiscal policies and active supervision of external and internal imbalances, significant negative spillover effects can occur between Member States participating in economic and monetary union and across the EU more widely. A credible fiscal framework and related rules should therefore be designed and enforced, to ensure that Member States pursue sound public finance policies that keep deficits within the range where financing can be secured. This approach, coordinated with an appropriate monetary policy, could also limit the risk of persistently higher inflation, instability, and the materialisation of macro-financial risks.

Confirming that there is still a need for better fiscal policy coordination among Member States and for a deeper EU fiscal framework, this study emphasises that these two things could lead to substantial benefits. More specifically, based on the results of a meta-regression analysis, estimates indicate that well-designed fiscal rules could generate deficit reduction of between 1.8 % and 1.3 % of gross domestic product. This would correspond to potential additional fiscal space of approximately €220 billion per year for the EU as whole.
Executive summary

Unless fiscal policies are coordinated effectively, significant negative spillover effects can occur between Member States participating in economic and monetary union and across the EU more widely. Fiscal responsibility, effective coordination of economic policies and active supervision of external and internal imbalances are key to keeping deficits within the range where sound financing can be secured. This approach, coordinated with an appropriate monetary policy, can also limit the risk of persistently higher inflation, instability, and the materialisation of macro-financial risks.

An effective fiscal framework and related rules should therefore be designed and enforced, to ensure that Member States pursue sound public finances and coordinate their policies. In that respect, greater involvement of the European Parliament in setting fiscal and economic policy objectives is key to achieving greater democratic accountability, transparency and ownership. In addition, more coherent EU-wide fiscal organisation, possibly taking the form of an EU treasury, and a sufficient permanent EU fiscal capacity could improve resilience to shocks and accelerate convergence towards healthy levels of investment.

However, little progress has been made on efficient institutional integration, and most of the discussions have remained focused on technical subtleties within the stability and growth pact (SGP). This might leave the economic and monetary union once again at the mercy of uncoordinated actions at Member State-level, as well as prone to high debt levels and unnecessary – and sometimes irresponsible – fiscal divergence that could continue to fuel fragmentation risks.

In November 2022, with the aim of replying to some of these concerns, the European Commission published a communication on ‘orientations for a reform of the EU economic governance framework’. In particular, it proposes to adapt the current framework so that fiscal surveillance is centred on a single operational indicator (expenditure path), with annual monitoring. The focus would therefore be on Member State compliance with the medium-term net expenditure path. In addition, the Commission proposed a simplification of enforcement procedures.

The annexed study looked at these issues and reviewed the main recent proposals on improving the EU fiscal framework. More specifically, based on the results of a meta-regression analysis, estimates indicate that well-designed fiscal rules could generate deficit reduction of between 1.8% and 1.3% of gross domestic product (GDP). This would correspond to a potential additional fiscal space of approximately €220 billion per year for the EU as whole.

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1 Communication on orientations for a reform of the EU economic governance framework, COM(2022) 583, European Commission, November 2022.
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1. Updating the Cost of Non-Europe: Background

As part of the 2022-2024 strategic execution framework, the European Added Value Unit within EPRS has been tasked with the Cost of Non-Europe reports project and, specifically, with updating the Mapping the Cost of Non-Europe in the course of 2022.

One of the policy areas in the Mapping of the Cost of Non-Europe is the economic and monetary union. A cost of non-Europe study of an incomplete economic and monetary union was published in 2014. The first study provided a quantitative evaluation of improved budgetary coordination.

An update of this analysis was needed for three reasons. First, the econometric results and the cost of non-Europe figures draw on data that only extends to 2014. Second, the policy environment has changed considerably since the study's publication. Many of the proposed policy options have since been implemented. These notably include the establishment of a European Fiscal Board (EFB) as an independent advisory board on fiscal matters. Third, ongoing initiatives focus on fiscal rules within the stability and growth pact, an area of high interest for the European Parliament.

We therefore updated the econometric analysis with recent analysis and data for it to take into consideration the potential impact of ongoing proposals. The purpose is also to arrive at a robust estimate of the benefits, given the many proposals and evaluations that have been produced in this area in the recent period. The annexed study aims to provide such an estimate by applying meta-regression analysis based on a dataset of 478 estimates of the effects of fiscal rules on fiscal outcomes.
2. Improving the EU fiscal framework: Progress made and state of play

Learning from some flaws revealed during the 2011 sovereign debt crisis, the EU improved and reinforced its economic policy arsenal. The resulting current common fiscal framework consists of the stability and growth pact (SGP), the macroeconomic imbalances procedure (MIP) and the European Semester. The SGP envisions Member States to coordinate their budgetary policy and avoid excessive deficits. The MIP aims to identify, prevent and address the emergence of potentially harmful macroeconomic imbalances that could affect economic stability adversely. Finally, the European Semester provides a framework for the coordination of economic policies across the EU and allows Member States to discuss their economic reform agenda and budget plans and monitor progress. Recent turbulences have again put this mostly functionalist framework under severe pressure, confirming large unaddressed gaps and stressing well-known persistent structural weaknesses. Designing effective rules under the SGP that could ensure Member States consistently pursue sound public finances and coordinate their fiscal policy has therefore regained much attention.

In its March 2020 communication, the European Commission acknowledged the need for further fiscal efforts to be adopted while dealing with the COVID-19 pandemic. It pointed to the activation of the SGP escape clause, which states that ‘in periods of severe economic downturn for the euro area or the Union as a whole, Member States may be allowed temporarily to depart from the adjustment path towards the medium-term budgetary objective, provided that this does not endanger fiscal sustainability in the medium term’. However, the Commission also proposed to prolong the temporary suspension as long as needed. This has led some researchers to argue that requiring to keep public debt levels below 60% of GDP and avoiding annual government deficit exceeding 3% seemed to no longer correspond with the fiscal reality of nearly all Member States. This ultimately re-kindled a lively debate in policy and academic circles.

Moreover, the issues linked to the framework’s institutional organisation have so far not been addressed fully. The European Parliament points out that, to strengthen the euro’s international role, the EU has to further develop and complete the as yet unfinished infrastructure of the common currency and make more progress on its critical functions. The Parliament stresses the need to promote an integrated framework that ensures sustainable public finances, reduces excessive macroeconomic imbalances, enables effective coordination of economic policies, and promotes convergence among Member States. In particular, the Parliament reiterates its call to strengthen Parliament’s democratic role in the economic governance framework, and calls on the Council and the Commission to take due account of its resolutions. Finally, a more coherent EU-wide fiscal organisation, possibly taking the form of an EU treasury, and a sufficient permanent EU fiscal capacity could improve resilience to shocks and accelerate convergence towards healthy levels of investment. With the aim of replying to some of these concerns, and conscious of a significant lack

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5 Resolution of 25 March 2021 on strengthening the international role of the euro, European Parliament.
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of sufficient permanent fiscal capacity at EU level, the Commission made an ambitious proposal and implemented a temporary recovery instrument, Next Generation EU (NGEU), as part of the necessary response to the socio-economic impact of the COVID-19 crisis. In December 2020, the European Parliament and the Council reached an agreement on the Recovery and Resilience Facility (RRF), the key instrument at the heart of NGEU. It will make €723.8 billion in loans and grants available to address some of the challenges identified in the European Semester.

In July 2022, the Eurogroup reaffirmed that fiscal policies should aim to preserve debt sustainability and raise the growth potential to boost the recovery. The Commission also recognised the need to assess the low effectiveness of the current economic governance framework. It published a communication on the economic governance review and two reports on the application of the economic governance framework. In March 2022, it issued a communication that provides Member States with guidance on the conduct of fiscal policy in 2023, including an overview on the state of play of the economic governance review. The communication emphasises the need to: ensure policy coordination and a consistent policy mix; safeguard debt sustainability through gradual and high-quality fiscal adjustment and economic growth; foster investment and promote sustainable growth; promote fiscal strategies consistent with a medium-term approach to fiscal adjustment (including the RRF); differentiate fiscal strategies; and take into account euro area aspects.

In November 2022, the Commission adopted another communication, ‘Orientations for a reform of the EU economic governance framework’, which proposes policy options to build a simpler, more transparent and integrated architecture for macro-fiscal surveillance. It highlights four main elements:

- national medium-term-fiscal-structural plans,
- greater national ownership and better enforcement,
- more focused and streamlined post-programme surveillance framework,
- a more effective framework to detect and correct macroeconomic imbalances.

More specifically, the Commission proposed that the SGP escape clause be extended until 2024, and stressed that a high level of investment would be needed to achieve the twin (i.e. green and digital) transition, improve cohesion and resilience, reduce energy dependencies, and increase defence capabilities. The 3 % GDP deficit and 60 % GDP debt reference values would remain, so changes to

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9 Statement on fiscal policy orientations for 2023, Eurogroup, July 2022.
14 The communication does not constitute formal guidance to Member States under the SGP or the European Semester but seeks to provide Member States with more clarity as they prepare their stability and convergence programmes.
15 Communication on orientations for a reform of the EU economic governance framework, COM(2022) 583, European Commission, November 2022.
the Treaty would not be necessary. The proposed revised framework also retains the escape clause and, in exceptional circumstances, would allow individual Member States to deviate temporarily from the medium-term fiscal path.

The Commission also proposed a more risk-based surveillance framework that puts debt sustainability at its core and would allow for greater differentiation among Member States, based on their respective public debt challenge. In their medium-term fiscal-structural plans, Member States should ensure that debt is brought onto a sustainable path by the end of the adjustment period (four years as a rule). These plans would include fiscal, reform and investment commitments, and should be in line with the existing recovery and resilience plans.

The Commission has not proposed a 'golden rule' to exclude some investment from EU fiscal rules. Investment priorities would be included in the medium-term fiscal structural plans set by the Member States, considering no trade-off between reforms and investment and fiscal adjustment. On the basis of a positive Commission assessment, these plans would be adopted by the Council and later implemented with annual monitoring under the European Semester.

Finally, the Commission suggested improving the enforcement mechanism, stressing that enhancing reputational sanctions and lowering the amounts of the financial sanctions could lead to greater effectiveness. In theory, options proposed also include the possibility of suspending EU funds for Member States. Based on macroeconomic conditionality, this would occur when Member State actions would not correct the excessive deficit effectively. In addition, a more effective framework to detect and correct macroeconomic imbalances should be introduced.

Looking ahead, in the first quarter of 2023, the Commission is expected to provide guidance on coordination of fiscal policies and convergence programmes for 2024 and beyond. In spring 2023, the new country specific recommendations (CSRs) are due to be issued.
3. Rationale: Why should the EU continue to act?

