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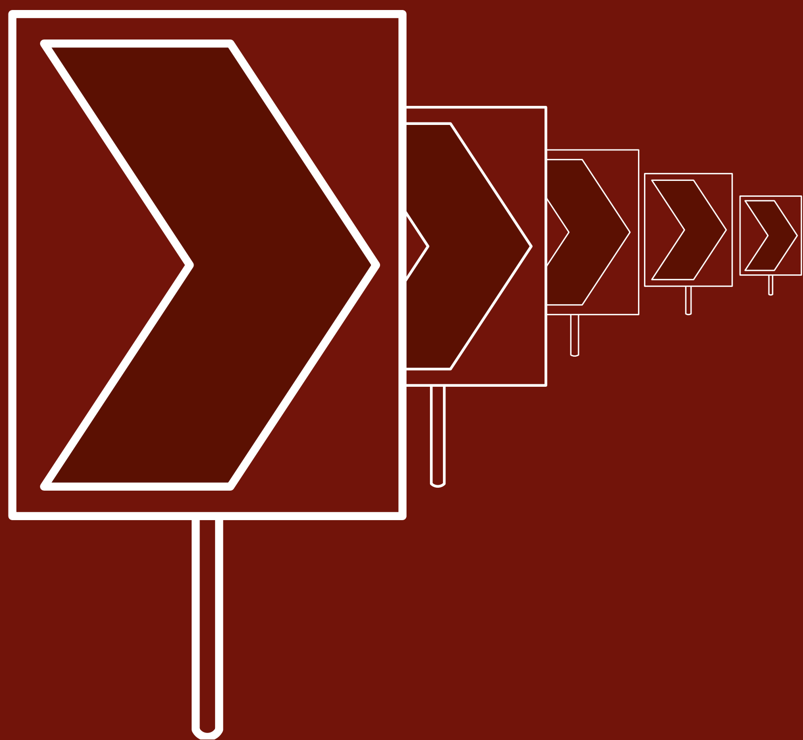

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Europe is facing a whole new set of challenges: The cost of living is rising, war is on our doorstep, and an environmental turnaround is needed. How should the EU framework for economic governance change to make Europe stronger, more sustainable and more resilient? The European Commission has recently developed guidelines for a reformed economic governance framework. In March 2023, the European Council endorsed these guidelines. They aim at strengthening national ownership and facilitating the enforcement of projects. At the same time, they are intended to enable strategic investments and set a framework to reduce the high level of public debt. However, such economic policy coordination efforts at the EU level and the individual governance reform proposals open new debates. To what extent do they correspond to the real needs and interests of the EU? And do they take into account country-specific economic, structural and social problems of the member states?

The articles in this issue of EconPol Forum highlight important aspects of a reform of the EU's economic governance that will help to make the public finance and the economy of the EU and its member states healthier and more resilient in the future. They critically examine the EU's latest reform proposal and shed light on ways to make policies and measures more effective.

In "Economic Policies and Their Impacts," the authors show how research and development tax credits encourage innovation in the private sector. "Institutions Around the World" looks at the income and tax burdens of the middle class in Europe. Finally, in "Big-Data-Based Economic Insights," we examine narratives about immigrants in German newspapers.

POLICY DEBATE OF THE HOUR

Reform of the EU Economic Governance – Why and How?

ECONOMIC POLICY AND ITS IMPACT

INSTITUTIONS ACROSS THE WORLD

BIG-DATA-BASED ECONOMIC INSIGHTS

Introduction to the Issue on

Reform of the EU Economic Governance – Why and How?

Chang Woon Nam

Rising cost-of-living, climate emergency and war are just some of the more pressing challenges Europe is now facing. How should the EU's economic governance framework be modified to make Europe stronger, more sustainable, and more resilient to meet these challenges? First, higher debt and deficits across Europe and the need for public investment to achieve the EU's long-term goals, such as building a digital and green economy, raise questions about the current shape of the Stability and Growth Pact (SGP). Second, the European Semester appears in need of adjustment to better accommodate the implementation and monitoring of national recovery and resilience plans. Third, the pandemic and war have highlighted not only the importance of public safety and security, but also that of high-quality social services to address inequalities and achieve better health outcomes. Social and strategic investments should therefore be properly reflected in the EU's economic framework.

In this context, the EU has revised its economic governance framework: in November 2022, the European Commission developed orientations for a reformed framework, a debate on which had been launched in 2020. These orientations aim primarily to make the framework simpler, more transparent, and more effective, strengthening national ownership and improving enforcement, while enabling strategic investments together with a realistic, gradual, and sustainable reduction of high public debt. In March 2023, the European Council agreed on a reform of the EU economic governance framework and endorsed these guidelines for reform. However, such economic policy coordination efforts at the EU level and the individual governance reform policy proposals open up new debates and create the additional need to assess to what extent they meet the real needs and interests of the EU as well as those of its member states, taking into account their country-specific economic, structural and social realities.

This issue of EconPol Forum contains eleven articles that highlight important aspects related to the reasons and opportunities for reforming the EU's economic governance. They examine the key challenges facing the EU and its member states and critically assess the EU's recent reform proposal. They also suggest policies and measures to make the public finances and economies of the EU and its member states healthier and more resilient.

According to *Clemens Fuest*, there is a tension between the idea of European fiscal supervision and the fact that national parliaments are ultimately responsible for fiscal policy. Market discipline is necessary to ensure that the costs of unsustainable fiscal policies are borne primarily by the countries pursuing such policies and by their creditors. However, this is hampered by, among other things, financial regulations that allow banks to hold large amounts of national government bonds. As long as this is the case, sovereign debt restructuring poses a threat to financial stability, undermines the credibility of the no-bailout clause and hinders the functioning of market discipline.

George Economides and *Apostolis Philippopoulos* suggest that a reliable analysis of fiscal sustainability requires debt-based rules in which fiscal instruments (such as public expenditure items and tax rates) respond systematically to the gap between inherited government debt and a policy target. This is consistent with the rhetoric of the new economic governance framework announced by the European Commission.

Iain Begg posits that the strong focus on the status quo in successive rounds of negotiations of the EU's Multiannual Financial Framework (MFF) and the lack of an overarching strategy in introducing new, extrabudgetary mechanisms are evidence of a certain caution in the search for durable solutions, but also contribute to a growing incoherence in the financial architecture. Ad hoc responses to crises, even if well-intentioned, leave a legacy of unresolved problems and unintended consequences that need to be addressed before they spiral out of control. Two of the most important problems he sees are the costs of funding, and legitimacy.

George Kopits highlights that EU member states that continuously respected the SGP's reference value for the budget deficit not only exhibited much lower volatility and higher growth rates than those that did not, but also recorded a significant decline in their government debt-to-GDP ratios. Compliance with the fiscal deficit and debt-to-GDP reference values, as proposed by the Commission for the reform of the EU fiscal framework, is therefore consistent with the overarching objectives of stability, growth and debt sustainability.

With regard to the difficulty of enforcing EU fiscal rules, reflecting actual experience with the implementation of the SGP, *Paul Dermine* and *Martin Larch* show that while several legal instruments exist to ensure enforcement, they are not being used, not least because EU governance arrangements have not been adapted to the changing political role of EU institutions. As integration in the EU grows deeper, the Commission has turned into a political actor whose interests do not necessarily coincide with those of its original role as "guardian of the treaties." This evolution must be taken into account, among other things, when assessing the enforceability of EU fiscal rules in the context of the ongoing reform of the SGP.

In order to effectively enforce compliance with the EU's fiscal rules, *Wolfram Richter* argues for shifting the responsibility for imposing sanctions in the event of noncompliant behavior by member states from the Community to the intergovernmental level. Rewarding compliance rather than punishing noncompliance makes the transition possible. Such a reform would bring the governance framework of the SGP closer to that of the European Stability Mechanism (ESM).

To restore debt discipline in the EU, *Vesa Kanniainen* calls for the introduction of a tax on subsequent borrowing ("Tobin tax") when it exceeds a critical level. This solution, comparable to balanced budget rules at the US state level, introduces a more radical type of political discipline than simply relying on market discipline, which usually comes too late.

Vivien A. Schmidt argues that the EU's fiscal rules must not be primarily aimed at debt reduction, but at investing in the future. The European Semester should be decentralized at the national level to ensure effective national ownership and legitimacy. In addition, EU economic governance should also be democratized through strategic dialogues focusing on macroeconomic and industrial policy.

According to *Torben M. Andersen*, the need for government investment is steadily increasing in the EU due to the green transition, energy disruption and digitalization, but does not require more complicated fiscal rules. Therefore, the policy focus on investment can be strengthened by continuous, in-depth monitoring of public investment and/or separate spending targets for public consumption and investment.

Sebastian Blesse, Florian Dorn and *Max Lay* propose a reform introducing a modified golden rule that promotes public investment while maintaining fiscal sustainability, i.e., debt-financed spending should be limited to net investment, while debt-financed investment is capped by a deficit rule. Other primary expenditures (excluding net investment) must be balanced. In addition, the investment categories relevant for the golden rule must be narrowly and clearly defined to avoid creative accounting tricks, while the narrow definition of investment should be limited to investment spending that can create new capital stock and stimulate sustainable economic growth.

Finally, *Anne-Laure Delatte* suggests linking government support for the business sector to carbon emissions, an area where EU policy guidance could be helpful. To be budgetarily efficient, government support to protect citizens from climate shocks should target low incomes rather than providing across-the-board income support. The ECB's corporate bond portfolio allocation is still largely biased toward carbon-intensive companies; therefore, the European Parliament should be given more control to actively promote the rebalancing of this portfolio toward low-carbon companies.

We hope you enjoy this Policy Debate of the Hour!

Clemens Fuest

The Reform of the EU Economic Governance Framework, Market Discipline and the Role of the ECB

KEY MESSAGES

- **Experience with European fiscal rules has shown that European rules cannot prevent member states from accumulating high debt levels if they want to**
- **The fact that the ECB increasingly positions itself as a fiscal bailout mechanism implies that the risk of short-term fiscal crises due to a collapse of confidence in capital market declines. But this comes at the cost of further weakening incentives for fiscal discipline**
- **A reform of economic governance should place emphasis on enhancing fiscal discipline and responsibility**
- **The proposal that an excessive deficit procedure will be opened by default if countries deviate from their agreed fiscal adjustment paths may improve discipline**
- **In contrast, the idea to allow countries to incur more debt if their policies are aligned with EU political priorities will weaken fiscal discipline**

Should the EU reform its economic governance framework? And if so, how? The framework's objective is to promote EU fiscal stability and economic growth. In principle, fiscal and economic policy is primarily a national responsibility. However, economic developments in individual member states significantly affect other member states, as well as economic development throughout the EU and beyond. This clearly calls for policy coordination, which is what the EU governance framework provides.

While EU economic governance encompasses all member states, whether countries belong to the Eurozone plays a key role, since in a monetary union there is a greater need for common governance rules than among countries with national currencies. Unsurprisingly, therefore, the focus of the debate lies on the fiscal rules enshrined in the Treaty of Maastricht, which limit fiscal deficits to a maximum of 3 percent of GDP and public debt to 60 percent of GDP.

European fiscal governance rests on three pillars. First, the fiscal rules limiting deficits and the level of public debt, which are linked to a process of political supervision and coordination. Second, the No-Bailout Rule stipulates that each country is responsible for its debt and stresses the role of market discipline in this regard. Third, the European Central Bank is not allowed to finance the budgets of national governments.

The reform of the economic governance framework currently under discussion focuses on the first element. This paper argues that the reform needs to be considered in the context of all three governance elements. From this perspective, the reform would need a stronger focus on fiscal responsibility and accountability.

WHAT IS WRONG WITH THE EXISTING EU GOVERNANCE FRAMEWORK?

One recent reason posited as making a reform of the existing EU governance framework necessary is that the fiscal rules have been suspended since 2020, when the Covid-19 pandemic broke out. Now the plan is to reinstate them in 2024, but it seems natural to discuss whether the rules should be changed before they are applied again.

But there are eight other, more fundamental, reasons to consider a reform of the governance framework. First, the fiscal rules are criticized for favoring procyclical fiscal policies: during economic crises, they are seen to offer too little room for fiscal expansion, while during economic booms they fail to encourage fiscal consolidation. Second, the fiscal rules are criticized for being arbitrary. It is indeed difficult to produce a convincing theoretical argument justifying the numerical values of 3 percent and 60 percent for the deficit and the debt levels, respectively. Third, the rules are criticized for paying too little attention to the quality of public spending. Public investment and public consumption have very different implications for economic growth and, hence, for fiscal sustainability.[1]

Fourth, it has been argued that the focus of the EU fiscal governance framework may fail to detect risks to fiscal sustainability that may build up outside the public budget, like, for instance, private debt growth during real estate booms. The fiscal problems of Spain and Ireland during the European debt crisis are cited as examples for this.

Fifth, compliance with the rules has been weak enough for some observers to question the relevance of the governance

[1] Blesse et al. (2023) review research about whether fiscal rules crowd out investment, as is often claimed. The available evidence does not support this view.

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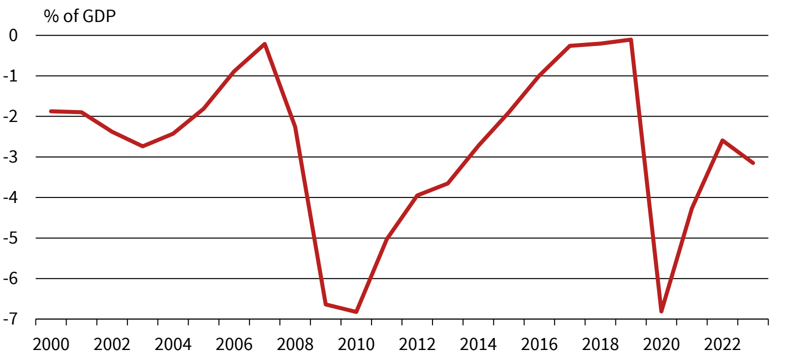
Figure 1

Average Fiscal Deficit in the Eurozone (20 Countries)



Source: IMF World Economic Outlook, April 2023. © ifo Institute

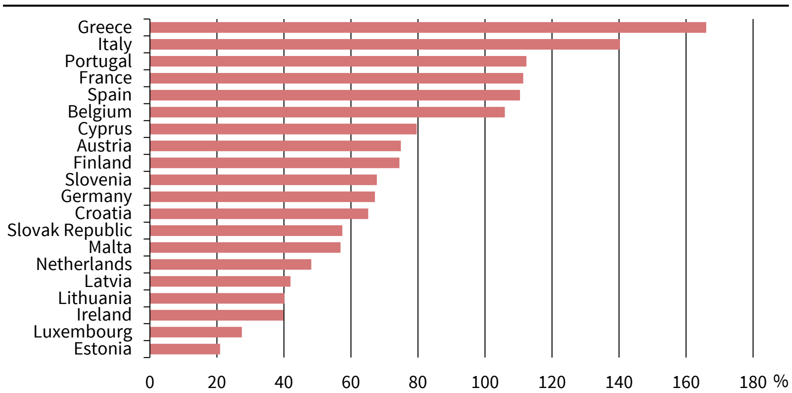
framework entirely. For instance, the Stability and Growth Pact originally required countries to make sure that their fiscal balances were approximately balanced in normal times so that the 3 percent deficit rule would leave enough room for fiscal support during economic crises. If anything, the fiscal policy actually pursued by most countries took the 3 percent rule rather as a focal point for normal times (see e.g., Kamps and Leiner-Killinger 2019). Figure 1 illustrates how fiscal deficits evolved between the years 2000 and 2023. The average deficit was 2.7 percent of GDP.

Greece provides one extreme example of failure to comply with the fiscal rules, where the governance framework proved unable to prevent the country from accumulating excessive public debt and ultimately defaulting. Deviations from the rules were widespread across the Eurozone, the heterogeneity of fiscal positions increasing significantly over the years, with some countries accumulating very high debt levels and others managing to keep debt in check (see Figure 2).

Debates about compliance often highlight the role of national ownership of fiscal consolidation plans. Pressure from Brussels for fiscal consolidation and economic policy reforms is often unpopular in the member states because of the lack of "national ownership." Fiscal consolidation is seen as imposed from the outside, on the basis of procedures and decisions perceived to be technocratic and far removed from domestic needs and effective democratic control. More generally, the governance framework is widely considered as too complex and opaque.

Figure 2

Debt to GDP Ratios in Eurozone Countries 2023



Source: IMF World Economic Outlook, April 2023. © ifo Institute

Sixth, the role of the governance framework during exceptional crises has been questioned. While it may be justified to offer more room for deficits under extraordinary situations, suspending limits to these deficits entirely is unlikely to be optimal. When rules are suspended and no further limits exist, the door opens to careless behavior and accounting tricks that allow countries to incur high debt levels to finance higher spending or tax cuts even in later years, after the crisis has receded.

Seventh, the 60 percent rule for the level of public debt as a percentage of GDP is deemed increasingly unrealistic in light of the far higher levels debt ratios have reached in many countries (Figure 2). Related to this, the debt reduction rule, which was added later, has been criticized for being overly restrictive and harmful. It requires countries above the 60 percent limit to reduce the gap to 60 percent at a rate of 1/20 per year. For instance, if a country has a debt ratio of 120 percent, it is required to reduce this ratio from one year to the next by 3 percentage points. The problem is that this rule has a bias toward a procyclical fiscal policy, since the debt ratio rises during economic downturns, simply because the denominator shrinks. This implies that the fiscal consolidation effort of the debt reduction rule needs to be larger in times of low growth.

Eighth, there is a controversial debate about the use of structural fiscal deficits as a key indicator in the preventive arm of the Stability and Growth Pact. Structural deficits are notoriously difficult to estimate, and misleading estimates may guide fiscal policy into the wrong direction.

At a more fundamental level, there is a debate pitting political supervision and coordination of fiscal policy at the EU level as one governance model, against market discipline as the other model. Critics of political coordination argue that the member states are responsible for their fiscal policy, democratic control takes place at the national level and that capital markets are most effective in ensuring fiscal discipline. The role of market discipline for EU economic governance will be discussed further below.

THE REFORM PROPOSAL OF THE EUROPEAN COMMISSION

The European Commission (2022 and 2023) has proposed a reform of the governance framework focused on the following key elements:

1. The reference values for the fiscal deficit and the debt level of 3 percent and 60 percent of GDP will be preserved.

2. All member states will submit plans with fiscal adjustment paths formulated in terms of multi-year expenditure targets.
3. For countries with deficits or debt levels above 3 percent and 60 percent of GDP, respectively, the European Commission will issue a country-specific “technical trajectory” intended to make sure that an annual fiscal adjustment of 0.5 percent of GDP is performed, so that the debt level moves along a downward path.
4. An excessive deficit procedure will be opened “by default” if countries stray from the agreed fiscal adjustment path.
5. General and country-specific escape clauses can be activated, for instance, in the case of an exceptional economic crisis.
6. Countries may be given more time for fiscal adjustments, i.e., more debt will be tolerated, if countries undertake reforms or investments that are in line with EU priorities.