Unless fiscal policies are coordinated effectively, significant negative spillover effects can occur between Member States participating in the economic and monetary union and across the EU more widely. Fiscal responsibility, effective coordination of economic policies, and active supervision of external and internal imbalances are key to keeping deficits within the range where sound financing can be secured. This approach, coordinated with an appropriate monetary policy, can also limit the risk of persistently higher inflation, instability, and the materialisation of macro-financial risks. The question is how to determine which targets (e.g. for debt and deficit levels), type of instrument and institutional governance framework should be put in place, since the current framework has achieved limited results in terms of fiscal responsibility (see Figure 1), reform implementation and coordination.

**Figure 1: Evolution of debt levels and risk of fragmentation in the EU**

![Image](image_url)


Many researchers point out that the complexity of the current rules-based system, in particular the increasing addition of rules, flexibility and exemption clauses in the SGP, has seriously challenged and undermined its effective functioning. Moreover, beyond the complexity of the current framework, its relative lack of reliability has also been highlighted as potentially problematic. For instance, the computation of potential output, output gaps, and structural balances appears to be too opaque, while being subject to large ex-post revisions.

Some have emphasised that the evolving interpretation of the SGP has not been mirrored by developments in national rules, giving rise to potential inconsistencies and low levels of enforcement. Both flexibility and the need to take into account economic circumstances and

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18 S. Deroose et al., op. cit.
specificities have also often been detrimental to enforceability. As a result, the EU fiscal policy has not had the full counter-cyclical effect it was expected to have but rather remained pro-cyclical or a-cyclical. In turn, the lack of effective resilience has not allowed the expected stabilisation to fully materialise in the event of a severe crisis.

While the European Semester should be a blueprint for economic policy coordination and convergence between Member States, it has so far only delivered limited results.\(^{19}\) For instance, as pointed out by the European Parliament,\(^{20}\) the share of CSRs from the semester with full or substantial progress has declined gradually, from 11% in 2012 to only about 1% in 2019. The lack of transparency, consistency, and European Parliament involvement in the way the CSRs are chosen, and the lack of prioritisation in the recommendations, are probably a key source of the current dismal results.\(^{21}\)

Beyond purely technical adjustments, and for greater credibility, the lack of efficient institutional organisation would also need to be tackled. The semester, MIP and SGP have proved largely ineffective, owing to a lack of both political will and efficient institutional integration in the fiscal area.\(^{22}\) Technical assistance to Member States,\(^{23}\) enforcement and implementation of the rules and objectives of the SGP, MIP and EU Semester, operations on the market to ensure EU financing, in particular as part of the Next Generation EU (NGEU) and the European stability mechanism (ESM), are all scattered across different services and sometimes different institutional arrangements. They operate with rather limited coordination, which greatly diminishes their relative effectiveness and proves costly in time of crisis. This could also largely undermine the potential positive spillovers that would occur if EU fiscal and monetary policy were coordinated more effectively.\(^{24}\) Moreover, the lack of fiscal convergence is not conducive to shared fiscal responsibility, which limits the potential for risk sharing and severely constrains any proposals for serious additional permanent fiscal capacity at EU level.\(^{25}\) This, in turn, impacts the EU’s economic growth rate negatively, while limiting a potential counter-cyclical intervention, should it be necessary.

Ideally, to respond to these issues, and as proposed by the European Parliament,\(^{26}\) an EU treasury would equip the EU with more capacities to apply the existing economic governance framework and optimise the euro area’s development. The resulting fiscal coordination would increase sustainability and resilience in Member States and confidence between them. It would consequently make solidarity easier and more efficient, should it be needed in the event of a new economic and financial crisis. Furthermore, a greater involvement of the European Parliament in the setting of fiscal and economic policy objectives would ensure more democratic

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24 *Monetary-fiscal policy interactions in the euro area*, Occasional Paper Series No 273, European Central Bank (ECB), September 2021.

25 E. Feas et al., *A proposal to reform the EU’s fiscal rules*, Real Instituto Elcano, December 2021.

26 *Resolution* of 16 February 2017 on budgetary capacity for the euro area, European Parliament.
accountability, transparency and ownership. As noted recently in a comprehensive study, the European Parliament’s role should also not be constrained during emergencies and situations necessitating urgent reaction; rather, improved cooperation mechanisms should be designed for such times. Moreover, the Parliament has stressed that responsibilities must be assigned at the level where decisions are taken or implemented, with national parliaments scrutinising national governments and the European Parliament scrutinising the European executives. Finally, contrary to more mature common monetary jurisdictions, the use of fiscal policy as a stabilisation tool in the euro area can only be achieved by coordinating fiscal policies, given that no area-wide fiscal authority or sufficient permanent fiscal capacity at EU level exists. Once rules have been improved and institutional inefficiencies addressed, the establishment of a sufficient permanent EU fiscal capacity would be welcome. It could focus on improving resilience to shocks, ensuring continued convergence, and guaranteeing healthy levels of investment in areas where high added value on common action is expected.

27 For a detailed analysis on this issue, see E. Bressanelli, Democratic control and legitimacy in the evolving economic Governance framework, Economic Governance Unit, DG IPOL, European Parliament, November 2022.
29 Resolution of 8 July 2021 on the review of the macroeconomic legislative framework for a better impact on Europe’s real economy and improved transparency of decision-making and democratic accountability, European Parliament.
30 The European instrument for temporary Support to mitigate Unemployment Risks in an Emergency (SURE) and NGEU are welcome step to support investment and reform in times of constrained fiscal capacity in some Member States but remain an imperfect substitute for permanent fiscal capacity at EU level.
4. Review of recent studies on reforming the EU fiscal framework

Table 1 below shows the main findings from selected recent studies on reforming the EU fiscal framework. In line with issues already identified in previous literature, several authors suggest reforms to simplify the SGP. Several authors notably emphasise the positive role of expenditure rules. Some recommend the introduction of a single net expenditure rule, with a country-specific debt target based on nationally designed expenditures and debt plans. Others point to the advantage of an expenditure rule rather than a basic deficit rule, arguing that the latter is pro-cyclical and may not help reduce indebtedness in good times. Opinions are more divided on establishing a 'golden rule' for net investment. Recent proposals focus on a 'green golden rule', whereby the EU fiscal framework could exempt the increase in net green public investment from the statistical indicators considered for fiscal rules for countries with sound public finances. Some researchers propose a 'golden rule' modelled on the governance of the RRF, while others argue that any 'golden rule' should not be based on gross but net investment spending.

In a recent proposal, the International Monetary Fund (IMF) presented several options to improve the current EU fiscal framework. As regards fiscal anchoring, the IMF would keep the existing deficit and debt targets unchanged but would replace the medium-term objective for the structural balance with a medium-term objective for the overall fiscal balance. This would be more ambitious for Member States with higher fiscal risk. The IMF also suggested multi-year expenditure ceiling paths to reach the medium-term objective. The excessive deficit procedure and the escape clause would be kept, while the debt correction benchmark would be abandoned. As for institutional reforms, the IMF only modestly envisaged a stronger mandate for national fiscal councils and the establishment of a European fiscal council. Finally, the IMF mentioned an EU fiscal capacity, although it is not clear how this would be implemented in practice.

The EFB has analysed the various proposals extensively. In June 2022, it published its assessment of the fiscal stance for the euro area in 2023, where it questioned the prolongation of the general escape clause under the SGP for an additional year. Its 2022 annual report, published in October 2022, included an assessment of EU fiscal policy conducted because of the COVID-19 pandemic and some proposals on reforms of the EU fiscal framework. The EFB notably stated that governance should be more than simply updating the SGP. The report also highlighted that surveillance should become more differentiated, and that the six Member States that are positioned well above the 60% debt ratio should agree on a reduction path over a 3- to 5-year horizon. For other Member States, the report suggested a move towards a more decentralised approach, and thus a monitoring of fiscal outcomes through national frameworks.

32 L. Feld and W. Reuter, op. cit.; Z. Darvas, op. cit.; W. Reuter, op. cit.
33 F. De Angelis, F. Mollet and L. Rayner, op. cit.
35 N. Arnold et al., op. cit.
36 Assessment of the fiscal stance appropriate for the euro area in 2023, EFB, June 2022.
37 Annual Report 2022, EFB, October 2022.
38 Belgium, Greece, Spain, France, Italy and Portugal.
Beyond the SGP, the report favoured joint EU action when it comes to protecting the provision of EU public goods more effectively, and more scope for stabilisation against possible major temporary shocks. In this respect, the EFB recommended an increase in the EU budget, extended by national envelopes, and a stabilisation mechanism in the event of major transitory shocks. The EFB notably emphasises the need for central fiscal stabilisation capacity as a greater risk-sharing mechanism, since some Member States might have insufficient capacity to deal with major temporary shocks.40

Table 1 – Selected recent studies on reforming the EU fiscal framework

<table>
<thead>
<tr>
<th>Authors</th>
<th>Main results and proposals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gaspar (2020)41</td>
<td>The author recalls that compliance track record with fiscal rules has been very poor. He supports the improvement of fiscal rules and identifies three fundamental priorities to consider in the architecture of the euro area, namely completion of banking union, integrated single European capital market, and a central fiscal capacity.</td>
</tr>
<tr>
<td>Gros and Jahn (2020)42</td>
<td>The authors recall the issues linked to the computation of potential growth and expenditure rules. They then argue for a ‘golden rule’ based on net investment spending.</td>
</tr>
<tr>
<td>Caselli and Wingender (2021)43</td>
<td>The authors find that the Maastricht fiscal criterion of a 3% deficit ceiling increases the number of observations around the 3% threshold by 20%, while reducing the occurrence of both large government deficits and surpluses significantly.</td>
</tr>
<tr>
<td>Ardanaz et al. (2021)44</td>
<td>The authors find that in countries without flexible fiscal rules (which include both countries without fiscal rules and countries with rigid fiscal rules), a fiscal consolidation episode equivalent to at least 2% of GDP is associated with an average 10% reduction in capital expenditures. They conclude that flexible rules protect public investment during consolidation episodes.</td>
</tr>
<tr>
<td>Blanchard et al. (2021)45</td>
<td>The authors propose abandoning fiscal rules in favour of fiscal standards, that is, qualitative prescriptions that leave room for judgement, together with a process to decide whether the standards are met.</td>
</tr>
<tr>
<td>Larch et al. (2021)46</td>
<td>The authors show that deviations from fiscal rules and the accumulation of government debt foster pro-cyclical fiscal policy. They conclude that complying with fiscal rules that limit the increase in government debt or keep a steady course in the face of cyclical fluctuation is conducive to counter-cyclical fiscal policymaking.</td>
</tr>
<tr>
<td>Căpraru et al. (2022)47</td>
<td>The authors find that independent fiscal institutions have had a positive and significant effect on budget balances and on compliance with fiscal rules.</td>
</tr>
</tbody>
</table>

40 See EFB, 2022, op. cit. This is also supported by V. Gaspar, Future of Fiscal Rules in the Euro Area, IMF, January 2020; N. Arnold et al., Reforming the EU Fiscal Framework: Strengthening the Fiscal Rules and Institutions, IMF, September 2022.
41 V. Gaspar, op. cit.
42 D. Gros and M. Jahn, op. cit.
44 M. Ardanaz et al., Growth-friendly fiscal rules? Safeguarding public investment from budget cuts through fiscal rule design, ScienceDirect, March 2021.
45 O. Blanchard et al., Redesigning EU fiscal rules: from rules to standards, Oxford Academic, October 2021.
47 B. Căpraru et al., Do independent fiscal institutions cause better fiscal outcomes in the European Union?, ScienceDirect, June 2022.
According to the authors, the evidence shows that fiscal rules, in general, have been flexible during crises but have not prevented a large and persistent build-up of debt over time. The paper also presents evidence on the benefits of a good track record in abiding by the rules.

The authors propose the establishment of an EU climate fund and the introduction of a green ‘golden rule’.

The authors argue that the review of the European fiscal framework should also focus on how to strengthen enforcement and increase compliance with the fiscal rules. They emphasise that increasing the political costs of non-compliance – through a reduction of complexity of the framework, an increase in national ownership and transparency, and simplicity of assessment – could help achieve this. They also argue that adding more flexibility, exceptions, and discretionary judgement would be counterproductive.

The authors note that the effectiveness of fiscal rules depends not only on their design but also on institutional elements. They stress that the enforcement of fiscal rules is as much a technical as a political issue, and recall that no matter how good the design of a fiscal rule, it will likely fail to have the desired effect if it is not backed by a solid institutional arrangement of monitoring and enforcement and by political will.

The authors propose 10 policy recommendations to make EU economic governance stronger, greener and fairer. They notably propose a central investment capacity for green and digital investments. They also propose to introduce a single net expenditure rule with country-specific debt targets based on nationally designed expenditure and debt plans to enhance political ownership.

The authors present a proposal to strengthen the European fiscal framework based on two elements: a revision of the fiscal rules, and a plan to create a European debt agency to absorb the debt accumulated during the pandemic.

The authors argue that the EU fiscal framework needs substantial reform. They propose a new framework based on risk-based EU-level fiscal rules, strengthened national institutions, and an EU fiscal capacity, whereby the 3% deficit and 60% debt reference values would remain.

The EFB proposes a comprehensive reform of the economic governance, notably through further differentiation in the implementation of fiscal surveillance. At the same time, the EFB concludes that more reliance on national monitoring of fiscal performance could be envisaged, providing the EU institutions validate a transparent and solid national fiscal framework. It reiterates the need to establish a central fiscal capacity for stabilisation, focused on improving the capacity of all Member States to mitigate large-scale temporary shocks. It also advocates joint efforts to assure the supply of high-priority EU public goods through a larger budget, increased by national envelopes in a net neutral way.

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50 L. Feld and W. Reuter, op. cit.


52 F. De Angelis, F. Mollet and L. Rayner, op. cit.


54 N. Arnold et al., op. cit.

5. Potential economic benefits of an efficient EU fiscal framework

Evidence in the economic literature largely confirm the importance of reducing public debt to restore fiscal sustainability and support stronger fundamentals. An earlier EPRS study focusing on cyclical factors concluded that a benefit of between €31 billion and €85 billion additional GDP per year could be achieved if coordination of fiscal policies were improved. Another series of studies using advanced econometric modelling investigated the potential impact of fiscal policy coordination by focusing on the size of expected spillovers. They found positive impacts of between 0.1% and 0.3% of GDP, representing between €15 billion and €30 billion of additional GDP per year. A study testing a series of adverse scenarios using different macroeconomic models looked at the economic consequences of fiscal policy fragmentation and fiscal rules. Focusing on diverging high public debt in the euro area, and assuming a baseline scenario with long-term risk premium, it estimated a long-term average negative GDP impact of between 0.3% and 0.8% of GDP depending on the scenario. This would represent between €40 billion and €120 billion of additional GDP per year compared with the baseline.

Looking at the potential impact of efficient public spending within the EU, and building on the literature on optimal fiscal decentralisation and quality of public finances, another study by EPRS found potential added value from budgetary waste reduction in the EU of up to €180 billion per year in the long term. An evaluation that updated previous results by EPRS confirmed that Member States with high debt levels are affected more heavily by output losses in a crisis; they have less scope for counter-cyclical fiscal policy and less development capacity in terms of investment, innovation, and thus potential growth rates. The results showed a positive impact of improved fiscal coordination, with a benefit of between €49 billion and €100 billion of additional GDP per year in the long term.

To provide a robust estimate of the cost of low fiscal policy coordination, the annexed study applies meta-regression analysis based on a dataset of 478 estimates of the effects of fiscal rules on fiscal outcomes. More specifically, the author presents a baseline estimate for potential efficiency gains from better coordination of fiscal policy, under the understanding that both the nature and extent of such coordination are a function of the presence of a fiscal rule. The estimated coefficients capture...
the estimated reductions in public deficit as a percentage of GDP owing to the presence of a fiscal rule. 63

Empirical results are reported in three steps. Step 1 focuses solely on the type of fiscal rules. The results appear as not significant with this simple analysis, reinforcing the idea that one-size-fits-all approaches in this area would have limited benefits. Step 2 adds specifications that comprise a broad set of additional conditioning and control variables including economic and political features. 64 As a result of these more elaborate specifications, significance improves but the coefficient values display high level of variance, thus pointing at remaining unaddressed factors in the econometric estimation. Step 3 takes interactions into account and adds country- and time-fixed effects. This improves the results substantially with stable and significant coefficients for the variables of interest. More specifically, everything else being equal, estimates indicate that well-designed fiscal rules could generate deficit reduction of between 1.8% and 1.3% of GDP. This would correspond to a potential additional fiscal space of approximately €220 billion per year for the EU as whole.

To conclude, the recent economic literature does indeed confirm the need for better fiscal policy coordination among Member States and for deepening the EU fiscal framework. In particular, well-designed rules could lead to additional benefits. As the geopolitical situation remains highly uncertain, and risks accumulate on account of the repercussions from the ongoing war in Ukraine, leadership and common action at EU level have become ever more important. In that respect, the improved economic governance framework the European Commission recently proposed could be a first instrumental step towards increasing responsibility, sustainability and resilience in Member States, as well as confidence between them.

63 A potential improvement would be to perform a coding of studies in a double-blind manner; the inclusion rule could be enlarged and thus econometric implementation extended.

64 This includes the administrative level to which the estimated effect refers, indicators that make it possible to check for potential publication bias, features of the econometric specification, econometric identification strategies, and country and time coverage.
Focusing on updating current estimates of the cost of non-Europe, with special emphasis on the EU fiscal framework, this report addresses two main research questions: what are the main proposals for improvements in the workings of the EU fiscal framework and how can a robust estimate be built of the costs generated by the absence of an effective EU fiscal framework in terms of fiscal policy coordination? The report describes the conceptual framework devised for this task (centred on a meta-regression analysis approach), explains the basic intuition and technical details underpinning meta-regression analysis, and discusses the data and estimation results. According to our estimates, fiscal rules are shown to generate deficit reductions of between 1.8% and 1.3% of GDP.
Executive summary

The objective of this report is to update the existing estimates on the potential benefits of the coordination of fiscal policies in the European Union or, in other words, provide rigorous estimates of the cost of Non-Europe with special reference to the effectiveness of the EU fiscal framework.

This report reviews the existing proposals for the reform of the EU fiscal framework and explains the conceptual framework devised and constructed for estimating the costs of Non-Europe with regard to the EU Fiscal framework.

First, the report presents and discusses the different ways that have been proposed so far for measuring the benefits of fiscal policy coordination. We identify indirect and direct approaches. The indirect approaches build upon the theories of fiscal decentralization and political budget cycles. In both cases, strong additional assumptions are required. In the former case, that centralisation implies coordination; in the latter, that political budget cycles is the only reason for lack of coordination. We argue these restrictions are inappropriate for the case at hand and favour instead a direct approach based on fiscal rules. We also make the case that the meta-regression approach to assessing the effectiveness of fiscal rules is the most appropriate for the current task, in light of its basic features.

The report then provides an update of the myriad recent proposals that have been tabled for reforming the EU fiscal framework. We note that unfortunately most of these proposals cannot yet be empirically or econometrically assessed because of data availability and/or the extremely short length of the available time series data.

We then explain the conceptual framework devised for this task, distil the basic intuition and discuss technical details underpinning our econometric analysis. We introduce the meta-regression analysis approach, which is the empirical framework we favoured in this report, detail the underlying intuition and explain its mechanics.

We then describe the algorithm employed for the selection of studies which form the data base that will be analysed using the meta-regression analysis framework.

This is followed by a discussion of the data collection effort for this exercise, the coding of the variables here constructed and their basic statistics.

Finally, we present and discuss our new results estimating the potential efficiency gains from better coordination of fiscal policy in the EU.

Our main conclusion and headline finding is that we find that fiscal rules generate deficit reductions of between 1.8% and 1.3% of GDP. This would correspond to potential efficiency gains over the long run from a better coordination of fiscal policy in the European Union of approximately €220 billion per year.
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1. Introduction

The 1992 Maastricht Treaty initiated a broad process of deepening of economic European integration. It laid the foundations for monetary integration and, in doing so, prompted further coordination of fiscal policies within the European Union. Over the last thirty years or so, we have witnessed the building of the EU fiscal framework as we know it today and this resulted in the increasing importance of evaluating the effects of these efforts. There is overall agreement in the diagnosis that the European Economic and Monetary Union (EMU) is still not complete. Hence it is of great importance to assess the main remaining challenges in completing the EMU and evaluate the costs of not fully addressing such challenges.