According to the European Commission, this reform aims to simplify the governance framework and make it more transparent, enhance national ownership, focus more on the medium term, and strengthen enforcement.

Three aspects of the reform stand out. First, the opening of an excessive deficit procedure by default if a country deviates from the agreed fiscal adjustment path suggests that enforcement will be stricter, whatever the precise meaning of “by default.” At the same time, more emphasis is placed on negotiations between the European Commission and each individual member state. This is likely to extend the influence of the European Commission on the adjustment plans. Previously, the governance structure was geared chiefly towards negotiations among peers. One weakness of this horizontal structure was that larger countries in particular had a tendency to avoid being sanctioned for rule violations. Whether the vertical structure will improve compliance is an open question. If countries do not want to comply with requirements issued by the European Commission, it will be easy for them to argue, for instance, that the EC is a technocratic institution that has less democratic legitimacy than their national parliaments. Thus, there is tension between the concept of European supervision of national fiscal policy and the fact that national parliaments are ultimately responsible for fiscal policy and have direct democratic legitimacy for conducting fiscal policy.

While it is not easy to come up with a reform which increases compliance, it is not impossible to do so. For instance, Fuest and Heinemann (2017) have proposed to use accountability bonds to improve compliance with fiscal rules, among other objectives. Countries whose deficits or debt levels exceed the limits of European fiscal rules would be obliged to finance the overshooting debt with junior bonds. This would make it clear that investors buying this additional debt take a higher risk, which in turn makes the violation of the rules very costly.[2]

Second, more emphasis will be placed on public expenditure. There are good reasons to use expenditure rules in fiscal governance, in particular because the public expenditure path is easier to control than the deficit path. At the same time, expenditure rules are not aimed at determining the level of public spending in a country. Different countries have different preferences for the share of the public sector in the economy. This implies that expenditure rules do allow for an increase in spending, provided that such changes are covered by measures to raise more revenue. While this makes expenditure rules complex and difficult to understand and communicate in public debates, experimenting with expenditure rules in the governance framework is nevertheless useful.

Third, the reform brings a fundamentally new element into the fiscal governance framework. Countries will be allowed to incur more debt if they follow political priorities formulated at the EU level. To some extent this transforms the fiscal governance framework into a tool for steering the economic and fiscal policy of the member states towards EU objectives, which may conflict with the objective of ensuring debt sustainability. Adding an additional objective to the governance framework will certainly reduce its transparency.

EU FISCAL GOVERNANCE, THE ECB AND MARKET DISCIPLINE

While the economic governance reform tries to tackle weaknesses of the existing fiscal rules and their enforcement, a key question is whether it addresses more fundamental issues of fiscal governance in Europe. These include the interaction between monetary and fiscal policy, the role of market discipline, and the role of the European Central Bank (ECB).

FISCAL POLICY AND MARKET DISCIPLINE IN A CURRENCY UNION

A currency union of fiscally sovereign member states like the Eurozone faces a fundamental problem that an assemblage of countries without a common currency does not face. Countries belonging to a currency union do not have a national central bank that can act as a lender of last resort to the government. In this regard, they face a similar situation as states belonging to a federation with a national currency like, for instance, the US states. The fact that a national government runs its own fiscal policy but has no control over the central bank has two implications.

First, there is a greater risk that crises lead to a collapse of trust in the ability of the government to

[2] The proposal has also been integrated into the comprehensive reform proposal for Eurozone governance by Bénassy et al. (2018).

service its debt, because a lender of last resort—a role normally played by the national central bank—is missing.

Second, if countries pursue unsustainable fiscal policies or a deep economic crisis overburdens public finances, they face default, which may take the form of a restructuring of public debt.

Governments of countries which do not belong to a currency union are in an entirely different situation. If they face a fiscal crisis but they control the national central bank, they will probably order a bailout using the printing press. If the government faces only a liquidity problem, the central bank acts as a lender of last resort and the problem is solved. However, if the crisis happens because fiscal policy is unsustainable, the monetary bailout leads to high inflation and a destabilization of the national currency, and possibly a devaluation. This may be painful, but advantageous in terms of economic governance. Since the cost of the currency devaluation is primarily borne by the country in question, there are strong incentives for national governments to avoid such a scenario. Creditors will take into account the risk of the country's debt, including the devaluation risk, so that early market reactions may even work towards preventing such a crisis. Of course, this does not mean that a fiscal crisis happening in one country has no consequences for other countries. For instance, if a currency is devalued, trade partners will be affected. But market discipline still works in this case, and most of the cost is borne by the country where the crisis originates, so that incentives are aligned.

In a currency union, things are different. The common central bank could also bail out member states undergoing fiscal difficulties, but the potential cost of doing so, in the form of higher inflation or lower central bank profits, would be spread across the entire currency union. In terms of governance, such an arrangement would imply that the cost of the crisis is not borne by the country where it originates, but by the community of countries constituting the currency union. Since such an arrangement would undermine incentives for sound fiscal policy, the European Central Bank is not allowed to finance government budgets of individual member states. This is a legal safeguard. Whether the ECB respects this legal rule is another matter, which will be discussed further below. If the central bank of the currency union refrains from financing the budgets of individual member states, unsustainable fiscal policy will lead to default, which may take the form of a restructuring of public debt. If such a debt restructuring is possible, investors in capital markets will carefully assess the sustainability of public finances of countries before buying their debt, so that default risk will be reflected in risk premia on such government debt. This is often referred to as market discipline. In this way, market reactions to imprudent fiscal policy create incentives to pursue sound policies. Since such reactions can sometimes be sudden and violent, market discipline prompts government to avoid any sign of financial difficulties and to steer clear of unsustainable fiscal policies.

However, market discipline will only work if investors truly believe that a debt restructuring will take place if countries borrow excessively. If political decision-makers think that debt restructuring will be too costly or too risky, they will avoid such a step and instead bail out the country in question. In the Eurozone, restructuring of public debt can be risky, since European financial sector regulation allows banks to hold large amounts of national government bonds without having to underpin these investments with equity. The reason is that these bonds are seen as riskless assets. But they are actually not riskless in a currency union, as just explained. Thus, if a government bond restructuring is necessary, there is a risk that this restructuring will trigger a banking crisis,[3] an event that usually has a massive negative impact on the rest of the economy.

In this situation, investors will rationally anticipate that highly indebted countries will be bailed out in case of a crisis, which leads to market discipline not working. In the years before the Greek debt crisis, interest rates on Greek government bonds were no higher than the interest rates on bonds of countries with much lower debt levels. This has sometimes been interpreted as evidence that market discipline does not work. The above analysis, however, leads to a different interpretation. Investors knew and anticipated that there would be a bailout. Ultimately Greek government bonds were restructured, but by the time it happened most banks had already got their money back, meaning that the burden of the Greek default was partly borne by taxpayers in the rest of the Eurozone.

What does this imply for fiscal governance? Market discipline can only play a role if the threat is credible that private creditors will lose money if they lend to a country whose debt becomes unsustainable. This threat is credible if and only if a restructuring of debt is feasible without giving rise to prohibitive costs or risks. A key step to assure this is to change financial sector regulation, so that banks no longer hold large quantities of government bonds of the country where they reside, without underpinning these bonds with equity.[4] Although this reform has been debated for a long time, no progress has been made so far.

A second obstacle for market discipline to work is that, during the period of low inflation and zero interest rates, the ECB bought large quantities of national government bonds to stimulate the economy and raise inflation to the two-percent target value. A side effect of this policy is that the ECB has now become a large creditor of the Eurozone member states, a position

[3] The proposal has also been integrated into the comprehensive reform proposal for Eurozone governance by Bénassy et al. (2018).

[4] The Scientific Advisory Board of the German Federal Ministry of Finance (Wissenschaftlicher Beirat beim Bundesministerium der Finanzen 2010) made this point early during the Eurozone crisis.

that further increases the costs of debt restructuring. In principle, national governments could compensate the ECB for possible losses it takes if a debt restructuring occurs, but politically this would be very costly for them, because they would have to explain to their voters why they must shoulder part of costs of the default of other Eurozone countries. This takes us to the role of the ECB for Eurozone governance.

THE ROLE OF THE EUROPEAN CENTRAL BANK

The framework for economic governance in the Eurozone needs to be seen in the context of how the ECB deals with fiscal difficulties of individual member states. Legally, the ECB is not allowed to finance governments or to engage in fiscal policy. However, drawing the line between monetary and fiscal policy in legal terms is difficult. From an economic perspective, it is natural to ask whether the ECB could and should act as a lender of last resort to national governments. For the reasons explained above, this is more difficult for the central bank of a currency union than for a national central bank. One of the risks involved in acting as a lender of last resort is that it is often difficult to distinguish clearly between situations where countries just need liquidity help, as opposed to situations where their debt is unsustainable.

In 2012, at the peak of the Eurozone Debt Crisis, the ECB effectively decided to position itself as a lender of last resort to governments by introducing the OMT program.[5] The ECB announced it would buy unlimited amounts of government debt of individual countries if necessary, provided that these countries participate in an adjustment program supervised by the European Stability Mechanism (ESM). The underlying idea was that the ESM procedures would make sure that the ECB will not buy government bonds of countries with unsustainable debt levels. Of course, given that the negotiation of an ESM program is a highly political undertaking, it is far from clear whether this safeguard would protect the ECB against being drawn into financing governments with unsustainable debt levels. However, the condition of an ESM program at least increased the cost for individual countries of relying on the ECB for fiscal policy support. Being shielded from market forces came at the cost of signing a program with political obligations in the form of complying with the conditions for a fiscal adjustment and economic reform program supervised by the ESM. The OMT program was never activated, but its existence alone created bailout expectations among investors, further weakening market discipline for fiscal policy.

Recently, the ECB took a further step and introduced the so-called Anti Fragmentation Instrument (AFI). It allows the ECB to buy bonds of individual member states if it thinks that interest rates in capital markets are out of line with economic fundamentals. Determining whether interest rates and risk premia reflect fundamentals is obviously largely arbitrary. But the key difference to the OMT program is that the countries receiving support no longer need to sign an ESM program to receive support. The AFI has therefore been criticized for shielding highly indebted Eurozone member states from both market forces and political obligations (Kronberger Kreis 2022).

Overall, the ECB has increasingly established itself as a fiscal actor in the Eurozone, taking over the role of a lender of last resort for governments with high debt levels.

POLICY CONCLUSIONS

The economic governance framework in the Eurozone has the function to ensure that the member states pursue sustainable fiscal policies. Experience with European fiscal rules has shown that such rules cannot prevent countries from accumulating more debt if they want to. There is a tension between the idea of European fiscal supervision and the fact that national parliaments are ultimately responsible for fiscal policy.

Poor compliance with European fiscal rules would be less problematic if the costs of unsustainable fiscal policies were borne primarily by the countries pursuing such policies and by their creditors. This is the function of market discipline. But this is made difficult, among other things, by financial regulation that allows banks to hold large amounts of national government bonds. As long as this is the case, a restructuring of public debt will pose a threat to financial stability, undermining the credibility of the No-Bailout Clause and hampering the functioning of market discipline.

For the EU economic governance framework, the fact that the ECB increasingly positions itself as a fiscal bailout mechanism implies that the risk of short-term fiscal crises due to a collapse of confidence in capital market declines, which addresses one of the vulnerabilities of fiscal policy in a currency union. But this comes at the cost of a further weakening of fiscal discipline incentives.

Against this backdrop, a reform of economic governance should place emphasis on enhancing fiscal discipline and responsibility. Some elements of the reform proposal by the European Commission do have the potential to improve compliance with fiscal rules, in particular the idea that an excessive deficit procedure will be opened by default if countries stray from their agreed fiscal adjustment paths. However, other elements are likely to weaken the focus on fiscal sustainability, in particular the idea of allowing countries to incur more debt if their policies are aligned with EU political priorities.

[5] The ECB argued that this was an act of monetary policy intended to protect the transmission mechanism for monetary policy. This was never convincing.

REFERENCES

Bénassy-Quéré, A. et al. (2018), "Reconciling Risk Sharing with Market Discipline: A Constructive Approach to Euro Area Reform", Centre for Economic Policy Research (CEPR) Policy, Insight No. 91, London.

Blesse, S., F. Dorn and M. Lay (2023), "A Targeted Golden Rule for Public Investments? A Comparative Analysis of Possible Accounting Methods in the Context of the Review of Stability and Growth Pact", Study Requested by the ECON Committee, European Parliament, Brussels.

European Commission (2022), *Communication on Orientations for a Reform of the EU Economic Governance Framework*, Brussels, 9.11.2022, COM(2022) 583 final.

Fuest, C. and F. Heinemann (2017), "Accountability Bonds – Reconciling Fiscal Policy Based on Market Discipline with Financial Stability", *EconPol Policy Brief* 03/2017.

Kamps, C. and N. Leiner-Killinger (2019), "Taking Stock of the Functioning of the EU Fiscal Rules and Options for Reform", *European Central Bank Occasional Paper Series* 231.

Kronberger Kreis (2022), *The ECB's Toxic Bond Purchase Program*, Project Syndicate, July 21.

Wissenschaftlicher Beirat beim Bundesministerium der Finanzen (2010), *Ohne Finanzmarktreformen keine Lösung der europäischen Staatsschuldenkrise,* Berlin.

Wissenschaftlicher Beirat beim Bundesministerium der Finanzen (2012), *Fiskalpolitische Institutionen in der Eurozone*, Berlin.

George Economides and *Apostolis Philippopoulos*

Fiscal Sustainability: Interest Rates, Growth and Debt-based Policy Rules*

KEY MESSAGES

- **Calculations based on the intertemporal government budget constraint can be only indicative regarding an economy's fiscal sustainability**
- **Sovereign interest rates, growth rates, as well as primary fiscal balances are all endogenous variables that are jointly determined. This rationalizes the use of structural macroeconomic models for the study of fiscal sustainability**
- **In the current situation and in most countries, macroeconomic stability can be guaranteed only if some fiscal policy instruments react systematically to public debt imbalances. This is consistent with the rhetoric in the new economic governance framework communicated by the European Commission**
- **Which fiscal policy instrument is being used to bring public debt down is essentially a fiscal policy multiplier problem**

Fiscal sustainability is a necessary condition for macroeconomic stability, which, in turn, is a prerequisite for economic growth and the financing of social policies. But how can we judge fiscal sustainability? The most popular approach, at least in policy reports and public debates, is based on the intertemporal government budget constraint (IGBC); see, for example, the European Commission's long-term fiscal sustainability indicators S1 and S2, as well as its recommendations for the public finances of EU countries (European Commission 2023a). We will therefore start our note by using the IGBC to provide some examples of public debt arithmetic. In this kind of analysis, fiscal sustainability boils down to the comparison between the real interest rate on sovereign bonds and the economy's real growth rate.

In turn, building upon the above, we will make a methodological point. We will argue that relying on the IGBC, one can get indicative results only. This is because the real interest rate on sovereign bonds, the economy's real growth rate, as well as most items incorporated in the primary fiscal balance, are all endogenous variables that depend on a number of factors, including the level of public debt itself (see also D' Erasmo et al. 2016). This can rationalize the use of structural macroe conomic models and, in turn, the necessity of debt-based rules according to which fiscal policy instruments react to public debt imbalances. We will close by connecting these arguments with the EU's fiscal rules. Data for euro area (EA) countries are used to support each stage of our analysis.

THE INTEREST RATE-GROWTH RATE DIFFERENTIAL

Table 1 reports data for the real interest rate on 10-year sovereign bonds, the real growth rate and their resulting difference in EA countries; these are averages of annual data over 2001–2022 for each country.[1] As can be seen in the third column, which covers the full euro period, growth rates have exceeded interest rates in most countries except Greece, Italy, and Portugal, where the differential has been unfavourable. However, once we exclude the sovereign debt crisis years during which Cyprus, Greece and Portugal, as well as Ireland, were shut out of bond markets and had to resort to official financial aid from the EC, the ECB and the IMF, the differential ceases to be positive in Greece and Portugal and becomes even more negative in Cyprus and Ireland (see the numbers in parentheses in the third column).[2] Thus, at first

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[1] For the nominal interest rate on 10-year sovereign bonds, we have used the interest rate at which these bonds are traded in the secondary bond market.

[2] For these countries, we have re-calculated the average real interest rate, the average real growth rate as well as their differential, after we excluded the years during which the nominal interest rate on their 10-year sovereign bonds exceeded 6 percent. In particular, we excluded the period 2012-2014 for Cyprus, the period 2010-2017 for Greece, the period 2011-2012 for Ireland, and the period 2011-2013 for Portugal. The relevant values are the numbers in parentheses.

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Table 1:
Interest Rate-growth Rate Differential (2001-2022)

Country	Real interest rate	Real growth rate	Interest rate-growth rate differential 2001-2022	2001-2014
Austria	0.3	1.5	−1.2	0.1
Belgium	0.4	1.6	−1.2	0.2
Cyprus	2.5(1.9)	2.6(3.6)	−0.1(−1.7)	1.7(−0.7)
Finland	0.7	1.4	−0.6	0.5
France	0.9	1.2	−0.3	0.8
Germany	0.4	1.2	−0.7	0.6
Greece	4.4(1.3)	0.4(2.3)	4.0(−0.4)	5.1(−0.3)
Ireland	1.4(1.0)	5.5(6.0)	−4.1(−5.0)	−0.2(−1.1)
Italy	1.6	0.3	1.3	2.4
Latvia	−0.2	3.4	−3.6	−2.5
Lithuania	0.4	4.0	−3.6	−1.7
Luxembourg	0.1	2.6	−2.5	−1.7
Malta	1.2	4.0	−2.7	−0.7
Netherlands	0.1	1.5	−1.4	0.3
Portugal	2.1(1.3)	0.8(1.3)	1.2(0)	3.0(1.4)
Slovakia	−0.3	3.5	−3.7	−3.3
Slovenia	0.8	2.5	−1.6	0.2
Spain	1.0	1.4	−0.5	0.6

Source: Eurostat; OECD; World Government Indicators; own calculations.

sight, things are not bad. However, the last column repeats the same exercise except that now we cover the period 2001–2014 only, namely we leave aside the period of the ECB's quantitative easing (QE) policies that started officially in the beginning of 2015. Comparing the figures in the last two columns reveals that, in most cases, the interest rate-growth rate differential turns from negative to positive, or to less negative, in the last column, which illustrates the beneficial effect of the ECB's massive bond purchases on bond prices and their yields. Since such large-scale QE policies cannot continue for ever, things look worse now.

Therefore, the evidence is mixed, with both positive and negative differentials over time and across countries. Also, if we think of the period since 2015 as being temporary, in the sense that sooner or later the ECB will embark on a gradual quantitative tightening, positive, unfavourable differentials can be expected in several countries.