Our main aim here is to contribute to a wider understanding of challenges faced by the current EMU institutional arrangements and to identify and evaluate more precisely the benefits of improving fiscal coordination and how these can reinforce the EMU architecture. The main objective of this report is to try to provide a systematic and quantitative evaluation of the existing estimates of the net benefits generated by the EU Fiscal Framework.

The motivation for the proposed study is twofold: (a) the covid pandemic has led to the suspension of the EU fiscal rules until 2023 and there is wide recognition that the framework is ripe for reform; this is partly because (b) the performance of the fiscal framework has been judged as not entirely satisfactory from most sides of the debate. It must be stressed that the policy environment has changed considerably in the last few years as many of the proposed policy options have been implemented.

The objective of the EU Fiscal Framework is to put in place an effective framework for the coordination and surveillance of the fiscal policies of the Member States. In response to the sovereign debt crisis, substantial reforms were carried out in 2011-2013. Chiefly, the ‘Six Pack’ amending the Stability and Growth Pact (SGP), the Treaty on Stability, Coordination and Governance in the Economic and Monetary Union (which included the Fiscal Compact) and the ‘Two Pack’ reform that focused on national draft budgetary plans. Other important components of the EU Fiscal Framework are the European Semester, the excessive deficit procedure, and the Next Generation EU (NGEU).

The two main research questions or tasks the report addresses are: what are the main current proposals for improvements in the workings of the EU fiscal framework? And how to provide a robust estimate of the cost of a lack of effective EU fiscal framework, specifically, of fiscal policy coordination?

There have been a few estimates presented on the benefits of coordinating fiscal policy in the EU and the present report aims at updating these estimates. The objective of this report is to propose a clear approach that generates and justifies calculating the costs of Non-Europe in terms of the functioning of the EU fiscal framework.

This report explains the conceptual framework devised for this task (centred on a meta-regression analysis (MRA) approach), it distils the basic intuition and technical details underpinning meta-regression analysis and discusses the data and estimation results.

Anticipating our main finding, our baseline estimates suggest that fiscal rules generate deficit reductions of between 1.8% and 1.3% of GDP, which would correspond to potential efficiency gains from a better coordination of fiscal policy of approximately €220 billion per year. The implied time horizon for these effects is the long run, that is, within a 15 to 25 years window.

The report is organised as follows. In the next section, we present and discuss the different ways that have been proposed so far for measuring the benefits of fiscal policy coordination. We make the
case that the meta-regression approach is the most appropriate for the current task, in light of its basic features. Section 3 provides a brief update of the myriad recent proposals that have been tabled for reforming the EU fiscal framework. We note that unfortunately most of these proposals cannot yet be empirically or econometrically assessed (because of data availability and/or the length of the time series data). Section 4 introduces the meta-regression analysis approach, details the underlying intuition and explains its mechanics. Section 5 describes the algorithm employed for the selection of studies, while section 6 focuses on the data collection effort for this exercise, the coding of the variables here constructed and their basic statistics. Section 7 presents and discusses our new results estimating the potential efficiency gains from better coordination of fiscal policy in the EU. The last section concludes.
2. Measuring the benefits of fiscal policy coordination

How to measure the cost of the lack of effective EU fiscal framework? This is an important yet difficult answer question. The main elements of EU fiscal framework were established over a period of about at least 30 years which started with the 1992 Maastricht Treaty, followed by the Stability and Growth Pact (SGP) and continued with the 2013 Treaty on Stability, Coordination and Governance in the Economic and Monetary Union (TSCG). A number of additional reforms were implemented after the Global Financial Crisis, with the view of strengthening both the fiscal rules and the fiscal institutions underpinning the EU fiscal framework (Delivorias 2021). These have attempted to make the framework more credible and effective yet empirically assessing these changes remains challenging. The view we take here is that the main channel to deliver these benefits is through an increase in the extent of fiscal policy coordination among Member states and a deepening of the EU fiscal framework (here thought of as encompassing both rules and institutions).

Previously, there have been various attempts at measuring the extent of fiscal policy coordination. Ivanova and Weber (2011) exploit the assumption that the fiscal response to the global financial crisis was highly coordinated and use this to estimate the size of the potential spill-over effects from a better coordination of fiscal policies to be around 0.25 percent of GDP. Another important corroboratory piece of evidence is provided by Bańkowski et al (2017) which study fiscal spill overs with the example of Germany in mind and estimate that increases in German fiscal expenditures generate potential positive spill-over of around 0.2 to 0.3 percent of GDP to the other member states. One concern about these estimates is how generalizable one believes them to be, as the former is anchored in an extraordinary response to a specific event (the global financial crisis) and the latter rests upon the behaviour of one perhaps rather special country.

Thinking about how to measure the extent of fiscal policy coordination one could devise two main possible approaches. One more indirect and the other, the one we will pursue in this report, more direct.

- The indirect approach offers at least two avenues, one based on fiscal decentralisation and the other on political budget cycles.
- The direct approach focuses on fiscal rules and fiscal multipliers.

For the one centred upon the notion of fiscal decentralisation, the necessary assumption in this case would be that, everything else the same, the greater the extent of fiscal decentralisation, the less coordinated would be the conduct of fiscal policy. Baskaran et al. (2016) carry out a meta-regression analysis of the literature and find that the evidence whether fiscal decentralisation leads to faster or to slower economic growth remains highly inconclusive. They document that the main reasons behind this inconclusiveness remain methodological and modelling choices, chiefly the all-important matter of measurement: “no final agreement can be reached regarding the impact of decentralization on economic growth without a consensus as to how to measure decentralization in the first place” (Baskaran et al. 2016 p. 1462).

The second indirect avenue we identified is related to political budget cycles. This large and well-established literature investigates whether incumbent governments in electoral democracies increase expenditures in the run-up to elections in order to remain in power. The necessary assumption in this case would be that the greater the strength of the evidence in favour of political budget cycles, everything else the same, the less coordinated would fiscal policy be. For this body evidence, there are two recent meta-regression-analyses with slightly conflicting results. Philips (2016) uses data on 1198 estimates across 88 studies published between 2000 and 2015 and report evidence of a statistically significant albeit small increase in government expenditures and public debt (and decreases in revenues and fiscal balance) around elections. He also reports that these findings are robust to publication bias. Mandon and Cazals (2019) use data on 1037 estimates from...
46 studies to argue that little systematic evidence can be found supporting the view that national leaders use fiscal tools in order to be re-elected. Yet they uncover evidence of substantial publication bias, with researchers rather selectively reporting empirical support for the political budget cycles hypothesis. They also note that this highlighted publication selection bias has been reduced in the past 25 years or so and that the nature and quality of political institutions appear to be the factors which most affect political budget cycles.

There are at least two reasons why it is important to mention these two indirect approaches. One is that they both allow an explicit (albeit indirect) take on the net benefits from coordinated fiscal policy. The second is that there are meta-regression analyses for each of them which would provide a head start in carrying out a fast and time-constrained assessment of this question. Because we are here operating under these strict time and resource constraints, we choose meta-regression analysis as a transparent and effective way to addressing the question of estimating the benefits from fiscal policy coordination. Future work should return to these possibilities and contrast the findings they generate with other existing estimates.

The direct approach is the one we favour here and it focuses on fiscal rules and fiscal multipliers. These two issues are the center of current attention and discussions. Fiscal rules are (usually numerical) guidelines set by the government to constrain its own fiscal policy decisions on spending and taxation, while fiscal multipliers refer to an estimate of the effect an increase or a decrease in government spending has on overall economic activity, that is, on GDP. The literature on both areas is vast and they have both been the subject of meta-regression analyses.

The multiplier literature is well established (Ramey 2019, Ramey and Zubairy 2018), but the available results for the case of fiscal rules needs to be adapted to the case at hand. Once the fiscal rules part is estimated then we can use the lessons from the fiscal multiplier part to generate a precise estimate of the costs in annual GDP terms of a lack of credible and effective EU fiscal framework, and more specifically, of fiscal policy coordination.

Hlavacek and Ismayilov (2022) provide arguably the most up-to-date meta-regression analysis of the body of econometric evidence on the fiscal multiplier. They assemble of a data base with more than 3200 fiscal multiplier estimates from 132 studies. Their meta-regression analysis exploit several linear and non-linear models as well as a bayesian averaging model to investigate heterogeneity effects. Their results suggest that the fiscal multiplier is significantly less than one and, more precisely, in the 0.75-0.82 range. One important contribution of this study to the fiscal policy literature is disentangling the existence of selection publication bias in the literature and these authors conclude that despite its small magnitude, publication bias is present and significant. This last finding contrast starkly with the conclusion from a range of other recent meta-analyses: Gechert (2015), Gechert and Rannenberg (2018), and Asatryan et al (2020) find either no evidence or weak support for publication bias, albeit they mostly agree on the range of estimated effects.

Before commenting on the fiscal rules literature, it is important to clarify the possible use of these fiscal multiplier results in the present context. The fiscal multiplier literature is very rich and well-established but, from our relatively narrow point of view, suffer a crucial drawback: it seldom if at all examines the effect of fiscal rules, national or supra-national, as a mediating factor. This may be driven by the belief that the effectiveness of government intervention actions, regarding spending and taxes, measured in terms of changes in output is unrelated to the rationale, policy and political mechanics behind the policy decision. In short, the belief may be that once government decides to change policy by a certain amount, the effect on output (the multiplier) is unaffected by the way the government arrives at or makes this decision. Hlavacek and Ismayilov (2022) provide arguably the most extensive set of characteristics of the estimated effects among available studies, and they do not report whether or not fiscal rules of any kind are accounted for. Future work that could benefit from more time and resources would do well in further investigating this possibility (although
please note that our preliminary analysis suggests that the estimated effects seldom account explicitly for fiscal rules which, although does not totally invalidate the possibility of this approach, makes it much more time consuming and potentially more arbitrary). This has led us to focus on fiscal rules.

**Fiscal rules** are explicit constraints on a government’s fiscal policy in the sense that they involve the establishment of numerical limits (floors or ceilings) on one or more public finance aggregates such as government expenditures, revenues, budget balance or public debt. The theoretical justification for fiscal rules has a deep and long history in macroeconomics starting arguably with the seminal paper on rules versus discretion by Nobel-prize winners Kydland and Prescott (1977). The ensuing literature has been reviewed by Stokey (2002) and applied to fiscal policy by among others Fatás and Mihov (2003). The main broad reasons for the introduction of fiscal rules are to diminish discretion, increase the credibility and effectiveness of macroeconomic stabilisation policy, and improve the sustainability of public finances. A rules-based approach to fiscal policy entail compliance with quantitative limits on national, regional or local government deficits and debt as part of membership in a monetary union. Indeed, the 1992 Maastricht Treaty established inter alia (a) two fiscal policy rules (annual budget deficits of not more than 3 percent of GDP and a 60 percent limit on the debt to GDP ratio), (b) that exception to these rules granted only when faced with a downturn of at least 2 percent of GDP, and (c) that countries violating these limits would be subject to an excessive deficit procedure (Bilbiie et al. 2021).