THE ABOVE DIFFERENTIAL AND THE ISSUE OF FISCAL SUSTAINABILITY

In this section, following most policy reports by the European Commission (see e.g., European Commission 2023a), we analyse the issue of fiscal sustainability through the lens of the government budget constraint. Based on Table 1, we will distinguish two cases: one in which the interest rate-growth rate differential is favourable (i.e., negative) and the other in which it is unfavourable (i.e., positive).

If the interest rate-growth rate differential is favourable, meaning negative, then the dynamic path of public debt is stable, in the sense that the government can roll over its debt, issuing new debt to pay for the interest, without the need to cut spending or raise taxes in the future (see Blanchard 2019).[3] If, on the other hand, the interest rate-growth rate differential is not favourable, meaning positive, then the public debt ratio is not stationary in the sense that, given the inherited public debt, its path is explosive over time.

To show the quantitative importance of the interest rate-growth rate differential for fiscal sustainability within this commonly postulated policy context, we provide some numerical examples or what is known as debt arithmetic. Thus, using the simple tool of the government budget constraint, we will quantify the required fiscal adjustment under different scenarios regarding the interest rate-growth rate differential as well as the target for the public-debt-to-GDP ratio sometime in the future. As an example, we will refer to the case of Greece, which is the country with the highest public-debt-to-GDP ratio in the EU.

We start by imagining an unfavourable interest rate-growth rate differential. Let us say that the outstanding public-debt-to-GDP ratio is 171 percent, as was the case in Greece at the end of 2022. Also say that there is a positive, 1 percent, interest rate-growth

[3] However, even if the public-debt-to-GDP ratio can remain finite, there might be fears of default if this finite ratio is believed to be "too" high. This can perhaps provide extra arguments for upper limits on the debt-to-GDP ratio like those of the Maastricht Treaty even when the differential is favourable (Wickens 2008; Blanchard 2019).

rate differential. We also consider a time horizon of 35 years, at the end of which the public debt ratio is lower than its starting value, as recommended by the EC—say, 100 percent of GDP. Thus, we ask what primary balance is needed to bring the debt ratio down to 100 percent after 35 years. Simple calculations can show that this requires an average annual primary fiscal surplus, as a percentage of GDP, equal to 3.4 percent over the next 35 years.[4] A sustained surplus of such size is rather demanding.[5] This unpleasant arithmetic can be compared to a scenario in which the interest rate-growth rate differential is favourable. Assume now that there is a negative, –1 percent, interest rate-growth rate differential. Focusing on the same experiment as before, where the end of period debt will be 100 percent of GDP 35 years from now, a primary surplus of 0.7 percent of GDP is needed.[6] An average primary fiscal surplus of 0.7 percent is far more achievable than 3.4 percent for the next 35 years!

Thus, a favourable interest rate-growth rate differential can erode the burden of outstanding public debt so that public debt can be brought down without much fiscal effort (in our example, by just keeping the primary fiscal balance almost balanced). But is this the end of the story?

IS IT A GOOD IDEA TO RELY ON THE GOVERNMENT BUDGET CONSTRAINT ONLY?

Calculations like the above are sensitive to assumptions about sovereign interest rates and growth rates over time. More importantly, sovereign interest rates and growth rates are endogenous variables, and the same applies to several items included in the primary fiscal balance, such as tax revenues, social expenditure programs, etc. All these variables can hence depend, directly or indirectly, on the inherited public debt itself. Such endogeneity implies that the debt dynamics, and what is needed for debt stability and fiscal sustainability, are more complicated than those implied by the above analysis. Moreover, even when we introduce fiscal reaction functions (see below) to restore stability, the behaviour of economic agents may change and this can again affect the growth rate, the interest rate, tax bases, etc. All this, as pointed out by D' Erasmo et al. (2016), is a reflection of the Lucas critique.

The above implies that a more reliable fiscal sustainability analysis requires the use of structural macroeconomic models where these three key drivers of public debt dynamics (real interest rate, growth rate, and primary fiscal balance) are all endogenous and jointly determined. There are many dynamic general (dis)equilibrium models of this type in the academic literature, but also by researchers in the EC, the ECB, the IMF, etc.[7] To the best of our understanding, a common message from this literature is the following: Given the current situation, if a shock hits the economy, macroeconomic stability and determinacy can be guaranteed only if some fiscal policy instruments react systematically to public debt imbalances. And this seems to apply to most countries on both sides of the Atlantic. However, although such rules are a very common device to restore stability in research papers, there is no empirical evidence that this happens in reality (see Table 2 below).

As can be seen in the last column of Table 2, and for most of the EA countries, the correlation between current public debt to GDP and next year's primary fiscal surplus to GDP is negative, meaning that an increase in the public-debt-to-GDP ratio in the cur-

[4] Here we work as chapter 3 and Annex A5.4 in European Commission (2023a). This unstable case is related to the "S2 indicator" of fiscal sustainability in the EC reports.
[5] Note that these numbers are quite close to those reported by the EC in its Post Programme Surveillance Report on Greece published in Autumn 2022 (EC 2022a); the latter reports numbers between 1.4 percent (under a relatively optimistic scenario about the gap between the real interest rate and the growth rate) and 3.1 percent (under a relatively pessimistic scenario about the same gap).
[6] Here we work as in chapter 3 and Annex A5.3 in European Commission (2023a). This stable case is related to the "revised S1 indicator" of fiscal sustainability in the EC reports.
[7] Applications to the Greek economy include Economides et al. (2021); Dimakopoulou et al. (2022); and Dendramis et al. (2022). Similar studies apply to the US economy (Leeper et al. 2010; Davig et al. 2010; Davig and Leeper 2011: Malley and Philippopoulos 2022.) as well as to the Eurozone as a whole (Dimakopoulou et al. 2023).

Table 2:
Correlation Between Public Debt and Next Year's Primary Fiscal Surplus

Country (average over 2001–2022)	Public-debt-to-GDP ratio	Correlation between current public-debt-to-GDP ratio and next year's primary fiscal surplus to GDP (2001–2022)
Austria	75.5	−0.26
Belgium	101.7	−0.13
Cyprus	78.7	0.22 (*)
Finland	55.0	−0.66
France	85.2	−0.44
Germany	68.7	0.39
Greece	149.4	0.19 (*)
Ireland	60.8	−0.07
Italy	123.7	−0.55
Latvia	30.7	−0.01
Lithuania	31.3	0.30
Luxembourg	16.7	−0.11
Malta	60.3	0.20
Netherlands	55.2	−0.32
Portugal	101.8	0.39 (*)
Slovakia	46.2	0.31
Slovenia	51.0	0.08
Spain	77.0	−0.21

Source: Eurostat; own calculations.

rent period is associated with a lower primary fiscal surplus or a higher primary fiscal deficit in the next period. Exceptions include Germany, which has a relatively high positive coefficient, as well as Cyprus, Greece, and Portugal (marked with an asterisk). However, recall that Cyprus, Greece, and Portugal have been in enforced fiscal austerity programs as a condition for their official bailouts. We can therefore interpret these negative correlations as an indication of absence of stabilizing fiscal policy reactions. Evidence provided by the EC itself supports this absence (European Commission 2015).

The above can perhaps explain the recent change in the EC's rhetoric. Since the Maastricht Treaty in 1992, the agreement has been that fiscal rules at the national level are needed for the viability of the single currency. Various rules have been introduced and debated over the years without much success.[8] In the new economic governance framework recently presented by the European Commission (2022b) and the European Council (2023), although references to the 3 percent ceiling for fiscal deficits remain, there is now a more explicit emphasis on the need to embark on debt-reducing policies on a systematic basis from 2024 onwards.

We close by asking a question. If, in practice, we do not observe any systematic fiscal reaction to public debt imbalances, then, by quoting Leeper et al. (2010), a natural question to ask ourselves is "Why do forward-looking agents continue to purchase bonds with relatively low interest rates?" The answer given by Leeper and his co-authors is that—to the extent that we want to maintain the assumption of rationality—economic agents believe that the current inaction is temporary and that it will be replaced by necessary policy corrections in the future. This is why trust, expectations about the future, and what is signalled by policymakers in the present are crucial. In this context, the announcement of simple and realistic debt-based policy rules is necessary for trust and confidence about the future.

POLICY CONCLUSIONS

Sovereign interest rates, growth rates and most items included in primary fiscal balances are all endogenous variables that are jointly determined. It is also obvious that all of them are affected by economic policies. This applies in particular to sovereign interest rates, which do not only reflect fundamentals but are also shaped by economic sentiments. This is why in case of an "accident" that triggers a loss of trust, sovereign interest rates jump upward; if this persists, it can become a vicious cycle. The Greek sovereign crisis of the previous decade is a well-known example.

Acknowledgement of this is crucial for a reliable analysis of fiscal sustainability. This necessitates the use of structural macroeconomic models that avoid the Lucas critique. In such models, a common finding is that if we assume that fiscal policies remain unchanged as in the current data, the path of public debt is explosive over time in most countries. Hence, debt-based rules are needed according to which fiscal instruments (like public spending items and tax rates) react systematically to the gap between the inherited public debt and a policy target value. If the feedback reaction to public debt is strong enough, stability is restored or, equivalently, the public debt arithmetic turns from unpleasant to pleasant.

However, the adoption of such feedback policy rules comes at a fiscal cost, since reaction to outstanding public debt implies a relatively high primary surplus or a relatively low primary deficit. Here, there is a classic intertemporal tradeoff, in the sense that if a country follows a debt-contingent fiscal policy, it practically front-loads the cost of the fiscal adjustment, with higher fiscal costs in the short term and smaller sacrifices in the later periods. Front-loading the fiscal adjustment helps the country to gain credibility, but entails the risk of a recession and vicious cycles in the short term (see Alesina et al. 2019 and CESifo 2014, for the dynamics of austerity programs).

Finally, which fiscal policy instrument is being used to bring public debt down is essentially a fiscal policy multiplier problem. The macroeconomic literature suggests that a damage-minimizing policy mix is one in which we use fiscal instruments with small output multipliers to bring public debt down and—once public debt has been brought down—we allow fiscal instruments with large output multipliers to take advantage of the fiscal space created. Anticipation of the latter, if credible, shapes incentives and may mitigate the recessionary effects even in the short term. This is consistent with the "expenditures" rules suggested recently by the EC. However, one must be clearer regarding the kind of public expenditures that should be cut to bring public debt down.

REFERENCES

Alesina, A., C. Favero and F. Giavazzi (2019), *Austerity*, Princeton University Press, Princeton.

Beetsma, R. and M. Larsh (2019), "EU Fiscal Rules: Further Reform or Better Implementation?", *ifo DICE Report* 17(II), 7-11.

Beetsma, R. (2022), "The Economics of Fiscal Rules and Debt Sustainability", *Intereconomics* 57, 11-15.

Bilbiie, F., T. Monacelli and R. Perotti (2021), "Fiscal Policy in Europe: Controversies over Rules, Mutual Insurance and Centralization", *Journal of Economic Perspectives* 35, 77-110.

Blanchard, O. (2019), "Public Debt and Low Interest Rates", *American Economic Review* 109, 1197-1229.

CESifo (2014), *The EEAG Report on the European Economy,* CESifo, Munich.

Davig, T., E. Leeper and T. Walker (2010), "Unfunded Liabilities and Uncertain Fiscal Financing", *Journal of Monetary Economics* 57, 600-619.

Davig, T. and E. Leeper (2011), "Monetary-Fiscal Policy Interactions and Fiscal Stimulus", *European Economic Review* 55, 211-227.

[8] For the history of EU fiscal rules as well as the current state of affairs and controversies, see Beetsma and Larch (2019); Bilbiie et al. (2021); Beetsma (2022) and the references cited there.

Dendramis, Y., G. Dimitrakopoulos and E. Tzavalis (2022), *Assessing Downside Public Debt Risks in an Environment of Negative Interest Rates Growth Differentials: A Structural Policy Scenario Analysis, Department of Economics,* Athens University of Economics and Business, Mimeo.

D' Erasmo, P., E. Mendoza and J. Zhang (2016), "What Is Sustainable Public Debt?", in J. Taylor and H. Uhlig, eds., *Handbook of Macroeconomics*, Vol. 2, North Holland, Amsterdam, 2493-2597.

Dimakopoulou, V., G. Economides and A. Philippopoulos (2022), "The ECB's Policy, the Recovery Fund and the Importance of Trust and Fiscal Corrections: The Case of Greece", *Economic Modelling* 112, July 2022, 105846.

Dimakopoulou, V., G. Economides, A. Philippopoulos and V. Vassilatos (2023), *Can Central Banks Do the Unpleasant Job That Governments Should Do?*, Department of Economics, Athens University of Economics and Business, Mimeo.

Economides, G., D. Papageorgiou and A. Philippopoulos (2021), "Austerity, Assistance and Institutions: Lessons from the Greek Sovereign Debt Crisis", *Open Economies Review* 32, 435-478.

European Commission (2015), *Public Finances* in EMU, Brussels.

European Commission (2022a), "Post-programme Surveillance Report Greece, Autumn 2022", *Institutional Paper* 191, November.

European Commission (2022b), *A Communication on Orientations for a Reform of the EU Economic Governance Framework*, November.

European Commission (2023), "Debt Sustainability Monitor 2022", *Institutional Paper* 199, April.

European Council (2023), "Economic Governance Framework: Council Agrees Its Orientations for a Reform", *Press Release*, 14 March.

Leeper, E., M. Plante and N. Traum (2010), "Dynamics of Fiscal Financing in the U.S.", *Journal of Econometrics* 156, 304-321.

Malley, J. and A. Philippopoulos (2022), "The Macroeconomic Effects of Funding US Infrastructure", *European Economic Review*, Forthcoming.

Wickens, M. (2008), *Macroeconomic Theory,* Princeton University Press, Princeton.

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The EU's Increasingly Complex Finances: A Ticking Bomb?*

KEY MESSAGES

- **The EU's finances have become more complex because of a proliferation of off-budget mechanisms alongside the traditional budget. Most of these new mechanisms involve borrowing and lending activities**
- **The agreement of the Next Generation EU response to the pandemic accentuates the trend towards off-budget mechanisms. It also means the EU has to borrow directly from financial markets to finance grants to member states, instead of using its own revenues**
- **Increased resort to borrowing raises problems of legitimation, because the role of the European Parliament is more limited in relation to borrowing mechanisms than the powers it has over the annual budget and the multiannual financial framework**
- **Servicing the EU's new borrowing and repaying the debt over the coming decades will place demands on future EU budgets. However, there is resistance to increasing the budget, while adopting new resources to fund it is politically challenging**
- **For these reasons, there will be pressures to rethink the EU's finances and to focus more on EU-level public goods. Both will require bold decisions and efforts to overcome the bias towards the status quo of recent decades**

The EU budget is invariably among the most hotly contested issues in European governance. It pits reluctant net contributors against recipients of EU spending, advocates of shifting the focus of EU expenditure programs to the challenges of today against those accustomed to receiving support for Cohesion Policy and farm subsidies, and even some regions against their national governments. Yet although the headline total of the EU budget is a very large number – payments in 2023 are planned to reach EUR 168.6 billion, higher than the projected nominal GDP of 10 member states in 2023 – it is just one percentage point of EU GDP.

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At this level, what the EU budget can realistically fund is limited, in stark contrast to the capacities of the highest levels of government in both federal and unitary countries. A chart published by the Federal Reserve Bank of St. Louis shows[1] that net outlays of the US federal government, which had fallen from a peak of 40.7 percent of GDP at the end of World War II to 10.8 percent in 1948, then fluctuated between 16.1 percent and 22.2 percent in the five decades following the end of the Korean War. However, in 2009 (the global financial crisis) the figure rose, temporarily, to 24.3 percent before returning to the previous range, then surged to a peacetime peak of 31 percent in 2020 (the pandemic).

By contrast, when the EU is confronted with exceptional crises, the scope for any EU-level budgetary response is measured in small fractions of a percentage point of GDP.Instead, any fiscal response has to come from the individualmember states and, in recent crises, it is often the countriesmost in need of a fiscal stimulus that are least able to provide it. This creates demands for an EU-level response, but they cannot be met because there is a capability-expectations gap,[2] Zin that the EU has neither the budgetary resources nor a legal framework that allows it to act decisively. Any form of fiscal stimulus, in particular, is precluded. The reasons are many but derive mainly from the reluctance of member states to delegate enhanced budgetary power to the EU. Figure 1 illustrates the quandary.

To try to solve the quandary, the EU has resorted to funding mechanisms outside its traditional budgetary framework. Examples include the bailout funds during the sovereign debt crisis of the early 2010s, the Facility for Refugees in Turkey in 2016 and, most recently, the various instruments created in response to the Covid-19 pandemic. In each case, the solution adopted can be defended, especially where action has to be urgent, albeit with concerns about ad hoc governance mechanisms and risks for the EU's core budget. However, the agreement in 2020 on the Next Generation EU package (NGEU), made in response to the pandemic, was a qualitative shift in the use of off-budget funding mechanisms. Its novelty was to allow the Commission to borrow directly from the financial markets, to fund not just loans to member states, but also grants.

This paper examines the consequences of this evolution of the EU's finances, focusing on two dimensions: the threats posed to the coherence of the main EU budget, and the range of governance complications.

* This paper draws on presentations made by the author to the European Parliament Budget Committee in June 2022 and February 2023. It does not necessarily reflect the views of the Committee or the Parliament.

[1] https://fred.stlouisfed.org/series/FYONGDA188S.

[2] The phrase was first coined by Christopher Hill in relation to EU attempts to develop its international role (Hill 1993).

The next section provides a brief overview of the background and the political economy factors that inhibit change in the budget. It then turns to the complexity of dealing with a proliferation of borrowing and lending mechanisms;[3] conclusions complete the article.

BACKGROUND

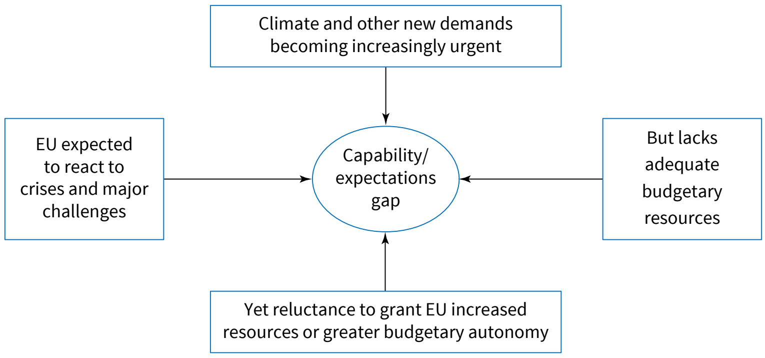
Since a major reform enacted in 1988, the EU budget has been set within a multiannual financial framework (MFF) which establishes ceilings for various headings of expenditure. By far the biggest are for Cohesion Policy (mostly targeted at relatively less prosperous regions) and direct payments to farmers. Indeed, from 1988 to 2020, some 75 percent of EU spending was on these two headings, including a related budget line of support for rural development, with the share of Cohesion Policy gradually rising over the years, but support for farmers and rural development remaining above 30 percent of the total up to the end of the 2014–20 MFF.[4] In the current MFF, for the 2021–2027 period, these headings will still account for two-thirds of EU spending.

After 1988, the number of member states grew from 12 to 28 before Brexit intervened; the "1992" program to complete the single market was (largely, even if gaps persist) completed; the euro became the currency of, now, 20 member states; and the last fifteen years have seen a succession of crises. While it is true that many changes of detail have been enacted, in broad terms it is remarkable how little the EU budget has changed.

The reasons are not hard to find. First, the reluctance of member states to delegate budgetary powers to the EU, noted above, keeps the scale of the budget low. Path dependency is a second explanation because it is so hard to alter existing lines in the budget. Then there is the expectation of juste retour, the notion beloved of all Finance Ministers that they have to ensure an acceptable net balance between what their country pays into the EU and what it receives from it, irrespective of how the money is spent (Heinemann et al. 2020). These and other factors favor status quo as the outcome of successive MFF negotiations. Moreover, especially in the current period of fiscal stringency, a trilemma has emerged in which net contributor member states want to curb what they remit to the EU, defenders of existing policies (both member states and sectoral interests) want to retain what they have, while others want the EU to spend more on emerging priorities. Only two out of three can be satisfied.

However, there has long been a second dimension to the EU's public finances, consisting of borrowing and lending operations, especially through the European Investment Bank (EIB). These had previously attracted hardly any of the acrimony surrounding the MFF (Laffan 1995). Latterly, though, this has begun to change with the recognition that the "galaxy" of EU financial mechanisms has become what the subtitle of a European Court of Auditors report (ECA 2023) calls "a patchwork construction," beset by procedural and accountability challenges.

Figure 1
The EU's Budgetary Quandary



Source: Author's compilation. © ifo Institute

THE GOVERNANCE CHALLENGES ASSOCIATED WITH INCREASED BORROWING AND LENDING

The proliferation of these off-budget mechanisms had been captured in a chart developed by the secretariat of the EP's Budget committee in 2017,[5] already at that time reflecting an unease about the use of mechanisms over which the Parliament had much more limited oversight than it does with the MFF. The main concern was about legitimation of measures offering financial support for EU policies for which the Commission and, especially, the Council were in the driver's seat while the Parliament was sidelined. Other sources of disquiet included potential contingent liabilities and the resort to diverse procedures or Treaty articles to launch the funds.

NGEU, although formally a temporary mechanism, accentuates these concerns. In EU jargon, the money raised to fund it is classified as external assigned revenues (EAR), a category that has been used, notably, for the payments made by non-EU countries (for example, Norway) towards EU programs in which they participate, such as the Horizon research program. EAR are recognized in the EU's Financial Regulation (Article 21.2) but had been only a small proportion of the aggregate revenue. However, they are at odds with one of the core principles of the EU budget, universality, which dictates that all revenues should go into a common pot and, thus, not be hypothecated to par-

[3] Begg et al. (2022), a study for the European Parliament, provides details.
[4] Data for the last 20 years is brought together in a spreadsheet made available by the European Commission, https://commission.europa.eu/strategy-and-policy/eu-budget/long-term-eu-budget/2014-2020/spending-and-revenue_en.
[5] It shows the sheer variety of mechanisms, ranging from the Facility for Refugees in Turkey to the various funds created for bailouts during the sovereign debt crisis, https://www.europarl.europa.eu/cmsdata/113502/WS percent20galaxies percent20EU percent20Budget_17012017.pdf.

ticular policies. Small amounts of EAR could reasonably be overlooked from this perspective as reflecting specific circumstances, but funding on the scale of NGEU cannot so easily be dismissed.

Other budget principles are also being compromised. Unity requires that there be a single budget, but NGEU can be construed as a parallel budget on a similar scale to the MFF. Transparency is also at risk to the extent that funds supporting similar policy objectives – notably the green and digital transitions – adopt different rules of implementation, as seen in the rules applicable to NGEU and Cohesion Policy (within the MFF). There is also legal ambiguity about whether borrowing to fund EU policies is allowed, although Article 5 of the Own Resources decision (the legal text which governs the arrangements around the EU's revenues, formally ratified in 2021[6]) provides a form of derogation for NGEU, referring to the borrowing being temporary and for the sole purpose of addressing the consequences of the Covid-19 crisis.

EU borrowing takes distinctive forms. The loans to member states under NGEU are back-to-back (the EU borrows and lends on to the member state, which then has to repay) and, in principle, expose the EU to financial risk only in the rather unlikely event of a default by the recipient. When it was launched, the historically low interest rates meant that the Commission, with its AAA classification from rating agencies, could borrow very cheaply compared with some of the more fiscally stressed member states, in effect enabling them to fund certain public investments on more favorable terms than if they had borrowed themselves. Most of the many other borrowing mechanisms are also back-to-back as explained in the 2023 overview by the European Court of Auditors,[7] although the report also draws attention to differences in the detail.

By contrast, borrowing for the grant component of NGEU has to be serviced and, in time, repaid. The money for this will have to come from future EU budgets after 2027, notwithstanding the fact that this relies on a deal (the next MFF) which is unlikely to be struck until 2026 at the earliest and subsequent iterations of it up to 2058. The inter-institutional agreement on NGEU stipulates that this "should not lead to an undue reduction in programme expenditure or investment instruments under the multiannual financial framework" (European Union 2021, 28).

NEW EU OWN RESOURCES

A key part of the Own Resources decisions ratified in 2021 was to provide for the introduction of new own resources – revenue sources assigned to the EU level to fund EU spending – which would be hypothecated to the NGEU repayments. A casual reader might infer that by agreeing to new resources, the risks to existing EU spending would be nullified, but one further line in the agreement is also worth noting: "It is also desirable to mitigate the increases in the GNI-based own resource for the member states." To put this in context, the great bulk of current funding of the MFF comes from what are referred to as "national contributions," of which a resource calibrated on the gross national income (GNI) of member states accounted for over two-thirds of all own resources: EUR 104 billion of a total of EUR 154 billion in 2022. Projected figures for 2023 are EUR 108 billion and EUR 157 billion.

Efforts to identify and introduce new own resources for the EU have gone on, sporadically, ever since the 1988 reform of the EU budget, but in all that time, only one has been introduced (in 2021): a levy based on the weight of unrecycled plastic in each member state. The proceeds of this levy have raised an average of around EUR 6 billion per annum, about 4 percent of total own resources. Moreover, no fewer than 17 member states have their ex ante contributions under this heading abated, reducing its value by some EUR 710 million each year. Plainly, therefore, much more will be needed if the aim of using new own resources to repay the NGEU borrowing is to be realized.

Obvious questions are "what" and "when"? At the end of 2021, the Commission presented proposals for a first "basket" of new own resources, comprising:

- 25 percent of the revenue from the EU's Emission Trading Scheme (ETS). These revenues are currently allocated to the member states which auction the permits, with a small proportion earmarked for the European Investment Bank to use for the EU Innovation and Modernisation Funds;
- 75 percent of the revenue from a European carbon border adjustment mechanism (in effect a tax on products with high embedded carbon emissions imported from third countries); and
- 15 percent of the residual profits of large multinational companies, payable to countries where products are consumed, as a result of an OECD/G20 decision (European Commission 2021).

According to the Commission's estimates, the annual yield from these three resources would be, respectively, EUR 9 billion, EUR 0.5 billion, and EUR 2.5–4 billion, making a total of EUR 12–14 billion. However, a proportion of the ETS revenue is expected to be used for a new Social Climate Fund, operational starting in 2026 and intended to shield vulnerable households from higher energy costs resulting from the expansion of the ETS to include road transport and energy costs. A statement on the Commission website[8] reveals that this new fund will "mobilize EUR 86.7 billion from 2026 to 2032" – EUR 12.3 billion per annum, albeit with

[6] https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52021PC0570.
[7] Op. cit.
[8] https://climate.ec.europa.eu/eu-action/eu-emissions-trading-system-eu-ets_en#documentation.

co-financing from member states. Unless the member state contributions constitute a high share, the net revenue from the ETS will be substantially eroded.

Two problems are immediately apparent. First, the likely proceeds from these three resources will fall well short of what will be needed to pay off the NGEU borrowing, especially if the ETS revenue goes largely to the Social Climate Fund. The original headline total of NGEU borrowing was EUR 750 billion at 2018 prices, with EUR 390 billion for grants and the balance of EUR 360 billion for back-to-back loans to member states. A 2 percent per annum allowance for inflation has taken the nominal value of the debt above EUR 800 billion, to be repaid over thirty years. Assuming no costs to the EU budget of the loan component, repayment of the money borrowed for grants, if amortized at a steady rate, will be on the order of EUR 14–15 billion per annum – at least 7 percent of the annual budget.

The second immediate problem is that both the ETS and the CBA have to be thought of as "Pigouvian" taxes; such taxes have a dual aim of raising revenue and deterring socially damaging practices. If they succeed in the latter aim, the revenue they raise will tend to fall – perhaps not dramatically in the short run, but enough over time to call into question their ability to provide a steady revenue stream. To the extent that this happens, other resources – most likely the GNI resource; in other words, payments from national treasuries – would have to make up the difference.

More fundamentally, the political narrative behind using new own resources to meet the costs of NGEU is flawed because it disguises the associated burden on taxpayers or national treasuries. New own resources may limit the calls on the GNI resource, but it is a statement of the obvious that they displace the burden to other taxes. NGEU was undeniably a worthwhile and timely initiative, important for the European "project" in demonstrating a capacity to respond to crisis, but to revive an old aphorism, there is no such thing as a free lunch.

POLICY CONCLUSIONS

Muddling-through is often the default in EU decision-making and is undeniably exemplified in developments in the Union's finances. A strong status quo bias in successive rounds of MFF negotiations and a lack of an overarching strategy in establishing new, off-budget mechanisms testify to a caution in finding enduring solutions, but also contribute to a growing incoherence in the financial architecture. Ad hoc responses to crises, though well-intentioned, have been the norm rather than the exception and one of the proposals in the recently published proposals for the mid-term review of the current will add another: a new fund for the reconstruction of Ukraine (European Commission 2023). The proliferation of such funds will leave a legacy of unresolved problems and unintended consequences that will have to be confronted before they spiral out of control. Two of the most salient are the costs of financing and legitimation.

The recent rise in interest rates in response to the surge in inflation has altered the favorable arithmetic of 2020 for debt service and could become a sizeable burden on the MFF in future. Again, some illustrative numbers can be instructive. For EUR 800 billion of debt, every percentage point of the interest rate means an annual debt service charge of EUR 8 billion, already more than the proceeds of the plastics resource. Even if only the grant component of NGEU is taken into account, the annual cost for each percentage point of interest would be at least EUR 4.2 billion. With interest rates at 4 percent or above, the burden will be substantial and, although an optimistic view that central banks may succeed in returning to a 2 percent inflation target is not implausible, it is likely to be a slow process.

The legitimation question has multiple dimensions. Many of the loan-based mechanisms in the galaxy of EU finances were agreed on at speed, principally by the Council, but with only limited involvement of the European Parliament in decision-making or subsequent oversight. In many cases, a credible justification can be advanced about the necessity of acting urgently. However, the outcome is that significant EU policies are being funded by mechanisms that are not subject to the same scrutiny as spending from the MFF. Some of the policies in question have similar objectives, especially in relation to the green and digital transitions, but are administered in different ways. In addition, legitimation is called into question by the diversity in legal bases used for different instruments.

Politically and institutionally, a new approach is now needed for the EU's finances. Overcoming the strong status quo bias is always difficult, but likely new demands on the EU will also require fresh thinking on how to structure new mechanisms and, as discussed by Buti et al. (2023), to give greater priority to European public goods, as opposed to national public goods funded by the EU. A third of a century on from the last major reform of the MFF, are decision-makers ready to confront these challenges?

REFERENCES

Begg, I. et al. (2022), *The Next Revision of the EU Financial Regulation and the Budget Galaxy*, www.europarl.europa.eu/thinktank/en/document/IPOL_STU(2022)721500.

Buti, M., A. Collocia and M. Messori (2023), "European Public Goods", *Voxeu Column*, https://cepr.org/voxeu/columns/european-public-goods.

European Commission (2021), *The Next Generation of EU Own Resources*, https://commission.europa.eu/strategy-and-policy/eu-budget/long-term-eu-budget/2021-2027/revenue/next-generation-eu-own-resources_en.

European Commission (2023), *Mid-term Revision of the MFF 2021–2027*, COM(2023) 336, Brussels, 20.06.2023, https://commission.europa.eu/strategy-and-policy/eu-budget/long-term-eu-budget/2021-2027/documents_en.

European Court of Auditors (ECA, 2023), *The EU's Financial Landscape – A Patchwork Construction Requiring Further Simplification and Account-*

ability, Special Report 05/2023, https://www.eca.europa.eu/Lists/ECADocuments/SR23_05/SR_EU-financial-landscape_EN.pdf.

European Union (2020), *Interinstitutional Agreement of 16 December 2020 between the European Parliament, the Council and the Commission on Budgetary Discipline, on Cooperation in Budgetary Matters and on Sound Financial Management, As Well As on New Own Resources, Including a Roadmap for the Introduction of New Own Resources*, OJ L 433I, December 22, 2020, https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32020Q1222(01)&qid=1686758039625.

Heinemann, F., M. Pilati and F. Zuleeg (2020), *How to Overcome the "Juste Retour" Obsession*, https://www.europarl.europa.eu/RegData/etudes/ATAG/2020/648763/IPOL_ATA(2020)648763_EN.pdf.

Hill, C. (1993), "The Capability-Expectations Gap, or Conceptualizing Europe's International Role", *Journal of Common Market Studies* 31, 305-328.

Laffan, B. (1995), *The Finances of the European Union*, Palgrave, Basingstoke.

*George Kopits**

EU Fiscal Rules: Do They Destabilize and Inhibit Economic Activity?

KEY MESSAGES

- **EU member states that have continuously complied with the Stability and Growth Pact's budget deficit reference value have experienced much lower volatility and higher growth rates than those which violated the reference value. Also, most complying member states recorded a pronounced decline in the public debt-to-GDP ratio in the subperiods before and after the EU debt crisis**
- **Therefore, adherence to the reference values for the general government deficit and debt, as proposed by the European Commission for the reform of the EU fiscal framework, are compatible with the overarching stability, growth, and debt sustainability goals**
- **Encouragement is warranted of growth-friendly structural reforms and of public investment in the member states' medium-term structural-fiscal plans while complying with the deficit and debt reference values, as envisaged by the European Commission**
- **The proposed shift to the government net expenditure benchmark as the single operational rule, as long as it is consistent with convergence to the debt reference value, is an important step toward simplicity, transparency, and greater stability**
- **Conversion of the Recovery and Resilience Facility into a permanent central stabilization mechanism should be considered for adoption in the new fiscal framework, to mitigate multi-country shocks and to strengthen stability and sustained growth within the Union**

Fiscal rules are often viewed as a straitjacket on policymaking. Permanent constraints on the government's budget deficit are deemed to be destabilizing and growth-hindering. The logic—built mainly on the caricature of a strictly balanced annual headline budget—is that, by disallowing the operation of automatic stabilizers or blocking discretionary fiscal intervention, such rules magnify the effect of shocks or cycles on the economy. In addition, the rules stifle potential growth by limiting the scope for public investment (Haldane 2023). As a corollary, a companion claim is that lower growth fails to reduce the public debt-to-GDP ratio, undermining the fiscal rule's ultimate objective of ensuring debt sustainability.

This argument seems implicit in the context of the ongoing reform of the EU economic governance framework, which aims at endowing the fiscal rules with greater flexibility and simplicity, with added space for public investment and structural reforms. In the words of the European Commission President, "Member States should have more flexibility on their debt reduction paths. … There should be simpler rules that all can follow. … With more freedom to invest. … Let us rediscover the Maastricht spirit—stability and growth can only go hand in hand" (European Commission 2022b).

On the basis of these goals, the European Council has issued orientations for the framework's reform (European Council 2023), in line with guidelines from the Commission and drawing from a wide range of recommendations from various internal and external sources (European Commission 2022a and 2022c). More recently, the Commission published a set of legislative proposals to amend the regulations and directives of the European Parliament and the Council regarding the Stability and Growth Pact (SGP) (European Commission 2023a, 2023b and 2023c). While they are welcome as an important step toward enhancing the effectiveness of the Pact, the orientations and the enabling proposals can be interpreted as an attempt to correct some weaknesses of the rules, including their allegedly pro-cyclical and anti-growth properties. It is, therefore, timely to examine the major macroeconomic consequences of fiscal rules that have been implemented in the European Union. The results of this inquiry should help shed light on the Commission's proposals for reform.

EVIDENCE

Empirical research devoted to testing the effect of discretionary fiscal policy has documented procyclicality across a large sample of advanced and emerging-market economies (Fatas and Mihov 2003). Recent estimates of a policy reaction function on rich cross-country panel data corroborate this result, but do not detect a discernible effect of fiscal rules on the economic cycle. Moreover, among potential drivers of these results, high public indebtedness seems to play a role in limiting the fiscal space available for adopting a countercyclical stance (Larch et al. 2021).

The effect of fiscal policy on economic growth can be traced through specific budgetary components, on the basis of the endogenous growth theory. Estimates on a panel of OECD countries sug-

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gest that a boost in non-distortionary indirect taxes or a reduction in distortionary taxes have a positive effect on potential growth. Likewise, an increase in productive expenditures (infrastructure investment, education, healthcare) or a decline in non-productive spending (social benefits, wages, transfers) stimulate growth (Kneller et al. 1999). Additional OECD cross-country estimates indicate that governments tend to mitigate a recession by sacrificing investment in favor of current expenditures, thereby hindering growth over the medium term (Larch et al. 2022). This implies that, instead, compliance with fiscal rules, preferably through reform measures—for example, by rationalizing the social security system—is likely to be growth-friendly.

What follows is an attempt to verify the above results by taking a closer look at the track record of EU member states over the past two decades, prior to the coronavirus pandemic when the rules were suspended. The focus is on member states that have continuously complied with the SGP's deficit reference value, as opposed to states that had violated the rule at any time during this period. Specifically, the issue under consideration is whether complying member states have experienced greater or lesser output volatility and higher or lower real growth rates than non-complying members.