Crucially, fiscal rules imply coordinated fiscal policies if and when these rules are (a) properly designed, (b) well supported, (c) accepted democratically, and (d) clearly enforced. The latter three are very important qualifications that matter even more when we are considering countries that are members of a monetary union. The design of fiscal rules has been dramatically affected by the global financial crisis to the point that the IMF separates rules before and after the crisis by denoting them as “first-” and “second-generation” fiscal rules, respectively (Eyraud et al 2018). Before the crisis, fiscal rules aimed at combining simplicity and flexibility, with very little emphasis on enforceability. Flexibility has generated difficulties in enforcement and limited the rule’s ability to anchor expectations of debt sustainability, while simplicity led enforcement and monitoring procedures to be relatively underdeveloped. The emphasis on enforcement is the hallmark of the so-called second-generation fiscal rules. The IMF authors also note that “Originating in Europe, second-generation fiscal rules have spread worldwide” (Eyraud et al 2018 p. 10).

**Properly designed fiscal rules** could be effective, even when compliance is not perfect. Caselli and Wingender (2021) focus on EU countries and find that the Maastricht fiscal criterion of the 3 percent deficit ceiling increases the number of observations around the 3% threshold by 20 percent, while significantly reducing the occurrence of both large government deficits and surpluses. Notice that these estimates are pre-covid, pre-war in Ukraine and pre-return of inflation and their update would be most welcome to check whether they are still valid and if they had changed, by how much they have done so. They also applied to a specific time period, and more long-term analysis need to be done to confirm their robustness. Ardanaz et al. (2021) study fiscal rule design for a larger sample of 75 developed and developing countries over the period from 1990 to 2018 focusing on the important context of public investment behaviour during fiscal consolidations. They argue that fiscal rule design is key and point out flexibility as the main feature: flexibility is defined as the inclusion in the rule book of mechanisms to accommodate exogenous shocks and may involve cyclically adjusted fiscal targets, well-defined escape clauses, and differential treatment of investment expenditures. All these have the added complication that they are difficult to communicate and implement. An important consideration in this case is that this flexibility may come at the cost of increasing the complexity of the framework. They show that flexible rules protect public investment during consolidation episodes. The authors do not consider the implications of sufficient budgetary capacity but it can play a role here. They find that “in countries without flexible fiscal rules (which include both countries without fiscal rules, and countries with rigid fiscal rules), a
fiscal consolidation episode equivalent to at least 2 percent of GDP is associated with an average 10 percent reduction in capital expenditures. Instead, in countries where the fiscal rule includes flexibility features, the ensuing decline in investment is less than 2 percent, and not statistically significant.” (Ardanaz et al. 2021 p.3).

The second qualification we raised above refers to fiscal rules being well supported. What we mean by well supported is that rules are backed by institutions. Indeed, a fiscal framework can be simplistically defined as a set of rules plus a set of institutions. How well rules and institutions fit, or work together, will be a key determinant of fiscal outcomes. Indeed, one can use this simple idea to understand the very history of the EU fiscal framework as, according to Delivorias (2021), the emphasis on rules since the outset has recently been supplemented with attention to fiscal institutions, first at the national level with the Fiscal Compact, and later on at the supranational level with the establishment of the European Fiscal Board. The role of institutions goes well beyond the effective enforcement of the rules and should include, among other things, monitoring, coordination, and learning.

Figure 1 – Numerical compliance with the rules of the SGP.

![Figure 1 – Numerical compliance with the rules of the SGP.](image)

Notes: 'Deficit rule': A country is considered compliant if, (i) the budget balance of the general government is equal or larger than -3% of GDP or, (ii) in case the -3% of GDP threshold is breached, the deviation remains small (maximum 0.5% of GDP) and limited to one year. ‘Debt rule’: A country is considered compliant if the debt-to-GDP ratio is below 60% of GDP or if the excess above 60% of GDP has declined by 1/20 on average over the past three years. ‘Structural balance rule’: A country is considered compliant if the structural budget balance of the general government is at or above the medium-term objective (MTO) or, the annual improvement of the structural budget balance is equal or higher than 0.5% of GDP. ‘Expenditure benchmark rule’: A country is considered complaint if the annual rate of growth of primary government expenditure, net of discretionary revenue measures and one-offs, is at or below the ten-year average of the nominal rate of potential output growth minus the convergence margin necessary to ensure an adjustment of the structural budget deficit of the general government in line with the structural balance rule.

Source: Larch and Malzubris (2022).

Evidence on the role of fiscal institutions is starting to appear. Căpraru et al (2022) provide evidence on whether independent fiscal institutions lead to better fiscal outcomes in the European Union. Examining the period from 2000 to 2019, they find that independent fiscal institutions have had a positive and significant effect on budget balances (i.e., smaller government budget deficits) as well
As on compliance with fiscal rules. Interestingly, they also document that when rules are judged to be not well-designed, institutions have a weaker effect. These conclusions hold for euro-area vs. non-euro-area members and also for whether systemic and banking crises have occurred. One interesting result on institutional learning refers to the finding that independent fiscal institutions seem to play a larger role in countries that established these monitoring bodies before 2013, that is, that are older and have operated for longer. There are important lessons and implications to be drawn (and agreed upon) of such findings at the EU level.

The third qualification we raise refers to fiscal rules being clearly enforced. This requires less explanation as the rules are as good as the extent of compliance with them and their enforcement, which of course includes the (a priori agreed upon) consequences of deviations from them. The figure 1 above, from the compliance tracker of the European Fiscal Board Secretariat, provides a quantitative overview of compliance with SGP rules over time. As it can be seen, the Board indicator suggest compliance decreases in crisis situations such as the global financial crisis circa 2009 and the covid pandemic more recently.

The issue of compliance has been subjected to further analysis recently. Reuter (2019) studies econometrically when and why do EU members states break their fiscal rules focusing on the period from 1995 to 2015. Notice that the focus is not on supranational rules, but exclusively on national ones. Reuter examines specific fiscal rule characteristics and their fiscal frameworks, as well as their political, (socio-)economic and supranational environments. He finds that monitoring and enforcement institutions (issuing real-time alerts) are significantly associated with a higher probability of compliance and that compliance with rules constraining stock rather than flow variables and set out in coalitional agreements is significantly higher. Yet, the economic environment, business cycles, and forecast errors are not found to play significant roles explaining compliance with fiscal rules.

Enforcement is of course closely related to compliance. Larch et al (2021) provide evidence on the enforcement of fiscal rules in the EU following the 2012 Fiscal Compact. Based on a survey of national independent fiscal institutions, they examine the correction mechanism, which is the core of the Fiscal Compact. They find that better compliance tend to be associated with a superior design of the correction mechanism, higher government efficiency and a stronger media presence of independent fiscal institutions. They also find that surprisingly many countries have linked the trigger of the correction mechanism to formal decisions at the EU level rather than to independent assessors at the national level.
3. A brief update on recent reform proposals

There are two important concerns regarding reform proposals. One is their rapidly growing number (for instance, the IMF just came out with a full reform proposal weeks ago) and the fact that many of these proposals have elements for which we do not have the previous history and the past experience that can assist us in precisely evaluating their costs and benefits. These are important considerations to keep in mind.

The objective of the EU Fiscal Framework is to coordinate and ensure surveillance of the fiscal policies of the Member States. In response to the sovereign debt crisis, some reforms in the framework were carried out. Chiefly, the ‘Six Pack’ amending the Stability and Growth Pact (SGP), the Treaty on Stability, Coordination and Governance in the Economic and Monetary Union (which included the Fiscal Compact) and the ‘Two Pack’ reform that focused on national draft budgetary plans. Other important components of the EU Fiscal Framework coordination are the European Semester, the MIP and recently, in addition to the support by the MFF, the Next Generation EU (NGEU). A technical assistance support was also created and reinforced recently. Before the Covid emergency a number of reforms were proposed and discussed (Pisani-Ferry and Zettelmeyer 2019) but with Covid crisis came the suspension of the SGP rules which has open a wider space for the discussion of these reform proposals.

One important proposal from the European Commission (2017) highlights the need for tougher coordination. The concern is that enforcement and implementation of the objectives of the SGP (Stability and growth pact), MIP (Macroeconomic Imbalance Procedure) and Semester, operation on the market to ensure EU financing, in particular as part of NextGenerationEU (NGEU) and the European Stability Mechanism (ESM) are all scattered under different institutional arrangements. This lack of coordination diminish their relative effectiveness and can prove costly in time of crisis. The issue of further institutional build-up is relevant here as a way of achieving a more integrated Economic and Fiscal Union with the view that the idea of a euro area Treasury, a euro area budget, and an European Monetary Fund are thought of as important directions to be considered at a later stage of the deepening of Economic and Monetary Union, within the EU framework if they can help anchoring the democratic accountability of euro area institutions.

The IMF has recently proposed a three-pronged programme of reform of the EU Fiscal Framework. It is innovative in that it aims at strengthening both fiscal rules and fiscal institutions. It is centered on fiscal rules, national fiscal institutions and EU fiscal capacity. On fiscal rules, the IMF proposes that the current 3 percent deficit and 60 percent debt values remain, but linked to fiscal risks that are to be identified by debt sustainability analysis using a commonly agreed methodology, developed by a new and independent European Fiscal Council. It is unclear whether this solve the issue of non-compliant member states or any issue related to effectively implementing reforms. For member states with greater identified fiscal risks, convergence is to take place over three to five years, while other member states would have more flexibility.