As reported in Table 1, compliance with the budget deficit rule was accompanied by much higher stability (shown by lower output volatility) and higher growth, as compared to non-compliance. Greater macroeconomic stability reflects absence or low degree of procyclicality, which is not surprising given that the 3-percent-of-GDP deficit limit provides ample space for the operation of automatic stabilizers, and in some countries even for adoption of a discretionary countercyclical stance.[1] By the same token, a high growth rate is presumably an indication of a budgetary adjustment consisting of an increase in non-distortionary taxation and in productive public investment and/or a cut in distortionary taxes and in nonproductive public expenditures. Beyond these general points, it is noteworthy that growth and stability indicators are somewhat dispersed across complying member states, yet all apparently managing to overcome the impact of the 2008-12 debt crisis. Within the euro area, smaller economies, such as Estonia, Ireland and Luxembourg, displayed strong growth performance over the entire period under scrutiny. Outside the euro area, Bulgaria and Poland have recorded high growth rates, admittedly from a lower output base.

Although the evidence suggests that compliance with fiscal rules contributes to stability and growth, this should not be interpreted as causality, insofar as a range of potential country-specific determinants are excluded from the analysis. In particular, monetary policy, which consists de facto of a uniform inflation targeting regime within the euro area—namely, a Taylor rule reaction function that incorporates the output gap[2]—, is manifest in differences in real interest rates across member states (Mayer 2012).

The relation between the level of indebtedness and compliance with the deficit rule deserves further scrutiny from two perspectives. The first posits that a highly indebted member state is likely to adopt a procyclical stance to meet the deficit limit, or simply

[1] On average, in member states, a 1 percent GDP contraction leads to a budget deficit of roughly ½ percent of GDP, allowing for automatic stabilizers. Therefore, for a government targeting a balanced budget at trend GDP, it would take a 5 percent shortfall from trend GDP to reach a deficit equivalent to nearly 3 percent of GDP, all else remaining unchanged.

[2] Poland and Sweden also follow inflation targeting, while Bulgaria conducts a discretion-based monetary policy.

Table 1

Economic Performance of EU Member States Complying with Reference Value for Budget Deficit, 1998–2019

	Volatility [a/]	Growth [b/]
Euro area		
Austria	1	1.7
Belgium	0.7	1.7
Estonia	1.5	3.6
Finland	1.6	1.8
Ireland	1	5.5
Luxembourg	0.8	3.7
Netherlands	1.1	1.7
Spain	1.2	2.1
Other EU members		
Bulgaria	0.7	3.6
Poland	0.4	3.8
Sweden	1	2.3
Non-complying EU members		
Average	1.9	0.9

[a/] Coefficient of variation of percentage change in real GDP.
[b/] Geometric mean of percentage change in real GDP.

Sources: IMF World Economic Outlook and calculations by the author.

to exceed the limit, given the lack of sufficient fiscal space. Indeed, the high public debt burden has challenged policymakers in Italy and Greece from the very outset. Yet, as an "original sin" in the initial years of membership, both governments indulged in a loose fiscal stance by fully allocating interest savings—stemming from the vanished exchange risk premium—to finance tax cuts and primary expenditure hikes. Thus, they exacerbated an already procyclical expansion, which eventually contributed to the debt crisis. By contrast, for example in Belgium and Spain, governments earmarked the interest savings for a significant reduction in public debt.[3]

The second perspective involves the extent to which compliance with the deficit limit helps reduce the public debt-to-GDP ratio. Table 2 shows that complying member states achieved a decline in the debt ratio during the subperiods before and after the financial crisis, which may reflect not only the actual fall in debt stock, but also the relatively high growth rate—both trends attributable to compliance with the budget deficit rule. By and large, containment of the debt ratio has been somewhat less successful since the financial crisis. In any event, these results suggest that fiscal rules can help restore debt sustainability through a stepped-up adjustment effort toward budgetary discipline, but more importantly, they can help to improve the budgetary structure.

IMPLICATIONS

Overall, evidence on the macroeconomic consequences of the existing EU fiscal rules is suggestive of association with stability and growth, as well as with greater public debt sustainability. But to be sure, this should not lead to complacency. Instead, the findings support the view that there is scope for improving the fiscal governance framework broadly along the orientations advocated by the Council and the proposals issued by the Commission. Besides continued adherence to the existing debt and deficit reference values—though with greater flexibility—the Council correctly calls for transparency and simplicity in design, effective coordination and surveillance, supported by growth- and resilience-enhancing structural measures and public investments (European Council 2023).

The proposed net government expenditure benchmark as an operational rule, anchored to a debt-to-GDP target ratio converging to the reference value of 60 percent of GDP, represents not only a step toward simplicity and transparency, but also toward greater stability. Indeed, since the expenditure path is defined as a proportion of medium-term GDP growth or lower—to provide a safety margin and to prevent procyclical expansion—, while revenue is cyclically determined, the rule would help ensure a cyclically neutral fiscal policy stance.

A fundamental question, however, is the degree and manner of flexibility in implementation of the new governance framework.[4] Specifically, the projection of the debt ratio target over the medium term, incorporating corrections for any deviation from the expenditure path, would be subject to bilateral negotiation between the Commission and each member state in the context of the European Semester. Such an approach is deemed excessively flexible by some member governments, on the grounds that it lacks transparency and uniform enforcement of the rules across the membership.[5]

[3] From 1998 through 2005, Greece and Italy recorded interest savings equivalent to around 5 percent of GDP, and Belgium and Spain of some 3 percent of GDP; see the analysis of the crisis in Kopits (2017).

[4] See the critical review by the European Court of Auditors (2019).

[5] See the objection raised by Christian Lindner (2023), Germany's Minister of Finance.

Table 2

Public Debt of EU Member States Complying with Reference Value for Budget Deficit, 1998–2019 [a/]

	Pre-debt-crisis		Post-debt-crisis	
	1998	2007	2013	2019
Euro area				
Austria	68	64	81	71
Belgium	119	64	106	97
Estonia	8	4	10	8
Finland	54	35	56	59
Ireland	51	25	120	57
Luxembourg	7	7	24	22
Netherlands	69	42	68	48
Spain	64	36	100	98
Other EU members				
Bulgaria	75	17	18	19
Poland	48	45	56	47
Sweden	75	40	40	35

[a/] Outstanding gross liabilities of the general government at year-end, as percent of GDP.

Sources: IMF World Economic Outlook and calculations by the author.

National independent fiscal institutions remain in the frontline of real-time surveillance of public finances of member states, for accountability and for enforcement purposes. Hence, the Council and the Commission emphasize the need to strengthen them, including possibly with the application of international standards of good practice. But the continued threat of financial sanctions for rule violations and the attendant excess deficit procedure—even at the proposed reduction to a maximum rate to 0.5 percent of GDP—are unlikely to materialize as an effective enforcement tool, given the weakness of peer review at the Council, and may contribute to a procyclical contraction if imposed during a recession. A far more effective deterrent to fiscal misbehavior would be to increase exposure to market discipline, manifest in the risk premium on government bonds (Kopits 2018). In this regard, a practical innovation would consist of a market-imposed penalty if member states were obliged to issue junior bonds to finance deficits that exceed the reference value (Fuest and Heinemann 2017).

The current reform could be complemented with an additional component which, while not considered in the envisaged reform, would be clearly consistent with the subsidiarity principle stressed in the Commission's proposals. As part of the new architecture, with a view to enhancing the EU's overall stability and growth objectives, the Recovery and Resilience Facility (RFF) could serve these goals at a higher level, as a permanent central fiscal capacity (Beetsma and Kopits 2020). Whereas, in its current design, the RRF provides funding for much-needed infrastructure projects, its scope falls short of functioning as a permanent EU-wide stabilization instrument. Instead of operating as a one-off temporary facility created solely in response to the coronavirus crisis—with actual disbursements delayed beyond the impact of the initial shock—a permanent stabilization scheme could be activated semi-automatically to help offset regional shocks affecting multiple member states simultaneously.

POLICY CONCLUSIONS

At least four policy conclusions can be derived from the foregoing empirical evidence and from the implications for the current reform of the EU Stability and Growth Pact. First, the experience of the member states that have complied with the budget deficit limit of 3 percent of GDP suggests that the rules neither destabilize nor inhibit economic activity, as compared to member states that violated the limit. Furthermore, the public-debt sustainability of member states that observed the deficit limit has improved, or not deteriorated significantly, except during the financial crisis. Therefore, the basic design of the reference values, despite their apparent numerical arbitrariness, does not need to be overhauled.

Second, the contours of the envisaged reform as regards simplicity and transparency seem appropriate to strengthening the Pact. The specification, as the operational rule, of the medium-term limit on the net government expenditure path as a ratio of medium-term GDP growth should help the stabilization goal. The expenditure path needs to be consistent with a country-specific gradual convergence of the debt-to-GDP ratio toward the debt reference value of 60 percent of GDP. However, an issue that remains contentious is the proposed bilateral negotiation—incorporating a number of considerations—of the trajectory of the net government expenditure and debt reduction target over the medium term between the Commission and each member state. While some member governments welcome as much flexibility as is possible, others want to preserve a uniform, transparent treatment of all member states.

Third, enforcement of the rules has been widely recognized as the weakest link of the fiscal framework. Financial sanctions have been ineffective as a deterrent for noncompliance, insofar as they have never been imposed for violations of the rules and the excess deficit procedure. Besides, the application of sanctions, even if reduced in size, would be likely to aggravate a downward procyclical stance during a recession. As an alternative, highly indebted and profligate member states are to be exposed to market pressures, manifest in the risk premium on government paper. An efficient approach would consist of obliging such member states to finance with junior bonds government deficits that exceed the reference value.

Fourth, although absent from the proposed fiscal framework, there is a strong case for creating a permanent central stabilization scheme—incorporating growth-oriented public investments—to be activated semi-automatically to offset the impact of symmetric or asymmetric shocks and cyclical fluctuations that hit simultaneously several member states with regional externalities. Such a facility would build on the experience accumulated from the track record of the RRF and strengthen the stabilizing and growth-friendly qualities of the fiscal framework.

REFERENCES

Beetsma, R. and G. Kopits (2020), "Designing a Permanent EU-Wide Stabilization Facility", *CESifo Working Paper* 8735, forthcoming in D. Adamski and others, eds., *Handbook on European Monetary, Economic and Financial Market Integration*, Cambridge University Press, Cambridge.

European Commission (2022a), "Report on Public Finances 2021", *Institutional Paper* 181, Brussels.

European Commission (2022b), "State of the Union", Address by President von der Leyen, Strasbourg, 14 September.

European Commission (2022c), *Communication on Orientations for Reform of the EU Economic Governance Framework*, Brussels, 9 November.

European Commission (2023a), *Proposal for a Regulation of the European Parliament and of the Council on the Effective Coordination of Economic Policies and Multilateral Budgetary Surveillance and Repealing Council Regulation* (EC) 1466/97, 26 April.

European Commission (2023b), Pro*posal for a Council Regulation Amending Regulation (EC) 1467/97 on Speeding up and Clarifying the Implementation of the Excessive Deficit Procedure*, 26 April.

European Commission (2023c), *Proposal for a Council Directive Amending Directive 2011/85/EU on Requirements for Budgetary Frameworks of the Member States*, 26 April.

European Council (2023), *Orientations for a Reform of the EU Economic Governance Framework: Council Conclusions*, Brussels, 15 March.

European Court of Auditors (2019), *EU Requirements for National Budgetary Frameworks: Need to Further Strengthen them and to Better Monitor their Application*, Special Report 22.

Fatas, A. and I. Mihov (2003), "The Case for Restricting Fiscal Policy Discretion", *The Quarterly Journal of Economics* 118, 1419-1447.

Fuest, C. and F. Heinemann (2017), "Accountability Bonds: Reconciling Fiscal Policy Based on Market Discipline with Financial Stability", *Economic Policy Brief*, 1 November.

Haldane, A. (2023), "The Case for Rethinking Fiscal Rules is Overwhelming", *Financial Times*, 16 May.

Kneller, R., M. Bleany and N. Gemmell (1999), "Fiscal Policy and Growth: Evidence from OECD Countries", *Journal of Public Economics* 74, 171-190.

Kopits, G. (2017), "The IMF and the Euro Area Crisis: The Fiscal Dimension", in M. Schwartz and S. Takagi, eds., *The IMF and the Crises in Greece, Ireland, and Portugal*, International Monetary Fund, Washington DC.

Kopits, G. (2018), *How Could the Stability and Growth Pact be Simplified?,* Economic Governance Support Unit, Committee on Economic and Monetary Affairs, European Parliament.

Larch, M., E. Orseau and W. van der Wielen (2021), "Do EU Fiscal Rules Support or Hinder Counter-cyclical Fiscal Policy?", *Journal of International Money and Finance*, ISSN 0261-5606, 112, 2021, p. 102328, JRC123214.

Larch, M., P. Claeys and W. van der Wielen (2022), "The Scarring Effects of Major Economic Downturns: The Role of Fiscal Policy and Government Investment", *EIB Working Paper* 2022/14.

Lindner, C. (2023), "We Need to Strengthen EU Fiscal Rules, Not Dilute Them", *Financial Times*, 25 April.

Mayer, T. (2012), *Europe's Unfinished Currency: The Political Economics of the Euro*, Anthem Press, London.

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Solving the Enforcement Dilemma of the EU Fiscal Rules

KEY MESSAGES

- **To ensure a smooth functioning of the Economic and Monetary Union, the Stability and Growth Pact defines limits on national fiscal policies and encompasses the possibility to impose sanctions**
- **This short piece explores the much under-examined issue of enforcement of the EU fiscal rules**
- **In the ongoing reform debate, a more consistent recourse to financial sanctions under the Stability and Growth Pact is presented as a counterweight to more flexible and tailor-made rules**
- **At the same time, in light of past experience and in the absence of concrete changes to EU governance, many observers take a rather negative stance on the enforceability of EU fiscal rules**
- **We clarify a number of crucial concepts with the aim of debunking the politically appealing but risky view that in the EU imposing sanctions on sovereigns is nearly impossible**

COMMITTMENT VERSUS ENFORCEMENT

Like all rules-based systems, the effectiveness and credibility of the EU's Stability and Growth Pact (SGP) has been predicated on two basic ideas: strong commitment of the participating parties, and enforcement. Without them the whole architecture set out in the Maastricht Treaty would have been void from the start or, as the saying goes, the political tribute vice pays to virtue.

From the outset, commitment played an important role. Article 126 of the Treaty—one of the cornerstones of the SGP—draws a clear red line with regard to legal enforcement. It explicitly excludes recourse to the main enforcement instrument under EU law—the infringement procedure—for the largest part of the excessive deficit procedure. In other words, the architects of the single currency area thought that member states should not be referred to the European Court of Justice for running afoul of fiscal recommendations of the Council. In return, the European Council issued a resolution in June 1997 that includes the firm commitment by (i) the EU member states to respect the provisions of the SGP, and (ii) by the Council to a rigorous and timely implementation of all elements of the SGP.

However, the credibility of the political commitment took a first major blow in November 2003 when the Council resorted to a procedural trick to refrain from enforcing the rules upon Germany and France, and held the excessive deficit procedures launched against these two countries in abeyance. The action the Commission filed, following its role of "Guardian of the Treaties," before the European Court of Justice against the Council proved ultimately unsuccessful, and failed to clarify the enforceability of fiscal policy rules (Maher 2004).

Since then, the public debate around the SGP has been characterized by an overt dichotomy. The official line religiously highlights the rules-based nature of the SGP and pledges equal treatment across countries. The informal view expresses serious doubts about whether the rules will ever be enforced subject to considerations of political opportunity. The informal view gained ground after repeated attempts to revive the spirit of the 1997 resolution of the European Council by strengthening the economic rationale of the SGP did not bear significant fruits.[1]

For completeness, it is worth stressing that compliance with EU fiscal rules has not been dismal across the board. Since the SGP entered into force in 1997, many countries have followed a course that is perfectly in line with sound and sustainable public finances (Larch et al. 2023). But some other countries have run fiscal policies which clearly and repeatedly departed from the numerical constraints implied by the EU rules and, as a result, accumulated very high levels of government debt, which in the wake of major negative shocks gave rise to concerns

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[1] The 2005 reform of the SGP encompassed a number of crucial innovations, all of which were meant to make the rules economically more meaningful: (i) the structural budget balance became the key reference for fiscal adjustment and for a sound fiscal position in the medium term, differentiated across countries; (ii) more time for fiscal adjustment in the face of unexpected economic events and/or in exchange for structural reforms; and (iii) codification of "other relevant factors" when assessing the existence of an EDP.

regarding sustainability, and brought to light the realization that enforcement had been weak.

IS IT REALLY JUST POLITICS, STUPID?

Successive decisions by the Commission and the Council seemed to increasingly resign to the imperatives of politics by exercising greater forbearance or leniency, especially when dealing with larger member states (see, for instance, Juncker's famous quote "because it is France").[2] More recently, in the context of the ongoing economic governance review, the informal view has moved to the front seat: lack of compliance with the Pact is now officially presented as the result of unreasonably tight rules imposing unrealistic budgetary adjustments, especially on member states with high debt ratios, on account of the new macroeconomic environment.

The way out suggested by the Commission in its November 2022 orientations and reflected in the legislative reform proposal of 26 April this year is once more predicated on enhanced commitment, this time through ownership: the idea is that governments will eventually comply with reformed rules because they are expected to be directly involved in drawing up a bespoke and more realistic adjustment plan.[3]

As a concession to the original idea of a rules-based system, which is still dear to many member states, the Commission proposal also contains a promise to finally get serious about enforcement (a "more stringent EU enforcement"). However, this part is much less developed and mainly based on a pledge rather than a solid plan.[4] In a nutshell, the Commission promises a more systematic activation of excessive deficit procedures, a more frequent use of financial sanctions by lowering their amounts, reputational sanctions, and a consistent recourse to macroeconomic conditionality mechanisms.

Many observers may take the lack of detail and strength of the Commission's proposals about enforcement under a reformed Pact as inevitable. It therefore bears recalling that the lack of actual enforcement witnessed so far does not reflect a lack of enforcement instruments.

First, one should stress that although Article 126(10) of the Treaty practically excludes the infringement procedure under the EDP, other legal remedies are available to prompt action and support the enforcement of the EU's fiscal rules. Two such remedies are the action for annulment (Article 263 of the Treaty) and the action for failure to act (Article 265 of the Treaty). Hence, while the architects of the SGP excluded the infringement procedure for deviations from the fiscal rules, they still very much cared about due process. Although the two remedies have not been exploited much thus far, there is room for a stronger judicial involvement in the implementation of the EU's fiscal governance. One may not want to go as far as Blanchard et al. (2021), who propose a setup in which judges of a new and dedicated section of the European Court of Justice would ultimately decide whether a country's fiscal policy was or was not in line with EU guidance. However, instruments are in place for the European Court of Justice to decide whether the SGP has been implemented in line with EU law or not. For instance, the Court could very well be expected to take a view on whether during the Covid-19 pandemic the so-called general escape clause was implemented in line with the relevant provisions or, for that matter, whether the excessive deficit procedure was applied as designed. As a matter of fact, the Commission regularly and rightly underscored that the escape clause did not suspend the SGP. Moreover, the excessive deficit procedure was conceived to anchor budgetary policies in countries with an excessive deficit over the medium term, not to push them immediately into consolidation. Since the 2005 reform of the Pact, negative growth surprises have typically led to extensions of the adjustment process (EFB 2022).

Second, next to financial sanctions under the SGP, conditionality arrangements making access to EU funds conditional upon compliance with the EU fiscal rules have been strengthened over the years and apply to a wider range of budgetary instruments, most importantly structural funds.[5] These incentive structures usefully complement the punitive prongs of the enforcement mix, but their potential, with regard to fiscal governance and the enforcement of the Pact, remains largely unexploited.

Rather than blaming politics, we take the view that the lack of enforcement under the SGP reflects a flaw in the evolution of the EU's economic governance framework: available enforcement instruments are not used despite overt departures from the fiscal rules because there is no neutral advocate. We consider that the six- and two-pack reforms passed in the aftermath of the global financial crisis, coupled with growing differences across member states over the perceived value of the SGP, have affected the original division of roles between the Council and the Commission, with the latter turning into the dominant actor.[6] As a consequence,

[2] "EU Gives Budget Leeway to France 'Because It Is France' – Juncker," Reuters, 31 May 2016, https://www.reuters.com/article/uk-eu-deficit-france-idUKKCN0YM1N0.
[3] https://economy-finance.ec.europa.eu/system/files/2022-11/com_2022_583_1_en.pdf.
[4] The legislative reform proposal of the Commission of 26 April 2023 does not envisage any changes to the existing sanctions. The idea is to work with the current provisions by moderating the amounts of possible fines compared to the maximum set out in legislation.
[5] Initially limited to the comparatively small group of countries eligible for Cohesion Fund money, conditionality now also covers most EU structural funds and therefore virtually all member states. Moreover, the role of the European Parliament in deliberating a suspension of EU funds has been clarified. The strengthened provisions have not been tested yet, because they entered into force in 2021 after the de facto suspension of the SGP via the severe economic downturn clause.
[6] Two particularly prominent innovations introduced with the six- and two-pack reforms of the SGP are the reversed qualified majority voting for new financial sanctions and the comply-or-explain principle.

Figure 1

Can the Effectiveness of the EU Fiscal Rules Be Improved without Adjusting EU Governance?

Prevailing assessment	Unreformed SGP	+	Current EU governance	=	Weak compliance of high-debt countries
View underpinning reform proposal	Reformed SGP	+	Current EU governance	=	Improved compliance of high-debt countries thanks to ownership
Our view	Reformed SGP	+	Reformed EU governance	=	Better compliance of high-debt countries

Source: Authors' compilation. © ifo Institute

the current system increasingly blurs the line between technical assessment and the final decision on compliance, putting the Commission into a situation where it exercises political judgement while at the same time trying to act as neutral enforcer (Dermine 2022a). To be clear, the fact that the Commission has come to act as a "genuine executive" is not per se problematic; it is inevitable and even welcome in the broader context of growing economic and political integration. The Covid-19 pandemic first and the energy price hike thereafter have clearly underscored the importance of having a Commission that swiftly takes political initiatives. However, the clear downside of this *mélange des genres* is that the EU is effectively left without a crucial element of advocacy: if the "Guardian of the Treaties" is not triggering available enforcement tools provided by the economic governance framework, the rules-based nature of EU fiscal rules is void.

A POSSIBLE WAY FORWARD

As a consequence, we believe any serious attempt to improve enforcement of the SGP must include meaningful efforts on the governance side to clarify the demarcation between technical assessment, political decisions, and advocacy. This seems all the more necessary if fiscal governance is to become increasingly bilateral and country-specific. In fact, the ongoing reform debate mainly revolves around the notion that the effectiveness of the EU fiscal framework hinges on the design of the rules and the involvement of the individual member states in defining the adjustment path. The EU dimension of fiscal governance remains largely untouched. We believe this notion underrates the importance of EU governance; we think that strengthening EU governance would increase the chances of achieving the desired result (see Figure 1).

We see two main avenues for reform aimed at increasing transparency. First, the double-hatting described above should be better addressed through a clearer separation between technical assessment and final decision-making. This could *a minima* be achieved through a clearer allocation of tasks within the Commission, for instance with stronger autonomy of the competent Commission services vis-á-vis the final decision-making at the level of the College. A more radical option would consist of taking the logic of delegation one step further and, following a template reminiscent of that of independent fiscal institutions, which the EU and the Commission have promoted at the national level, outsource parts of the technical assessment beyond the Commission, to an external expert body. The European Fiscal Board or an institutional aggregation of national independent fiscal institutions would then constitute the most obvious candidates.

Finally, stronger judicial involvement could contribute to enhancing enforcement of the Pact and frame the action of the Commission, and the use of its discretion in that context. This would nonetheless require a more proactive use of the remedies available, and an overall relaxation of access conditions to the European Court of Justice. Most notably, such relaxation could be achieved through a broader understanding of challengeable acts, and a refined apprehension of the hard law/soft law divide, which would finally end the profound disconnect between the formal characterization of EU fiscal governance as a "soft" governance framework lacking clear legal force, and the much harder effects that its instruments (starting with the country-specific recommendations issued under the European Semester, or Commission's opinions on draft budgetary plans) actually produce, as well as the harmonizing dynamics they concretely set in motion (Dermine 2022b).

POLICY CONCLUSIONS

Enforcement of EU fiscal rules is increasingly seen as difficult, if not impossible. This view is reflective of actual experience with the implementation of the SGP, not due to lack of legal instruments. Several legal instruments to ensure enforcement exist but are not being used, not least because EU governance arrangements have not been adapted to the changing political roles of EU institutions. With growing economic and political integration in the EU, the Commission naturally and inevitably morphed into a political player whose interests are not necessarily aligned with those of its original role as "Guardian of the Treaties." This evolution needs to be acknowledged and addressed when assessing the enforceability of the EU fiscal rules in the context of the ongoing reform of the SGP. In parallel, the established practice of the European Court of Justice also deserves attention. Its currently, narrow approach to its own jurisdiction prevents it from playing the role of guardian of EU law that it could, and should, also embrace in the context of fiscal governance.

REFERENCES

Blanchard, O., A. Leandro and J. Zettelmeyer (2021), "Redesigning EU Fiscal Rules – From Rules to Standards", *Economic Policy* 36, 195-236.

Dermine, P. (2022), *The New Economic Governance of the Eurozone – A Rule of Law Analysis*, Cambridge University Press, Cambridge.

Dermine, P. (2022), "The Instruments of Eurozone Fiscal Surveillance Through the Lens of the Soft Law/Hard Law Dichotomy—Looking for a New Approach", *Journal of Banking Regulation* 23, 7-18.

European Fiscal Board (2022), *Annual Report* 2022, Brussels.

Larch, M., J. Malzubris and S. Santacroce (2023), "Numerical Compliance with EU Fiscal Rules: Facts and Figures from a New Database", *Intereconomics* 58, 32-42.

Maher, I. (2004), "Economic Policy Coordination and the European Court: Excessive Deficits and ECOFIN Discretion", *European Law Review* 29, 831-841.

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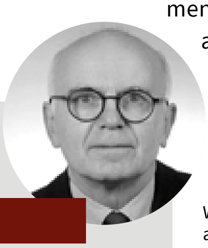
Rewarding Compliance with Fiscal Rules — A Proposal for Reform of the Stability and Growth Pact*

KEY MESSAGES

- **The European Commission has recently published legislative proposals for a reform of the Stability and Growth Pact (SGP). The declared object is to make the economic governance of the EU simpler, improve national ownership, place a greater emphasis on the medium term and strengthen enforcement**
- **However, critics doubt that the proposals are suited to enforce member-state fiscal discipline in the original sense of the SGP**
- **This paper argues in favor of shifting the competence to impose sanctions in the event of non-compliant behavior of member states from the Community to the intergovernmental level. Rewarding compliance rather than penalizing non-compliance makes the shift possible**
- **Such a reform should help to strengthen the accountability for enforcing fiscal discipline, as well as the credibility of sanction threats**
- **The reform would bring the governance framework of the SGP closer to that of the European Stability Mechanism (ESM)**

Public debt is like a contract at the expense of third parties. In this case, to the disadvantage of future generations. As Liz Truss experienced in autumn 2022, such a contract is not only morally questionable, but also risky in terms of financial stability. When the then-newly elected British Prime Minister tried to finance generous tax rebates with debt, the financial markets panicked. The British pound fell to a historic low, forcing her to resign after only 45 days in office.

If the British had adopted the euro, it would not have come to this. Interest rates on British government bonds might have risen slightly and the Euro might have lost some value against the dollar, but otherwise Liz Truss could have carried on unhindered. After all, at the time the UK's sovereign debt amounted to only 98 percent of GDP. While this was higher than in the previous sixty years, it was still quite average by Eurozone standards. In 2021, Italy had a debt-to-GDP ratio of roughly 150 percent, while that of Greece was not far from 200 percent.



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The euro makes such ratios viable by spreading the effects of individual member states' debt across the entire Eurozone. If Italy's debt ratio increases by 15 percentage points, the ratio in the whole Euro area increases by less than a single percentage point. However, this cushioning effect of a common currency creates a problem for fiscal discipline, as it weakens member states' incentives to exercise fiscal restraint. This is likely to have fueled the increase in the zone's common debt-to-GDP ratio from 67 percent at the introduction of the euro to 95 percent most recently.

THE STABILITY AND GROWTH PACT

In fact, a rise in public debt was anticipated as a potential risk and was the reason for signing the European Stability and Growth Pact (SGP) before introducing the euro. The Pact aimed to ensure that the level of public debt remained below 60 percent and that new borrowing did not exceed three percent of GDP in normal times. Sanctions were to apply in the event of non-compliance, but these were never consistently imposed. As a result, over the years the monetary union was allowed to take on the character of a debt union. Revisions to the Pact's rules introduced between 2011 and 2013 in response to the Greek sovereign debt crisis could do little to change this (for a guide to European economic governance, see Suttor-Sorel 2021). Whether the European Commission's (2022 and 2023) proposals for a comprehensive reform of the EU economic governance framework will make fiscal rules more binding is strongly doubted (Wyplosz 2022).

The Covid-19 pandemic even raised the European debt problem to a new level by deciding to finance the Next Generation EU recovery fund with common debt. The fund was established in support of countries particularly affected by the pandemic, such as Italy. The legal objection that the EU treaty does not provide for common debt was countered by referring to the extraordinary threat posed by Covid-19. Fiscal disciplinarians are now pinning all their hopes on this rule-breaking being a one-off exception. However, current discussion of how the rebuilding of war-ravaged Ukraine and the upcoming digitalization and decarbonization of the economy are to be financed gives reason to suspect that the breach has merely set a precedent.[1] Why the European capital markets have not yet shown any signs of growing unrest, as they did in the case of the UK, is not entirely clear and must remain unanswered here. Whatever the reasons, it would certainly be irresponsible to test the limits of public debt in the EU. What is needed instead are ideas on how to enforce fiscal discipline in the Eurozone.

However, this search for ideas must be preceded by a clarification of the causes for insufficient fiscal discipline. Two are worthy of consideration. First, as already mentioned, there is a tendency for countries to exploit the monetary union to communitize the adverse effects of excessive debt and to externalize currency and interest rate effects. Yet such behavior can only spread, because the sanctions provided for in the SGP are not imposed in practice. And this points to the second cause of the problem: The Pact communitizes the competence for imposing sanctions, too. As can be seen in many areas of life, however, collective competence means diluted accountability. As a result, threats of sanctions lose their credibility. Their enforcement suffers from relying on collective action, which often requires political compromises. There are thus two obvious strategies for remedying this flaw in the SGP governance. Either accountability is strengthened at the Community level, which, however, would most probably require the EU to be developed into a federal state or, alternatively, the competence and accountability for the imposition of sanctions is returned to the member states. In other words, Europe must choose between deeper political integration and some partial but targeted disintegration. Since the latter is the more realistic option, it is this that is considered below in more detail.

THE EUROPEAN STABILITY MECHANISM (ESM) AS A GOVERNANCE MODEL

The ESM is an intergovernmental organization, established in 2012 as a permanent firewall for the Eurozone. Indispensable to safeguard the financial stability of the Eurozone as a whole and of its member states individually, the ESM may provide stability support subject to strict conditionality. Such conditionality may range from a macro-economic adjustment program to continuous adherence to pre-established eligibility conditions. Importantly, decisions on the choice of instruments and the financial terms and conditions must be adopted by mutual agreement of the ESM member states. This means that each member state has a veto power, and that accountability is not diluted despite joint decision-making. However, the treaty establishing the ESM does not specify any sanctions to be imposed in case of non-compliant behavior by beneficiary states. Potential sanctions are limited to refusing support to a non-compliant member state if it would ask for support at a later occasion.

The governance of the ESM cannot be directly transferred to the SGP. The functions of these two institutions are too different. The ESM is called upon in cases of emergency, while the SGP is supposed to restrict member states' leeway in ongoing debt policy. Therefore, the governance of the ESM can only serve as a rough model for the reform of the SGP.

RESTRUCTURING THE SANCTIONING COMPETENCE OF THE SGP

The strengthening of accountability and shift of sanctioning competence to the member states can be achieved through rewarding compliant behavior rather than penalizing non-compliance. Instead of threatening member states with fines for excessive indebtedness, it would be more expedient to help them reduce excessive debt. At first glance, this reversal of payment obligations may seem unreasonable in that it runs counter to the principle that the "polluter" must pay for damages. However, putting a premium on compliant behavior has two key advantages. Firstly, it makes it possible to share the benefits and costs of debt reduction more fairly among member states. After all, a state with low debt also benefits if a highly indebted state reduces its debt and thus strengthens the stability of the common currency. Secondly, if a beneficiary state is mulling non-compliant behavior, the threat of an obligated state to withhold its agreed premium payment is more credible than the threat of the EU imposing a fine. After all, the European level lacks the sovereign power to collect a fine it has imposed. At best, it can reduce payments from the EU budget, but this requires a politically negotiated agreement. Such an intergovernmental agreement is not necessary if an obligated state refuses to pay a premium conditioned on compliant behavior because the beneficiaries in question did not behave compliantly. The withholding of the premium payment would merely mean acting in conformity with contracted rules. At most, it is conceivable that an obligated state might be willing to pay out the promised premium despite the beneficiaries' non-compliance. In this case, however, the government paying out must explain such generosity to its electorate. In other words, the government of an obligated state faces a credible threat of backlash if it fails to comply with its sanctioning obligation.

The proposed reform of the SGP could function as follows. First, the EU member states are divided into two groups. Countries with above-average public debt ratios are considered financially weak, while countries with below-average ratios are regarded as financially strong. The latter, which thus become "donor countries," are then obliged to make conditional transfer payments to the former, now "recipient coun-

[1] In an interview with the FAZ (2023), EU Economic Affairs Commissioner Paolo Gentiloni openly advocates new EU debt.

Table 1

Illustration of the Debt Reduction Plan, 2021

	GDP in €m, 2021	Public debt in €m, 2021	Public debt ratio as percent of GDP, 2021	Public debt at average EURO19-ratio	Over-hanging public debt 2021	Transfer in 2021	Debt Reduction/ Increase	Resulting public debt in 2021
AUT	406,148	334,260	82.3	387,465		1,380	1,380	640
BEL	502,312	548,524	109.2	479,205	69,319	-693	-2,080	546,445
DEU	3,601,750	2,470,801	68.6	3,436,070		12,238	12,238	2,483,038
ESP	1,206,842	1,427,694	118.3	1,151,327	276,367	-2,764	-8,291	1,419,403
EST	31,445	5,534	17.6	29,998		107	107	5,641
FIN	251,520	182,100	72.4	239,950		855	855	182,955
FRA	2,500,870	2,820,981	112.8	2,385,830	435,151	-4,352	-13,055	2,807,927
GRC	181,675	353,357	194.5	173,318	180,040	-1,800	-5,401	347,956
IRL	426,283	236,161	55.4	406,674		1,448	1,448	237,609
ITA	1,782,050	2,678,422	150.3	1,700,076	978,346	-9,783	-29,350	2,649,071
LTU	56,179	24,550	43.7	53,595		191	191	24,741
LUX	72,295	17,712	24.5	68,969		246	246	17,958
LVA	33,696	14,691	43.6	32,146		114	114	14,806
MLT	14,983	8,435	56.3	14,293		51	51	8,486
NLD	856,356	448,731	52.4	816,964		2,910	2,910	451,640
PRT	214,471	269,161	125.5	204,605	64,556	-646	-1,937	267,224
SVK	98,523	61,281	62.2	93,991		335	335	61,616
SVN	52,208	38,895	74.5	49,807		177	177	39,072
ZYP	24,019	24,259	101.0	22,914	1,345	-13	-40	24,219
Euro19	12,313,624	11,747,197	95.4		2,005,123	0	-40,102	11,707,095

Source: Author's calculations with data from Eurostat.

tries." As part of the plan to reduce public debt, donor and recipient countries conclude a contract at the intergovernmental level. Under this contract, donor countries are given the right to withhold their share of an agreed transfer payment if the beneficiary is non-compliant. The right to impose sanctions in the event of contract violation is thus reserved for the donor countries and not ceded to EU institutions.

To be even more specific, let us define "overhanging" public debt as that part of member states' debt that exceeds the Eurozone's average debt ratio. The recipient countries are then required to reduce a given percentage of their overhanging debt each year. If this is done, they are reimbursed by the donor countries with a transfer payment for a specified proportion of the reduced debt. If, for example, the minimum percentage of reduction were set at 3 percent and the reimbursed proportion at one-third, the recipient countries would be obliged to reduce their overhanging public debt by at least 2 percent per year on a net basis. The amount donor countries are obliged to contribute would be based on their economic strength, because in the European context GDP is considered the measure of ability to pay. To make it easier for donor countries to finance their payment obligations, they would be allowed to borrow the relevant amounts without violating the SGP.

To what extent would the rewarding of compliant behavior outlined above be open to abuse? Could it be exploited by a country intent on a deliberate breach? In theory, yes, but in practice, unlikely. The direct cost that a non-compliant country would have to bear is the loss of the agreed premium payments. By design, this cost increases with the size of the overhanging debt and vanishes with a vanishing overhang. By contrast, the benefit of non-compliant behavior is independent of the overhang's size. Therefore, when the overhang vanishes, a costless advantage beckons. This consists of the deferred perpetuity of debt-reduction premium payments on the increase in non-contractual debt. Hence, the possibility of abuse cannot be dismissed out of hand. However, it can be qualified. Firstly, the benefits of abuse can be reduced by extending the phase during which previously non-compliant countries must demonstrate compliance before donor countries return to paying debt reduction premiums. Secondly, non-compliant countries will realize that they are curtailing their own budgetary flexibility to their own detriment as debt and interest payments increase.