Regarding national fiscal institutions, the Fund suggests all member states to enact medium-term fiscal frameworks and set multi-year annual spending caps consistent with their overall balance anchor over the period with independent national fiscal councils playing a stronger role. In the IMF view, the Commission would continue to play its key surveillance role and the Economic and Financial Committee (EFC) would serve as the central node for a network of national fiscal councils. It remains to be discussed and agreed upon, of course, what kind of relationship it is to have with the national fiscal boards. The third pillar of the IMF reform proposal regards EU fiscal capacity. The idea here is that this would be established to achieve two key roles: improving macroeconomic stabilization, especially when monetary policy is operating at the effective lower bound, and allowing the provision of common public goods at the EU level, such as climate change and energy security infrastructure. The proposal includes a dedicated climate investment fund. The IMF argues
that this new proposal increases democratic accountability because it requires a reinforcing relationship between EU rules and national implementation, with greater domestic ownership of the rules and better alignment between country frameworks and EU rules.
4. A meta-regression analysis approach

In this project we propose to approximate the costs from the lack of effective fiscal framework by the extent of fiscal policy coordination and measure the latter by the effectiveness of fiscal rules. Our idea is to use meta-regression analysis to generate a transparent, rigorous and evidence-based estimates of the overall effects of fiscal rules on fiscal outcomes and on GDP, as well as to provide an understanding for the variation one observes in these estimated effects in their corresponding body of econometric evidence. Meta-regression analysis has developed and gained enormous popularity among economists of late because it is part of the growing concern about credibility, replicability and transparency that has permeated economics in the last decade or so (Brodeur et al 2020).

In this section we highlight and explain some basic features of meta-regression analysis, while in the next section we detail the search algorithm we use for selecting studies for our database, and in subsequent section we explain which dimensions of the effects (which explanatory variables for our meta-regressions) we decided to collected data about, measure and code.

Meta-analysis refers to a set of statistical methods for rigorously reviewing and evaluating a body of empirical evidence. When a large number of studies have been carried out on a given topic, combining their results in a systematic manner can provide additional strength, further insights and greater explanatory power than can the more informal, narrative discussions of individual results which is characteristic of traditional literature surveys. It can provide both for an overall estimate of the effect of interest (in our case, of the effects of fiscal rules) and for a detailed understanding of the features of the underlying estimates that are more or less responsible for the observed variation of the estimated effects themselves. Stanley and Doucouliagos (2012) remains the main textbook on meta-regression analysis and its applications to economics.

Meta-regression analysis goes beyond what is often called vote-counting or head-counting, in which inference that a specific result occurs in a majority of cases is usually taken as evidence of the significance and magnitude of the “true” effect. Head-counting is clearly neither systematic nor statistically powerful in drawing conclusions about summarising the findings from a body of evidence and understanding the main reasons for its variations. When the number of existing studies is very large, head-counting is even more likely to support misleading conclusions because the Type-II errors of the individual studies do not cancel out but are said to add up instead.

The typical study of the effects of fiscal rules on fiscal outcomes takes the form:

\[ g = \alpha + \beta R + \delta PEC + \varphi IC + \upsilon Inst + \varepsilon \]  

where \( g \) is a fiscal outcome (such as public debt, deficit, revenues or expenditures), \( R \) is a measure of the type of fiscal rule, PEC refers to the set of political and economic controls that condition the relevant estimated effect, IC is a measure of initial conditions (macroeconomic and structural distortions at the beginning of the period), Inst refers to institutional features accounted for, and \( \varepsilon \) is the error term. The coefficient on \( R \) represents the partial effect of fiscal rules on fiscal outcomes, ceteris paribus, and its size, sign and level of statistical significance are of central interest here.

The meta-regression equations we estimate take the basic form:

\[ Y_i = \beta_0 + \sum_{k=1}^{K} \beta_k Z_{ki} + \varepsilon_i \]  

where \( Y_i \) is the number of estimates of the effects of the fiscal rules we collect from the empirical literature, \( Z_{ki} \) is a vector of
$K$ study characteristics (that include econometric identification and specification choices; described in detail below), and $\beta_k$ is a vector of meta-regression coefficients which reflect the effect of particular characteristics of the original study on the reform effect. It is common practice to use estimated coefficients or the results of statistical tests (e.g., t-statistics) as the summary measure. One benefit from using the estimated coefficients is that meta-regression analysis generates a quality-adjusted overall or average estimate of the effect of interest (while the use of say t-statistics instead generate a view of the overall statistical strength of the relationship of interest).

The multivariate techniques stressing the magnitude of the effect or the “effect size” were first developed by Glass (1976). He defines the effect size as the average outcome of the treatment group minus the average outcome of the control group, divided by the standard deviation of the control group. A related development refers to estimating the “average” effect in order to assess its practical and statistical significance and to explain its variation among studies.

One important issue to be dealt with concerns the so-called publication bias problem. This refers to the tendency of academic journals to favour studies that report statistically significant results. One potential difficulty is the implicit assumption that working papers are not published (and may never be) because they do not contain a sufficient number of statistically significant results.
5. MRA algorithm: selection of studies

It is extremely important for the validity of a meta-regression analysis that we apply a well-defined and reproducible algorithm that can guide the literature search and the coding for the following econometric modelling. Here we follow closely the guidelines recently updated in Havránek et al. (2020).

The basis for our literature search was the EconLit database. This database covers all economic journals indexed by the American Economic Association. It provides an extensive and comprehensive collection of the economic literature and serves as a key reference in the academic research. We have also used Google Scholar, which might give some interesting complements, but the emphasis was naturally given to EconLit.

The keywords we used to guide our literature search were the following: “fiscal rule,” “fiscal restraint,” “debt brake,” “debt rule,” “budget rule,” and “deficit rule.” The literature search was carried out on July 18th, 2022 and saved. In raw figures, this resulted in a total of about 2,401 entries in EconLit (2,655 if we do not specify publication language as English).

We then filtered out all duplicate search results and excluded the papers that were not available in English. Furthermore, notice that we did not limit the time frame of the search so that all available entries that fulfil the criteria above were collected in the first instance.

In order to generate a sample of comparable studies, we follow Heinemann et al (2018) in applying a common definition of a fiscal rule, namely, that “fiscal rules are characterised as a permanent numerical constraint on fiscal policy defined in terms of an indicator of overall fiscal performance such as the government deficit, debt or expenditure.”

Finally, we limit our analysis to studies with public finance indicators such as expenditures, revenues, debt, or deficit as dependent variables. In other words, the large literature testing the impact of fiscal rules on financial market indicators or the structure of the budget are excluded.

This algorithm yields an initial grand total of more than 100 studies for coding. These were then assessed in terms of whether they contain the range of detailed information required for the meta-regression analysis. In assessing and coding these studies, we first assess their relevance with respect to the guidelines defined above as well as the clear reporting or availability of the necessary information to make judgements about the modelling strategy and the statistical aspects of the main estimates of interest. For instance, in light of the increasing use of the local projection method and the preference for reporting results in graphical instead of tabular form (for instance, by showing impulse response functions) a large number of these econometric results cannot be used in our empirical analysis. I add that we have started looking into the working paper versions of these journal articles contain the tabular results in their appendices. Although this seems to be the case for many of these papers, the fact that the reported estimates tend to differ from working paper to published article indicates that the difficulty and the complexities of such a task. For this report, we have assembled a dataset of 478 estimates of the effects of fiscal rules.
6. Data collection and variable coding

As noted above, in order to run the meta-regression analysis we need information on the estimated effect of fiscal rules on the range of fiscal outcomes. Moreover, in order to throw light on the reasons for the variation in these effects we need to quantify the range of study and estimate characteristics that we believe may play a role in explaining this variation.

Before proceeding we need to mention that we include the complete set of estimations from each study in our sample. This is a choice we make recognising that empirical studies include, in addition to their central or preferred specification, a large number of additional estimation specifications with the goal of contrasting them with “better,” preferred or richer ones. We decide against a selective inclusion of the preferred specification because it introduces an element of arbitrariness or uncertainty as very often authors do not explicitly identify their central estimate. This choice is easier to justify once we highlight that our meta-analysis relies on a rich set of coded dimensions and thus can account for this heterogeneity of specifications across and within studies.

With these objectives and explanations in mind, here we will focus on the following aspects:

i. the classification of the dependent variable,
ii. the type of the fiscal rule,
iii. the administrative level the estimated effect refers to,
iv. the broad set of additional conditioning or control variables including economic and political features,
v. a range of indicators that allow us to check for potential publication bias,
vi. features of the econometric specification,
vii. econometric identification strategies, and
viii. country and time coverage.

Let us explain each one of these groups in more detail.

Let us turn to the variables we are coding for our meta-regression analysis. First, there is large heterogeneity with respect to the dependent variable in the existing literature. Although most use the primary deficit as dependent variable, many other studies use either expenditures or revenues. Another source of variation to take into account is that the coding of the dependent variable sometimes differs in the sense that they can be expressed as a share of GDP, or in per capita, or less often absolute terms. This said, we will capture these choices through a set of dummy variables indicating whether the dependent variable is debt, the dependent variable is secondary deficit, the dependent variable is primary deficit, the dependent variable is secondary expenditure (including subcategories of spending), dependent variable is primary expenditure, or the dependent variable is revenue (including subcategories such as tax revenue or social security contributions.)

Identifying the type of fiscal rule under consideration is of course crucial in our analysis. We will use a set of dummy variables to capture whether the fiscal rule being used is a deficit rule, whether it is a debt rule, whether it is an expenditure rule, or whether it is a revenue rule. Note that we also find considerable heterogeneity regarding the codification of fiscal rules. Some estimated effects capture the impact of fiscal rules through dummy, discrete, or continuous variables. In light of such differences, comparing marginal effects of fiscal rules across studies is not possible but the range of characteristics being picked up will assist in making clear along which dimensions the estimated effects differ.

The third set of features we collect data for are the administrative level to which the estimated effect of fiscal rules refers to. Here we will focus on three main possibilities: whether they refer to the national level, to the state (or province) level, or to municipal level.
The fourth set of dimensions we account for are the control or conditioning variables that are used in the estimation of the coefficient of interest (on fiscal rules on fiscal outcomes). Unsurprisingly, studies vary hugely on these choices and we need to recognise this by identifying the main variables that are used (because of their theoretical importance, previous use, or availability) and allowing an additional residual category to reflect the other less common factors accounted for. In this light, we generated a set of dummy variables that reflect whether the used control variables include whether it includes, government stability indicators (e.g., tenure of the government), whether it includes variables indicating election years (this of course allow us to say something about the political budget cycles mechanism that as discussed above is deemed here as indirect but still of interest), whether they include debt dimensions, whether they cover preferences and cultural proxies (like language dummies, regional dummies, or fiscal preferences dummies), whether they include dependency ratio indicators (such as the share of working in total population), whether control variables include the output gap (although we must recognise that its usefulness has reduced recently), whether they include GDP growth indicators, whether they include trade openness indicators, whether they include indicators for budgetary rules, and whether they include indicators for supranational fiscal rule, such as the stability and growth pact.