AN ILLUSTRATION WITH DATA

How the proposal might function is briefly demonstrated with data from 2021 (see Table 1). For the sake of simplicity, it is assumed that a minimum percentage of debt reduction of three percent and a reimbursement rate of one-third have been agreed, and that the recipient countries manage to reduce their overhanging public debt by exactly 3 percent. The parameters mentioned would of course have to be negotiated; those used here are merely for illustrative purposes. It is clear that the choice of the reimbursement rate determines not only the extent of the redistribution between donor and recipient countries but also the strength of the sanction threat and thus the incentive for compliance on the part of the recipient countries.

In 2021, GDP in the euro area was €12.3 trillion and the average public debt-to-GDP ratio was 95.4 percent. Countries with above-average ratios were Belgium (109 percent), Cyprus (101 percent), France (113 percent), Greece (195 percent), Italy (150 percent), Portugal (126 percent), and Spain (118 percent). All these would have been classified as recipient countries. Their combined debt overhang amounted to a total of €2.0 trillion. Under the outlined plan, the recipient countries would have to reduce their overhanging public debt by 3 times €20 billion. In return, they would receive €20 billion from the donor countries. Germany, Europe's most important donor country, would have to contribute €12.2 billion. Though this sum may appear high, it merely reflects the country's economic strength. The sum would be the price Germany would have to pay for improving financial stability in the Eurozone. The reduction and alignment of individual countries' public debt ratios would significantly ease the job of the European Central Bank.

POLICY CONCLUSION

The EU sees the need to reform its fiscal rules (European Commission 2022). The only question is how. In academia, various models are being discussed, including a communitized European servicing of interest for the public debt attributable to the Covid-19 pandemic (Giavazzi et al. 2021), a change of focus away from debt and deficit ratios toward expenditure ratios, and a differential treatment of consumption and investment spending (Gros and Jahn 2020, with references to the literature). In contrast, the Commission wishes to strengthen the fiscal surveillance process and negotiate a separate adjustment path with each member state. This policy approach is based on the view that "one-size-fits-all" fiscal rules have not proved politically and economically viable (Paolo Gentiloni in his interview with FAZ 2023).[2]

[2] The Commission's original 2022 proposal was to replace rigid limits on public debt and fiscal deficits with country-specific debt reduction plans. In contrast, the proposals published in April 2023 require countries with deficits exceeding 3 percent to reduce debt by at least 0.5 percent per year. Reichlin (2023) criticizes this tightening with the argument that "rigid rules that fail to adapt to changing circumstances either harm the countries attempting to follow them or are violated systematically, undermining the credibility of the rule-setting body."

In none of these reform models, however, is it clear how compliance with fiscal rules can effectively be enforced. To remedy this, this paper argues for shifting the sanctioning competence for rule-breaking behavior from the Community level to the intergovernmental level. Such a shift would strengthen the accountability for enforcing fiscal discipline and increase the credibility of the sanction threat. However, the shift would require a switch from penalizing non-compliance toward rewarding compliance. That would not mean, though, that all the fiscal rules already in place should be abandoned. After all, it would still be necessary to have rules for dealing with cyclical fluctuations and macroeconomic shocks. The Maastricht criteria would also continue to be needed as a threshold for joining the monetary union. After all, countries must be kept from first pursuing an excessive debt policy and then joining the Euro in the expectation that they will be helped to reduce their debt.

REFERENCES

European Commission (2022), *Communication on Orientations for a Reform of the EU Economic Governance Framework,* COM(2022) 583 final, https://data.consilium.europa.eu/doc/document/ST-13828-2022-INIT/en/pdf.

European Commission (2023), *Proposal for a Regulation of the European Parliament and of the Council on the Effective Coordination of Economic Policies and Multilateral Budgetary Surveillance and Repealing Council Regulation (EC), No 1466/97*, COM(2023) 240 final, https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52023PC0240.

Frankfurter Allgemeine Zeitung (FAZ, 2023), "Wir brauchen neues Geld", 29 January, https://www.faz.net/aktuell/wirtschaft/mehr-wirtschaft/paolo-gentiloni-im-interview-eu-schulden-als-antwort-auf-us-milliarden-paket-18638385.html.

Giavazzi, F., V. Guerrieri, G. Lorenzoni and C. H. Weymuller (2021), *Revising the European Fiscal Framework*, 23 December, https://www.governo.it/sites/governo.it/files/documenti/documenti/Notizie-allegati/Reform_SGP.pdf.

Gros, D. and M. Jahn (2020), *Benefits and Drawbacks of an "Expenditure Rule" As Well As of a "Golden Rule" in the EU Fiscal Framework*, European Parliament, Economic Governance Support Unit, Directorate-General for Internal Policies, PE 614.523.

Reichlin, L. (2023), *The Fight Over EU Fiscal Reform*, Project Syndicate, 5 June, https://www.project-syndicate.org/commentary/europe-an-commission-flawed-reform-of-stability-and-growth-pact-by-lucrezia-reichlin-2023-06?utm_source=Project percent20Syndicate percent20Newsletter&utm_campaign=bada51f589-covid_newsletter_06_07_2023&utm_medium=email&utm_term=0_73bad5b7d8-bada51f589-105732053&mc_cid=bada51f589&mc_eid=f03f6e7c93&barrier=accesspaylog.

Suttor-Sorel, L. (2021), *Navigating the Maze – A Finance Watch Guide on How to Reform European Economic Governance*, Finance Watch, https://www.finance-watch.org/wp-content/uploads/2021/03/Navigating-the-maze-primer.pdf.

Wyplosz, C. (2022), "Reform of the Stability and Growth Pact: The Commission's Proposal Could Be a Missed Opportunity", *VoxEU Column*, 17 November, https://cepr.org/voxeu/columns/reform-stability-and-growth-pact-commissions-proposal-could-be-missed-opportunity.

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Making the Eurozone Function Again: A Solution for the European Debt Problem Is Hard But Not Impossible

KEY MESSAGES

- **The Eurozone is stuck in an inefficient equilibrium with high public debt and no policy discipline. The no-bailout rule is not credible**
- **This article proposes a radical two-stage solution for the restructuring of excessive public debt and to eliminate the incentives for undue public borrowing in the future**
- **"Restructuring" would amount to a Euro-wide collective retirement of excess debts. Calculations are presented for two alternative procedures**
- **Borrowing discipline would be restored by the introduction of a tax on subsequent borrowing if it violates a critical level, say a 100 percent debt-to-GDP ratio. This is called a "Tobin tax"**
- **The solution suggested, which could be compared with the US state-level rules of a balanced budget requirement, introduces radical policy discipline instead of relying on market discipline, which tends to come too late.**

The Eurozone's debt problem remains a top priority for a policy reform in the European Union. The public debt ratios relative to the gross domestic product in seven of the monetary union's member states continue to exceed the 100 percent level. It is not only high in Greece (193 percent), Italy (151 percent), and Portugal (127 percent), but also in Spain (118 percent), France (113 percent), Belgium (108 percent), and Cyprus (104 percent).

Why care about such high debt ratios? It is a matter of simple algebra: when the economic growth rate exceeds the market interest rate, debt ratios start declining over time. In the absence of such growth prospects, however, persistent national incentives for resisting reforms in spending push the problem into the future.

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To monitor and control national fiscal policies in the context of the common currency, the European Stability and Growth Pact—originally signed in 1997 and subsequently reformed several times—dictated that the budget deficit should not exceed 3 percent of GDP and that public debt shall not surpass 60 percent of GDP. Narrow-minded national interests, however, eventually circumvented the commitment to the collective aims of the monetary union. This state of affairs calls to mind the pioneering theory of coalitions developed by Mancur Olson, which addresses persistent conflicts between a coalition and the members of that coalition. Olson (1965) predicted that collectives typically face a commitment problem among their members, as the national benefit/cost analyses lead to the rejection of the interests of a collective in favor of national aims. In his 1961 paper on optimal currency areas, Robert Mundell, a Nobel Laureate in Economics also known as "the father of the euro," suggested that currency unions should recognize the risk of asymmetric demand shocks.

After the euro was created, it became evident that interest rate instability had been replaced by an incentive for excessive borrowing among the member states. Incentives were also distorted in banking. Ultimately, market forces—not the policymakers—signaled that enough was enough with Greece. The resulting German–French banking crisis had to be resolved in terms of the collective bailout operations of the other member states, the ECB and the IMF. The welfare loss to the Eurozone citizens was substantial.[1]

It was left to the ECB and its then-Chairman, Mario Draghi, to save the euro with his 2012 "whatever it takes" speech. His words carried enough weight to carry the day but could not make the Eurosystem function properly. Incentives had to be created for euro banks to finance their home states through the Long-Term Refinancing Operations (LTRO) program. Moreover, the quantitative-easing policy turned the ECB into the holder of a huge volume of junk bonds, raising serious questions about the legitimacy of its policies.

In the aftermath of the process, the ECB's rate on basic operations was reduced to zero, and the overnight rate for lending to banks was lowered to negative territory. The market rates of interest on the government debt of Germany and Finland turned negative, as safe havens were in great demand. Zombie firms were kept alive. Some fatal deficiencies were quite apparently embedded in the euro architecture. Understandably, they are related to the incentives created for the euro banks and to the demand for the collective bailout of the member states once a crisis is at the door.

[1] My research group of 12 economists had estimated that the welfare loss to the citizens of the Eurozone member states amounts to about 10 percent of GDP according to data comparing the performance of the Eurozone with that of the US economy up to 2014 (Kanniainen 2014).

In the Eurozone, the sovereign bond holdings of the European system of central banks amounted to €4,713bn when this paper was written.[2] The Eurosystem is tied to an equilibrium with inefficiencies in the functioning of the financial system, lack of policy discipline, and dearth of trust concerning the survival of the Eurosystem. The Targeted Longer-Term Refinancing Operations (TLTROs), a new instrument for monetary policy, was created in March 2021 to carry on with the unconventional monetary policies.

The European monetary union never recovered from the sovereign debt crisis of the 2000s. Currently, and in addition to the high debt of Greece, there are concerns about Italy's ability to pay its debts. Despite the lack of a solution to the debt problem, the ballooning inflation made the central bank go back to its traditional role. Its interest rates, which had not been raised for 11 years, have been raised several times in 2022 and in 2023, in a process that may not be yet over.

A POSSIBLE SOLUTION

In November 2022, the European Commission developed a set of orientations for a reform of the economic governance framework. The purpose was to strengthen debt sustainability and promote sustainable and inclusive growth among all member states. In March 2023, the European Council endorsed these guidelines and agreed on a reform of the EU economic governance framework. The national medium-term plans of member states with a public debt-to-GDP ratio above 60 percent should ensure that the ratio is kept on a steadily diminishing course.

Earlier, several academic initiatives suggested policy reforms, including a new debt instrument suggested by Brunnermeier et al. (2011), consisting of European safe bonds (ESB). The purpose of such bonds is to eliminate the perverse incentives that tie euro banks to sovereigns. The debt would be sliced into senior and junior claims, and any failure of a sovereign state to honor its debts would be absorbed by the holders of the junior security. The banks could thus avoid being overexposed to national bonds. The trouble with such a proposal is that the highly indebted countries would be able to continue issuing debt at favorable terms. The principle of market discipline would not kick in. Moreover, the systemic risk would remain. Therefore, the reform would not be crisis-proof, and the no-bailout rule would perhaps not be effective.

Another proposal was made by Fuest and Heinemann (2017) with the purpose of reinstating market discipline and the no-bailout rule. If the member state's structural budget deficit exceeds 0.5 percent of GDP, its excess debt would be issued in the form of accountability bonds, i.e., junior bonds that would lose their value as soon as the issuing government defaults on "regular" bonds. The ECB would not be allowed to buy accountability bonds. The problem, however, remains that the proposal tackles new debt, but appears not to solve the issue of existing debt. Moreover, the no-bailout rule had failed earlier. Why would it not re-enter through the back door?

One more proposal was made by Vihriälä (2020). He suggested debt relief for the excessive debt of Eurozone member countries by transforming part of the debt into perpetual zero-interest debt in the balance sheet of the ECB. The total debt would have to be "big enough." As a silent feature, the suggestion is not a free lunch. Instead, all euro member countries would implicitly finance the package through the capital their central banks hold in the ECB. The problem with the suggested solution is that no barriers are provided against the moral hazard incentive of accumulating additional debt in the future.

The Eurosystem problem arises fundamentally from the lack of credibility of the no-bailout rule and the resulting moral hazard arising among the member states and within the banking sector. The earlier proposals appear not to be crisis-proof. While they appear to rely on market incentives, it is unclear what would make the ECB stay out of the game if a crisis emerges. It could not stay passive in 2021 when the Covid-19 crisis swept the world.

The procedure proposed in this paper is much more strict than the previous ones in emphasizing policy discipline instead of relying solely on market discipline. It suggests a policy reform in a two-stage procedure. In particular, it suggests a final and once-for-all restructuring procedure of the public debt of the highly indebted member states, as well as a punitive tax on new debt if a member country violates the suggested limit.

IT IS DIFFERENT IN THE USA

The European trauma stems from the fact that no fiscal rule can replace policy discipline in safeguarding a proper set of incentives. Rules do not function if the incentives are distorted and if no plausible sanctions are levied on fiscally wayward member states. It is altogether different in the United States, where each state is, in practice, subject to balanced budget rules. With the exception of Vermont, all states are subject to deficit or debt limitations. Such policy discipline does indeed function: the median debt ratio is 16 percent across states, with a range of +/− 10 percent.[3] The policy discipline arises from the no-bailout principle, which has been effectively in operation since the no-bailout decision of the US Congress in the 1840s, as explained

[2] https://www.ecb.europa.eu/pub/annual/balance/html/ecb.eurosystembalancesheet2021~f9edd2ff57.en.html. The Asset Purchase Program (APP) amounts to €3,300 bn.

[3] The highest rate in 2019 was 27.83 percent in Kentucky, while the lowest was in the District of Columbia at 3.94 percent (source: Statista). The Illinois interest rate margin of exceeds 5 percent, but the mistrust is due to its underfunded retirement plan.

by Sargent (2012). As a result, several states have defaulted once the decision came to be tested. Policy discipline is reinforced by the Fed in that it stays away from the market for state borrowing.[4]

EUROZONE: RESTRUCTURING AND TOBIN TAX

In the Eurozone, debt restructuring is feasible under the current rules of the European Stability Mechanism.[5] They are designed, however, to address the problems of a single country. What this article suggests is the restructuring of the whole Eurozone. "Restructuring" in the suggestion means "a euro-wide collective, once-and-for-all mutual bailout of excess debts" instead of just "debt relief." As previously mentioned, the safe bond and accountability bond suggestions for a reform did not address the burden of the existing debt.

To make the euro function again, however, debt restructuring would not suffice. What is also needed is to eliminate the incentives for member states to accumulate excessive debt in the future. The present suggestion differs from the safe bond or accountability bond approaches in that it effectively imposes the no-bailout principle.

Two steps are envisaged. In the first step, the portion of the debt exceeding the 100 percent debt-to-GDP ratio will be retired jointly by all member states. All member states participate in the restructuring, including the indebted member states themselves in proportion to the capital key of their share in the ECB. The calculations show clearly that the debt problem is indeed a tough one. Such a mutual bailout leads to a very heavy burden on some of the member states. Therefore, an alternative calculation is presented where the "acceptable" debt ratio is taken to be higher, 127 percent. Then, only the Greek and Italian excess debts are mutually eliminated.

In the second stage, a tax will be imposed on a member country in case its debt ratio climbs above the threshold. The tax, which I call the "Tobin tax," can be collected from the investors who buy the debt or, alternatively, from the member's pandemic recovery fund (or any other transfer program within the European monetary union). For the tax incidence, it does not matter how the tax is collected. The responsibility of accepting the tax should be introduced into European legislation, and it goes without saying that the tax rate must be sufficiently high to work towards imposing policy discipline. The debt program should be implemented through "backward induction:" first the tax in the legislation, and then debt restructuring.

HOW MUCH MONEY IS INVOLVED?

In Table 1, I present the public debt figures for the euro member countries, the GDP and the excess debt, i.e., the portion that exceeding the 100 percent of GDP level (Excess debt (1)) or, alternatively, the 127 percent level (Excess debt (2)).

In Table 2, I present the capital keys and the national shares of the suggested programs of restructuring.

The total bill for restructuring under Excess debt (1) amounts to €1,701.0bn. This can be managed by the ECB writing off the equivalent amount of the member states' bonds it holds.

In both proposals, the financial burden needed to carry out the program is huge. It could, however, be compared with the Recovery and Resilience Facility (RRF), which is the largest component of Next Generation EU (NGEU), the European Union's landmark instrument for recovery from the Covid-19 pandemic. The RRF will provide grants of up to €312.5bn and loans of up to €360bn at 2018 prices, totaling up to €750bn (Bruegel 2022).

The 60 percent rule of the Growth and Stability Pact was not derived from macroeconomic theory, nor is the suggested 100 percent debt ratio in this article. Rather, it arises from the psychology of the markets in pricing public debt. It is the markets that ultimately decide on the various countries' likelihood to repay their public debt. Moreover, it should be pointed out that the suggested borrowing limit does not prevent

[4] The Covid-19 pandemic prompted the Fed to issue a statement that it can help the states. Illinois resorted to this opportunity, borrowing $3.2 bn from the Federal Reserve, which may have been a potential mistake of the Fed.
[5] Gross (2017) suggested that the ESM already constitutes, to a large extent, a "European Monetary Fund."

Table 1

Calculating the Excess Debt (1) and the Excess Debt (2)

Country	Debt € bn	GDP € bn	Excess debt (1) € bn	Excess debt (2) € bn
Greece	353.4	182.8	170.6	121.24
Italy	2,677.9	1,775.4	902.5	433.14
Portugal	269.2	211.0	58.2	
Spain	1,427.2	1,205.1	222.1	
France	2,813.1	2,508.9	304.2	
Belgium	548.7	506.2	42.5	
Cyprus	24.3	23.4	0.9	
Total			€1,701.0 bn	€544.38 bn

Source: Author's compilation.

Table 2

The Capital Keys and the National Shares of the Restructuring Programs

Country	Capital key	Restructuring burden € bn (Program 1)	Restructuring burden € bn (Program 2)
Belgium	0.36432	61.97	1.98
Germany	26.3615	448.41	143.50
Estonia	0.2817	4.79	1.53
Ireland	1.6934	28.80	9.20
Greece	2.4735	42.07	13.45
Spain	11.9246	202.83	64.89
France	20.4243	347.42	111.19
Italy	16.9885	288.97	92.44
Cyprus	0.2152	3.66	1.17
Latvia	0.3897	6.63	2.12
Lithuania	0.5788	9.85	3.15
Luxembourg	0.3294	5.60	1.79
Malta	0.1049	1.78	0.54
The Netherlands	5.8604	99.69	31.90
Austria	2.9269	49.79	15.89
Portugal	2.3405	39.81	12.73
Slovenia	0.4815	8.19	2.61
Slovakia	1.1452	19.48	6.23
Finland	1.8369	31.25	9.96
Together		€1,701.0 bn	€544.38 bn

Source: Author's compilation.

additional borrowing: it allows it, but conditional on the growth of the economy.