The presence and extent of a publication bias is a well-documented concern in social sciences (e.g., Franco et al., 2014). If statistically significant empirical findings have a higher probability of being accepted for publication, the estimates that end up being published will give a biased or misleading indication about the true value of the parameter of interest. They can also reflect ideological preferences from authors or current fashions or professional preferences. The reason why publication bias may emerge have two main avenues. On the one hand, authors may avoid writing (circulating and submitting) papers that rest only on statistically insignificant findings. This would comprise a publication bias that emerge on the submission side. On the other hand, journal editors may be more inclined to accept papers with statistically significant results (which can be called acceptance bias). Although both are possibilities, only the latter can be credibly capture empirically and this is usually done by comparing systematic differences in levels of reported statistical significance for working papers and journal articles. Therefore, we follow the meta-regression analysis literature and code whether the estimated effects come from a working paper or from a refereed journal.

The sixth set of dimensions we account for are the features of the econometric specification used in the estimation of the coefficient of interest of the effect of fiscal rules on fiscal outcomes. We code a set of dummy variables capturing whether the relevant econometric specification is dynamic (in the strict sense of including in the specification the lagged dependent variable), whether the relevant econometric specification includes time fixed-effects, whether the econometric specification reports normal or plain standard errors, whether the relevant econometric specification reports robust standard errors, whether the relevant econometric specification reports clustered standard errors, or whether the relevant econometric specification includes bootstrapped standard errors.

Another important set of characteristics to understand the observed variation in the estimated effects of fiscal rules refer to identification strategies. Many studies neglect or only deal insufficiently with the potential presence of omitted variables bias, endogeneity or reversed causality. Some try to address these concerns, but far from all. In order to account for these differences in identification approaches, we use four different dummy variables capturing different dimensions of these strategies. We code whether the estimated effect of fiscal rules is obtained in a specification that contains a set of relevant fixed-effects, whether it includes preferences and cultural proxies (such as language, regional, or fiscal preferences dummies), whether it is obtained using an instrumental variables approach (2SLS), and whether it is obtained using a quasi-experimental method, such as matching.
The last set of study characteristics we collect data for and code regards **country and time coverage**. Time coverage refers to the period underlying the estimate at hand (for instance, is the effect calculated for the years from say 1971 to say 2003?) As for country coverage, we generated dummy variables for whether country coverage comprises states that belong to the European Union (at the time of writing), whether country coverage comprises states that belong to the Euro area, whether country coverage comprises states that belong to the OECD, whether country coverage comprises individual countries that are not members of the above groups.

For this report, we have put together a dataset of 478 estimates of the effects of fiscal rules. Table 1 below displays the basic statistics of the variables that we ended up using in the econometric analysis. It covers basically three groups or types of variables. The dependent variable in our meta-regression analysis exercise is the estimated effect of the presence of a fiscal rule in terms of either primary or secondary deficit as a percentage of GDP. It is shown that the average value of such estimated effect in the literature is about -0.9 with a rather large standard deviation of 3.4. These are measure in percentage points of GDP: -0.9 should be read as the average raw effect of fiscal rules is to decrease public deficit in 0.9 percent of GDP. The key word here is raw as this average does not adjust or accounts for the type of deficit nor the characteristics or qualities of the underlying econometric study it comes from. The next variable of import is the type of deficit at paly and the table reveals that in our data the vast majority refers to primary deficit (as only about 5% of the estimates refer to secondary deficit instead; that is the meaning of the 0.04 figure). Most of the estimates focus on a whole range of fiscal rules, as indicated by the large prevalence of debt, expenditure and revenue rules. Finally, only about 5% of the estimates come from estimations that are based on state (or province) level data, as opposed to country level data.

Regarding the selection of control variables that the studies tend to employ, as it can be seen in Table 1. that only a small share of studies control for overall macroeconomic conditions (that is in addition to public deficits) as few of the estimates originate from specifications that include an unemployment measure. The reasoning often provided for this choice is the extensive presence of other macro variables, such as the debt level (present in more than 90% of the specifications) and to a lesser extent overall levels of public spending. Because this literature is so concerned about or influence by political budget cycles issues (as discussed above), most available estimates control for variables that reflect these concerns. Although clearly not the main interest in this report, here we selected just a few of these variables so as to account for these omnipresent concerns of the underlying literature: election year, the role of government stability, and of government orientation. It is crucial to stress that here we are not interested in singling out any one of the possible government ideological orientations and instead we just capture whether or not the underlying estimated effect of the fiscal rule account for such a control variable because it is widely used in the literature. It should be added that there are well-known difficulties in measuring such variable in particular because governments are often the result of a coalition of various political groups and, furthermore, operate within a context of other democratic state institutions.

Finally, we have also coded a representative range of features of the specification underlying the estimated effects we are focusing on. We take into account whether or not country and time fixed effects are used, whether dummy variables for euro area and OECD membership is used, and whether the econometric methodology used is differences-in-differences.
Table 1 – Basic statistics.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Number of observations</th>
<th>mean</th>
<th>Standard deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Estimated effect of fiscal rules on deficit (percentage point)</td>
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<td>-0.98616</td>
<td>3.460057</td>
</tr>
<tr>
<td>Type of dependent variable (Secondary deficit)</td>
<td>478</td>
<td>0.043933</td>
<td>0.205161</td>
</tr>
<tr>
<td>Type of fiscal rule (Debt)</td>
<td>478</td>
<td>0.541841</td>
<td>0.498768</td>
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<tr>
<td>Type of fiscal rule (Expenditure)</td>
<td>478</td>
<td>0.546025</td>
<td>0.498399</td>
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<tr>
<td>Type of fiscal rule (Revenue)</td>
<td>478</td>
<td>0.317992</td>
<td>0.466184</td>
</tr>
<tr>
<td>Administrative level data (State)</td>
<td>478</td>
<td>0.050209</td>
<td>0.218605</td>
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<tr>
<td>Control variables (Orientation)</td>
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<td>0.501101</td>
<td>0.500524</td>
</tr>
<tr>
<td>Control variables (Stability govt)</td>
<td>478</td>
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<td>0.499401</td>
</tr>
<tr>
<td>Control variables (Election year)</td>
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<td>Control variables (Debt level)</td>
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<td>0.922594</td>
<td>0.267514</td>
</tr>
<tr>
<td>Control variables (Spending level)</td>
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<td>0.466527</td>
<td>0.499401</td>
</tr>
<tr>
<td>Control variables (Unemployment)</td>
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<td>Specification (Interaction)</td>
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</tr>
<tr>
<td>Specification (Time fixed effects)</td>
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<td>0.231098</td>
</tr>
<tr>
<td>Specification (Country fixed effects)</td>
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<td>0.079056</td>
</tr>
<tr>
<td>Specification (Diff in diff)</td>
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</tr>
<tr>
<td>Specification (euro area)</td>
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<tr>
<td>Specification (oecd)</td>
<td>478</td>
<td>0.085774</td>
<td>0.280324</td>
</tr>
</tbody>
</table>
7. Estimating the potential efficiency gains from better coordination of fiscal policy in the EU

Using the meta regression analysis methodology described above and the data set discussed in the previous section, in this section we present our baseline estimates for potential efficiency gains from better coordination of fiscal policy under the understanding that the nature and extent of such coordination are a function of the presence of a fiscal rule. Our econometric results are reported in Tables 2., 3. and 4. below. The “baseline effect” is the coefficient we are most interested in. It captures the estimated reductions in the public deficit as a percentage of GDP due to the presence of a fiscal rule, once we control for a series of important features and characteristics of the related underlying econometric specifications.

We start this discussion with Table 2., which shows the range of baseline effects we obtain once we account for the type of fiscal rule, for whether the primary or secondary deficit is the relevant outcome variable, and for whether these effects are estimated at the national or state levels. There are two main conclusions from Table 2. The first is that most of these variables do not seem to exert a statistically significant effect on the estimated performance of fiscal rules. It is interesting to see that it is not important whether the fiscal rule in question focuses on debt, expenditure, revenue or deficit. The same can be said for whether the primary or secondary deficit is the relevant outcome variable of whether these effects are estimated at the national or state level. The magnitude of the estimated effect, however, is both economically rather large and relatively stable (around 4%) but always statistically insignificantly different from zero. The main lesson at this point is that this type of basic characteristics of the estimated effects do not generate a sufficiently precise estimate.

Table 2 – Random effects estimates.

(Independent variable is Fiscal Rule Effect)

<table>
<thead>
<tr>
<th></th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
<th>(5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baseline effect</td>
<td>-4.335</td>
<td>-4.217</td>
<td>-4.336</td>
<td>-4.368</td>
<td>-0.590</td>
</tr>
<tr>
<td></td>
<td>[3.912]</td>
<td>[3.447]</td>
<td>[3.562]</td>
<td>[3.680]</td>
<td>[3.744]</td>
</tr>
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<td>0.0299</td>
<td>0.0243</td>
<td>0.0247</td>
<td>0.0652</td>
</tr>
<tr>
<td>(Secondary deficit)</td>
<td>[0.859]</td>
<td>[0.860]</td>
<td>[0.858]</td>
<td>[0.859]</td>
<td>[0.859]</td>
</tr>
<tr>
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<td>-0.239</td>
<td>-0.140</td>
<td>-0.132</td>
<td></td>
</tr>
<tr>
<td>(Debt)</td>
<td>[0.194]</td>
<td>[0.194]</td>
<td>[0.287]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Type of fiscal rule</td>
<td>0.309</td>
<td>0.402</td>
<td>0.405</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Expenditure)</td>
<td>[0.196]</td>
<td>[0.280]</td>
<td>[0.281]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Type of fiscal rule</td>
<td>-0.181</td>
<td>-0.187</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Revenue)</td>
<td>[0.390]</td>
<td>[0.391]</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Administrative level data</td>
<td>10.10*</td>
<td></td>
<td></td>
<td></td>
<td>[6.094]</td>
</tr>
<tr>
<td>(State)</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Observations</td>
<td>478</td>
<td>478</td>
<td>478</td>
<td>478</td>
<td>478</td>
</tr>
</tbody>
</table>

Notes: Standard errors in brackets, *** p<0.01, ** p<0.05, * p<0.1

The addition of variables that reflect the type of controls often used in the underlying specifications dramatically change things as shown in Table 3. First and foremost, the estimated baseline effect remains relatively large but is now more often than not statistically significantly different from zero although it has also become rather unstable (ranging widely in range, sign and statistical
significance). The baseline effect we estimate is statistically insignificant only in column 1 but ranges quite a lot in value from 1.6% to a maximum of 6.2%. This seems to be driven by the choice of controls. The dimensions accounting for political budget cycle seem to make a big difference although they are also unstable. Accounting for government orientation seems to be important from a statistical point of view in columns 2 and 5, but not on the others. The stability of the government and presence of election year effects are perhaps slightly more stable but still gain and lose significance too easily.

Table 3 – Random effects estimates.

(Compliance variable Fiscal Rule Effect)

<table>
<thead>
<tr>
<th></th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
<th>(5)</th>
<th>(6)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baseline effect</td>
<td>-0.535</td>
<td>5.105***</td>
<td>5.895***</td>
<td>6.276***</td>
<td>4.465***</td>
<td>-1.610**</td>
</tr>
<tr>
<td></td>
<td>[5.800]</td>
<td>[0.738]</td>
<td>[0.735]</td>
<td>[0.984]</td>
<td>[1.180]</td>
<td>[0.805]</td>
</tr>
<tr>
<td>Type of dep variable</td>
<td>0.109</td>
<td>6.498***</td>
<td>7.096***</td>
<td>7.258***</td>
<td>8.886***</td>
<td>-0.00414</td>
</tr>
<tr>
<td>(Secondary deficit)</td>
<td>[0.859]</td>
<td>[0.924]</td>
<td>[0.908]</td>
<td>[0.950]</td>
<td>[1.116]</td>
<td>[0.841]</td>
</tr>
<tr>
<td>Type of fiscal rule</td>
<td>-0.141</td>
<td>1.252***</td>
<td>1.323***</td>
<td>1.296***</td>
<td>1.274***</td>
<td>-0.155</td>
</tr>
<tr>
<td>(Debt)</td>
<td>[0.287]</td>
<td>[0.426]</td>
<td>[0.415]</td>
<td>[0.418]</td>
<td>[0.415]</td>
<td>[0.286]</td>
</tr>
<tr>
<td>Type of fiscal rule</td>
<td>0.399</td>
<td>1.253***</td>
<td>1.187***</td>
<td>1.185***</td>
<td>1.150***</td>
<td>0.394</td>
</tr>
<tr>
<td>(Expenditure)</td>
<td>[0.280]</td>
<td>[0.423]</td>
<td>[0.413]</td>
<td>[0.413]</td>
<td>[0.410]</td>
<td>[0.279]</td>
</tr>
<tr>
<td>Type of fiscal rule</td>
<td>-0.180</td>
<td>-1.138**</td>
<td>1.624***</td>
<td>1.602***</td>
<td>1.603***</td>
<td>-0.169</td>
</tr>
<tr>
<td>(Revenue)</td>
<td>[0.389]</td>
<td>[0.578]</td>
<td>[0.571]</td>
<td>[0.573]</td>
<td>[0.569]</td>
<td>[0.388]</td>
</tr>
<tr>
<td>Administrative level data</td>
<td>-9.993</td>
<td>8.840***</td>
<td>6.205***</td>
<td>5.614***</td>
<td>13.32***</td>
<td>3.905*</td>
</tr>
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<td>(State)</td>
<td>[13.34]</td>
<td>[0.877]</td>
<td>[0.998]</td>
<td>[1.423]</td>
<td>[3.153]</td>
<td>[2.247]</td>
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<tr>
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<td>-0.286</td>
<td>4.903***</td>
<td>-2.411</td>
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<tr>
<td>(Orientation)</td>
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<td>[0.728]</td>
<td>[0.996]</td>
<td>[1.054]</td>
<td>[2.168]</td>
<td>[1.495]</td>
</tr>
<tr>
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<td>4.104***</td>
<td>3.843***</td>
<td>4.003***</td>
<td>-0.908</td>
<td></td>
</tr>
<tr>
<td>(Stability govt)</td>
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<td>[0.716]</td>
<td>[0.845]</td>
<td>[0.841]</td>
<td></td>
<td></td>
</tr>
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</tr>
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<td>[0.889]</td>
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<tr>
<td>(Debt level)</td>
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<td></td>
</tr>
<tr>
<td>Control variables</td>
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<tr>
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<td>478</td>
<td>478</td>
<td>478</td>
<td>478</td>
</tr>
</tbody>
</table>

Notes: Standard errors in brackets, *** p<0.01, ** p<0.05, * p<0.1
Table 4 presents our preferred estimates in the sense that they now cover a satisfactory range of study characteristics (by adding features of the econometric method underlying the estimated effects) and deliver a sensible range of baseline estimated effects that although is slightly bigger than that found in previous studies, seems to be sufficiently stable (especially when compared to its behaviour in the previous tables). This baseline estimated effects ranges from 1.3% in column 4 to 1.8% of GDP in column 1. These estimates are obtained once we enlarge the specification presented so far (which includes different types of control variables and fiscal rules) with characteristics of the econometric specifications used. More specifically these characteristics cover the use of time and country fixed effects, interactions, dummy variables for euro area and OECD membership, and for the choice of methodology (here captured by the choice of the difference-in-difference estimator). As shown in the table, not all of these factors are found to exert a stable and statistically significant effect but the baseline estimates are now much more stable than previously (that is, than controlling only for specification and types of fiscal rules).

In short, according to our preferred estimates in table 4, fiscal rules generate public deficit reductions of between 1.3% and 1.8% of GDP.
### Table 4 – Random effects estimates.

(Independent variable is Fiscal Rule Effect)

<table>
<thead>
<tr>
<th></th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
<th>(5)</th>
<th>(6)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baseline effect</td>
<td>-1.809**</td>
<td>-2.133**</td>
<td>-2.133***</td>
<td>-1.324*</td>
<td>-1.738**</td>
<td>-1.547**</td>
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<td></td>
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<td>[0.668]</td>
<td>[0.707]</td>
<td>[0.775]</td>
<td>[0.781]</td>
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<td>0.0307</td>
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<td></td>
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<td>[0.838]</td>
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<td>[0.655]</td>
<td>[0.657]</td>
<td>[0.656]</td>
</tr>
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<td>Type of fiscal rule (Debt)</td>
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<td>-0.118</td>
<td>-0.143</td>
<td>-0.151</td>
<td>-0.156</td>
</tr>
<tr>
<td></td>
<td>[0.285]</td>
<td>[0.285]</td>
<td>[0.225]</td>
<td>[0.223]</td>
<td>[0.223]</td>
<td>[0.222]</td>
</tr>
<tr>
<td>Type of fiscal rule (Expenditure)</td>
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<td>0.334</td>
<td>0.334</td>
<td>0.227</td>
<td>0.227</td>
<td>0.218</td>
</tr>
<tr>
<td></td>
<td>[0.277]</td>
<td>[0.278]</td>
<td>[0.219]</td>
<td>[0.220]</td>
<td>[0.219]</td>
<td>[0.219]</td>
</tr>
<tr>
<td>Type of fiscal rule (Revenue)</td>
<td>-0.284</td>
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<td>-0.263</td>
<td>-0.173</td>
<td>-0.163</td>
<td>-0.151</td>
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<tr>
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<td>[0.389]</td>
<td>[0.307]</td>
<td>[0.305]</td>
<td>[0.305]</td>
<td>[0.305]</td>
</tr>
<tr>
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<td>4.468**</td>
<td>3.344*</td>
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<td>-0.236</td>
</tr>
<tr>
<td></td>
<td>[2.238]</td>
<td>[2.340]</td>
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Notes: Standard errors in brackets, *** p<0.01, ** p<0.05, * p<0.1
8. Conclusions

The main innovation of this research report was to devise a method that was able to rigorously and transparently generate estimates of the costs of Non-Europe with special emphasis on the EU fiscal framework.

How to measure the cost of the lack of effective EU fiscal framework? This is a very complex question for a number of reasons. One is that the EU fiscal framework is unique in the world. No other group of countries has embarked in such a deep and extensive integration process. Second, the manner in which the EU fiscal framework developed or was constructed so far is also unique. It has involved a gradual process in which new institutions were created at various and different points in time to improve the effectiveness of an agreed-upon core set of fiscal rules. This gradual emergence of a new institutional set-up has at each stage generated a relatively new relationship between institutions and rules. That is, the character of the fiscal framework (understood basically and rules cum institutions) has also evolved over the last three decades or so. Third, one additional factor that increases the complexity of this research question is the fact that the covid pandemic has led to the suspension of the EU fiscal rules until 2023 and there is wide recognition that the framework is ripe for reform with a constant flow of new reform proposals coming to the fore. A fourth important reason is that the performance of the fiscal framework has been in broad terms judged as not entirely satisfactory. Fifth and finally, we must not lose sight that the policy environment has also changed considerably in the last three decades which hugely complicates a careful econometric evaluation of the framework.

With these important concerns in mind, this report has identified, devised, proposed, implemented and applied a new approach to generate robust estimates of the cost of a lack of effective EU fiscal framework, or more specifically, of fiscal policy coordination in the EU. One important limitation of this work was its short time frame of a total of four months from design to execution to final report. The final report above argues for a conceptual framework centred on a meta-regression analysis approach, it explains the basic intuition and technical details underpinning meta-regression analysis, introduces the data collected for its implementation, and discusses our main estimation results. According to our central estimates, fiscal rules by themselves (that is, not interacted with fiscal institutions for example) can be shown to yield public deficit reductions of between 1.8% and 1.3% of GDP.
REFERENCES

On the Effects of Fiscal Rules (for the meta-regression analysis database)


Annex – Assessment of the EU fiscal framework: Updating estimates of the cost of non-Europe


Other references


Without effective coordination of fiscal policies and active supervision of external and internal imbalances, significant negative spillover effects can occur between Member States participating in economic and monetary union and across the EU more widely. A credible fiscal framework and related rules should therefore be designed and enforced, to ensure that Member States pursue sound public finance policies that keep deficits within the range where financing can be secured. This approach, coordinated with an appropriate monetary policy, could also limit the risk of persistently higher inflation, instability, and the materialisation of macro-financial risks.

Confirming that there is still a need for better fiscal policy coordination among Member States and for a deeper EU fiscal framework, this study emphasises that these two things could lead to substantial benefits. More specifically, based on the results of a meta-regression analysis, estimates indicate that well-designed fiscal rules could generate deficit reduction of between 1.8% and 1.3% of gross domestic product. This would correspond to potential additional fiscal space of approximately €220 billion per year for the EU as whole.