POLICY CONCLUSION

The Eurozone will continue to suffer from financial fragility for as long as the central bank must intervene in financial markets to keep the euro alive. Market discipline in pricing public debt is powerless, and the bond prices are artificial. Such mispricing is detrimental to the investment strategies of European firms and explains why the Eurozone has a gloomy future in the minds of the investors.

In the current article, calculations are presented for a once-and-for-all mutual debt retirement program for the portion of the debt that exceeds the 100 percent, or alternatively 127 percent, of GDP ratio. To carry out the suggested program, all member states would be involved in the collective program, including the debtor countries themselves.

The calculations show that the burden of restructuring would fall particularly heavily on Germany and France. These were, however, the member states that benefited most from the collective bailout of their banks during the Greece crisis.

Clearly, the national sovereignty of the member states may pose a problem under this proposal. One can, however, ask how the markets will interpret such a lack of commitment to the common target of fixing the euro if a member state refuses a tax on its excessive borrowing.

Cross-country transfers have not been unusual within the Eurosystem; they are rather the rule. But this proposal opens up a different future. Imposing a strict limit in the sense of a "Tobin tax" on excessive indebtedness may provide sound policy discipline, restoring trust and credibility in the financial system. Some tend to think that creating the euro was the error of the century in the first place. Maybe it has never functioned properly. Maybe it sometimes did. If the purpose is to make the Eurozone function again, something radical needs to be done.

REFERENCES:

Bruegel (2022), *European Union Countries' Recovery and Resilience Plans*, 10 June, https://www.bruegel.org/dataset/european-union-countries-recovery-and-resilience-plans.

Brunnermeier, M. K., L. Garicano, P. Lane, M. Pagano, R. Reis, T. Santos, D. Thesmar, S. van Nieuwerburgh and D. Vayanos (2011), European Safe Bonds (ESBIES): *Executive Summary, European Safe Bonds (ESBies): Executive Summary*, Bendheim Center for Finance.

Fuest, C. and F. Heinemann (2017), "Accountability Bonds – Reconciling Fiscal Policy Based on Market Discipline with Financial Stability", *EconPol Policy* Brief 03, 1-7.

Gross, D. (2017), *An Evolutionary Path for a European Monetary Fund*, The Economists' Voice, Berlin.

Kanniainen, V. (2014), "The Future of the Euro: The Options for Finland", *CESifo* Forum 15(3), 56-64.

Mundell, R. A. (1961), "A Theory of Optimum Currency Areas", *American Economic Review* 51, 657-665.

Olson, M. (1971), *The Logic of Collective Action*, Harvard University Press, Cambridge, Mass.

Sargent, T. J. (2012), "Nobel Lecture: United States Then, Europe Now", *Journal of Political Economy* 120, 1-40.

Vihriälä, V. (2020), "Make Room for Fiscal Action Through Debt Conversion", *VoxEU CEPR*, 15 April.

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Making EU Economic Governance Fit for Purpose: Investing in the Future and Reforming the Fiscal Rules While Decentralizing and Democratizing

KEY MESSAGES

- **The EU needs a permanent EU debt facility to address its many existential challenges, including climate change, energy, inequality, and security related to the Ukraine crisis**
- **The EU's fiscal rules need to be fit for purpose, meaning that rather than primarily targeting debt-reduction they need to be focused on investment to meet the EU's many challenges**
- **Germany is the elephant in the room when it comes to obstacles to fit-for-purpose fiscal rules and EU level investment capacity**
- **The European Semester should be decentralized and democratized at the national level to ensure effective national "ownership" and legitimacy. The EU's economic governance should also be democratized through strategic dialogues focused on macroeconomic policy and industrial policy**
- **The dangers of populist extremism can be addressed only by developing common solutions that recognize the interdependence of the EU's economies and the need to address the EU's many existential challenges through EU solidarity, including EU leveldebt and fit-for-purpose fiscal rules**

In the past few years, the EU has been confronted with multiple crises that have led to a major rethinking of its economic governance. The decade of the 2010s was defined by the response to the eurozone crisis, focused on deficit and debt reduction. The "governing by rules and ruling by numbers" of the Stability and Growth Pact was first reinforced through belt-tightening austerity and structural reforms that didn't work and were slowly reversed over time as EU institutional actors recognized the need for growth in 2012, flexibility as of 2014, investment beginning in 2015, and social rights in 2017 (Schmidt 2020a).

When the Covid-19 crisis hit in 2020, Eurozone economic governance was transformed. Member-states engaged in expansive measures to shore up their economies and protect peoples' lives and livelihoods; the Commission suspended the fiscal rules along with state aid rules and created SURE to support employment; and the Council agreed to Next Generation EU and the 800bn euro Resilience and Recovery Fund (RRF) focused on the green transition, the digital transformation, and addressing social inequalities. In the meantime, the Commission had also revamped the European Semester, changing it from top-down negative conditionality to bottom-up positive conditionality, with more carrots and fewer (but better) sticks (Schmidt 2020b; Vanhercke and Verdun 2022).[1]

These measures all contributed to the largely successful management of the potentially disastrous economic fallout from the pandemic (Schmidt 2022). This was followed, however, by the inevitable inflationary pressures linked to restarting economies with broken supply chains, leading to the cost-of-living crisis. Then came the security crisis resulting from the Ukraine war, and the concomitant energy crisis which only added to the inflationary pressures. Last but certainly not least has been the on-going existential crisis related to climate change, with the uncalculatable human and environmental costs linked to increasingly hot summers, intense forest fires, cataclysmic storms, and rising seas.

How the EU responds to the on-going challenges driven by these crises will determine its future. The question confronting the EU today is: will it go back to the status quo ante of the fiscal rules or will it reform the rules significantly? Will it leave the temporary RRF as a one-shot emergency investment or will it add new EU level debt vehicles that would enable it to address its many crises while taking the necessary steps towards a more sustainable, equitable and just transition? The EU's answer will not only determine its future economic trajectory but also its political one. A return to the failed governance of the Eurozone, with austerity and without the investment vehicles necessary to confront the EU's many challenges, will also produce the negative spill-overs that fuelled the

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[1] Negative conditionality required rapid fiscal consolidation to meet the deficit and debt criteria of the Stability and Growth Pact along with structural reforms focused on deregulating labour and cutting the welfare state or face enhanced surveillance procedures by the Commission and the threat of sanctions. Positive conditionality involves RRF grants (carrots) for green, digital, and social projects proposed by countries in exchange for structural reforms focused on addressing national economic and administrative problems, as well as social inequalities.

rise of populist anti-system politics, and will make EU level coordination to resolve its many crises increasingly difficult.

EU-LEVEL INVESTMENT CAPACITY TO ADDRESS EUROPE'S MANY CHALLENGES

Europe needs permanent EU level fiscal capacity for investment and redistributive purposes to address the risks with regard to sustainability, social issues, and security. The sustainability risks are largely focused on ensuring the greening of the economy and the digitalizing of society, already targets of the temporary Resilience and Recovery Fund. But much more than the RRF would be necessary here, given the need for vast public expenditure on the green transition alone to fund the transformations of energy, transport systems, and buildings as well as to spur private sector investment in these areas. Such funding is required to ensure that all European member states, and not just the richer ones, can invest in all the ways necessary. With the reapplication of the SGP fiscal rules and in the absence of any EU level investment fund, only a handful of member states would be able to meet the EU's green investment targets, were they so inclined (Mang and Caddick 2023).[2] And without any such funds, it is equally doubtful that countries with less inclination to meet the targets would even try, in particular Central and Eastern European countries that face particular challenges with regard to decarbonization, given their reliance on coal-powered plants and in some cases their political inclinations. The lack of significant investment might not be felt immediately. But once the RRF runs out in 2026, the national spending gap for green investment will in subsequent years become much more problematic for highly indebted countries in view of the fiscal rules, however they are reformed (Tordoir 2023).

The United States, with its massive investment initiatives such as the CHIPS Act for semi-conductors and the $369bn Inflation Reduction Act (IRA) for energy security and climate change, is banking on the multiplier effects of public targeted investment to spur private sector investment. Initially, the EU did little in response other than to complain about the unfair competition and about European companies relocating to take advantage of US subsidies. Most recently, though, the European Commission proposed the Green Deal Industrial Plan, with production targets for green manufacturing, temporarily relaxing state aid rules, and promoting skills development, along with "STEP" (Strategic Technologies for Europe Platform), which repurposes existing funds and won't have the capacity to support the necessary industrial transformation in the EU.[3] As currently configured, then, the Green Deal Industrial Plan will not be able to match the US in terms of the money or the multiplier effects (given the lack of a Capital Markets Union to galvanize venture capital).[4] Moreover, the EU proposals lack the kind of social conditionality tied to the US IRA, linked to such things as collective bargaining, good wages, job creation, investment in training and apprenticeships, taxation on excess corporate profits, bans on corporate stock buy-outs and excessive share-holder dividends.

Equally importantly, although the loosening of the rules on state aid through the "Temporary Crisis and Transition Framework" is key to unleashing more investment, in the absence of a major EU level funding vehicle it risks unbalancing the "fair playing field" which is so important to the Single Market. Easing state aid rules on its own leaves the way open to uneven investment, as richer member states with the fiscal space (as per the fiscal rules) will invest but member states which are poorer and/or lack the fiscal space won't and/or can't (Mang and Caddick 2023).[5] For the moment, in short, the EU still lacks the major resources or the instruments to combat the twin challenges of decarbonization and digitalization in an effective manner, despite lots of "blah, blah, blah" (as Greta Thunberg would say).

Even before the impetus coming from the current US initiative, many had called for permanent EU level debt that could provide investment funds for all member states on a regular basis, even if this required treaty change (Cornago and Springford 2021; De Angelis et al. 2022; Schwarzer and Vallée 2020). Think of a permanent EU level debt facility as an EU wealth fund, akin to national sovereign wealth funds, which issues debt on the global markets to use to invest through grants to the member states in education, training, and income support; in greening the economy and digitally connecting society; as well as in big physical infrastructure projects (Lonergan and Blyth 2018; De Angelis et al. 2022). Another way to think of such funds, given continued resistance to EU level debt by some member states would be as "temporary just transition funds" targeting green and productive reforms and investments (Sustainable Finance Lab 2022) or as a permanent EU Climate and Energy Investment Fund (Heimberger and Lichtenberger 2023).

Such an EU level debt facility could also be used for solidarity purposes through a range of innovative EU funds targeting the EU's socio-economic needs. Examples include a long called-for common European unemployment reinsurance scheme (Enderlein

[2] Mang and Caddick (2023) estimate that only four countries representing only 10 percent of EU GDP would have sufficient fiscal space within their projected deficit and debt limits to meet the 1.5 degree aligned climate targets whereas eight countries representing 50 percent of EU GDP would not be able meet the targets without breaching the 3 percent deficit limit, and the rest would have difficulty meeting them.

[3] See the critique by Climate Action Network Europe (CAN), https://caneurope.org/the-step-proposal-recovery-funds.

[4] See comments by Shahin Vallée, Euractiv June 6, 2023, https://www.euractiv.com/section/economy-jobs/news/european-sovereignty-fund-commissions-best-chance-or-empty-shell/.

[5] As it is, by the latest figures, Germany has announced over half of approved state aid (50 percent), followed by France (23 percent) then Italy (7.8 percent). *Euractiv* June 19, 2023.

et al. 2012), possibly modeled on the example of the temporary SURE (short-term employment schemes) social bonds, issued during the pandemic with great success;[6] a refugee integration fund for municipalities (Schwan 2020); beefing up support for the Asylum, Migration and Integration Fund to focus on the extra costs for social services, integration, resettlement, and retraining needs (as opposed to financing returns),[7] in particular in light of the Ukraine crisis and the uptick in migration via the Mediterranean; an EU fund for "just mobility" focused on brain drain (Hasselbach 2019); a fund for early childhood investment (Hemerijck 2023); or even a guaranteed (basic) minimum annual income (Lonergan and Blyth 2018).[8] But beyond these funds for socio-economic purposes, also needed is a common EU level investment fund to address security risks more generally, beyond (or as part of) the 2 percent pledged by NATO members, while Ukraine needs a fund all of its own to help it rebuild, modeled along the lines of the Marshall Plan, in which the EU would be a major donor among others (Eisen et al. 2023).

THE REFORM OF THE FISCAL RULES

Beyond this, the reform of the fiscal rules is of the essence, given the problems that would come from reinstating the unreformed rules (Jurgeleit et al. 2022). The rules of the Stability and Growth pact, as reinforced between 2010 and 2012 through the six-pack, the two-pack, and the Fiscal Compact, inflicted significant damage on the Eurozone's growth prospects as a result of their procyclical nature, and in particular for member states most affected by the excessive debt procedures—not to mention those in conditionality programs (Schmidt 2020a). But although by the latter half of the 2010s the economic situation across Europe had improved while more was done to "socialize" the European Semester, to make it better adapted to member states' different needs (Zeitlin and Vanhercke 2018), the austerity budgeting baked into the rules nevertheless entailed that those without the fiscal space could not invest (see Southern Europe) while those with the fiscal space did not invest (Northern Europe) (Schmidt 2022).

In response to the Covid-19 crisis, the Commission's mission was transformed. It largely left behind its roles of enforcer and then moderator in the Eurozone crisis to become promoter of the new industrial strategy initiatives through the National Resilience and Recovery Plans (NRRPs), in which grants (and loans) from the RRF were to be disbursed to eligible member states in exchange for meeting certain conditions. The European Semester is now a much more bottom-up exercise emphasizing member-state buy-in through greater "national ownership" of the plans, at the same time that the Commission still exercises oversight via conditionality—such as determining whether certain pre-agreed "milestones" in terms of economic reform are met before disbursing the next tranche of funding. This "conditionality" is a far cry from what it was during the early phase of the Eurozone crisis, however, when structural reform meant largely cutting welfare states and deregulating labor markets. It is focused on attacking national economic vulnerabilities and administrative hindrances as well as social "fairness" by addressing inequalities of opportunities as well as of outcomes. On the whole, NRRPs have worked effectively, although they have worked best in those countries that have taken ownership of the process, for the most part countries that were beneficiaries of RRF grants (Zeitlin et al. 2023).[9]

The main question for now is what will happen with the reform of the fiscal rules, in particular with the end of the temporary RRF, especially if no permanent EU level fiscal capacity is forthcoming. Will this mean a return to the "sticks" without any "carrots"? And if so, would the European Semester still be able to succeed in its efforts to redirect member-states toward the green and digital transitions as well as addressing social concerns?

In the past few years, many policy analysts had called for the rules to be permanently suspended, to be replaced, say, by a set of "fiscal standards" to assess sustainability in context (Blanchard et al. 2021); or by a "Golden Rule" in which public investments beyond those that are part of NGEU should not be counted toward deficits or debt when deemed to benefit the next generation (e.g., investments in education and training, greening the economy, digitalizing society, and improving the physical infrastructure) (Bofinger 2020; van den Noord 2023). Others have proposed eliminating the debt brake embedded in national constitutional legislation (that demands that investment by Eurozone countries be funded by current tax revenues rather than bond issues), to

[6] SURE raised €6.55 billion through a 15-year social bond, with total funding coming to €98.4 billion out of a maximum funding envelope of €100 billion, making the Commission by its own account one of the world's most significant environmental, social, and governance (ESG)-label issuers, accounting for 16 percent of global social bond issuance in 2021, https://commission.europa.eu/strategy-and-policy/eu-budget/eu-borrower-investor-relations/sure_en.

[7] The EU AMIF fund program budget in a nutshell between 2014 and 2022 shows co-financing for 425,870 returnees as opposed to funding for 51,581 places in reception accommodation infrastructure, 89,969 trained in asylum-related topics, and 176,998 participations in pre-departure measures, https://commission.europa.eu/strategy-and-policy/eu-budget/performance-and-reporting/programme-performance-statements/asylum-migration-and-integration-fund-performance_en#programme-in-a-nutshell.

[8] Paid for, say, by the "digital dividend," by having digital platforms pay for our data (which means establishing our property rights on our data, licensing private corporations to use it)—Lonergan and Blyth (2018).

[9] Zeitlinet al. (2023) found in their study of the implementation of the NRRPs in eight countries that whereas Portugal, Spain, Croatia, and Slovakia used the RRF to the fullest, for ambitious plans with significant social policy components, while Italy was a only bit less ambitious, mainly on the social side. Belgium lacked ambition while Estonia and Latvia also lacked ownership, arguably because of lower grant allocations and higher expenditure commitments. In contrast, Northern European countries such as Germany, the Netherlands, and Austria had lower levels of ambition and of ownership, as well as little in the way of grant allocations.

encourage countries to invest in infrastructure or to develop a green economy (De Grauwe 2016). Research has shown that in Germany during the Eurozone crisis years, adherence to the debt brake (along with fetishism for the "schwarze null") ensured not only that federal spending did not keep up with an expanding economy, despite years of budgetary surpluses, but also that in Germany's federalized system—with the Länder responsible for university education, and local governments for local infrastructure—the rules limited new investment for the poorer (and therefore already more indebted) regions and localities, thereby increasing inequalities among sub-federal units while stunting growth potential (Roth and Wolf 2018; Schmidt 2020a). It is also worth noting that the OECD in its *2016 Economic Outlook* used the example of Germany to demonstrate that debt-financed public investment would have no long-term effect on debt-to-GDP ratio (OECD 2016).

The Commission's proposal for reform of the fiscal rules (floated in November 2022, revised at the end of April 2023) offers a modest revision of the numbers-based rules of the Stability and Growth Pact, focused on debt sustainability. It keeps the numerical targets, notably with regard to no more than 3 percent deficit and 60 percent debt (eliminating only the 1/20th a year rate at which excess debt above 60 percent would have to be reduced yearly), most likely because the Commission was cognizant that Treaty change would be difficult, since the rules and numbers of the SGP are written in so many different places in the Treaties and legislation (Jones 2020). This would mean that as of 2024, the 14 countries with budget deficits above 3 percent of GDP, representing 70 percent of GDP of the EU, would be pushed to reduce their deficits by 0.5 percent of GDP or even 0.7 percent for four countries (Greentervention 2023). This said, the Commission has recommended longer time periods for meeting the numerical targets and more country-specific sensitivity in the application of the rules. But it did not adopt the golden rule on investment on the grounds that it would be difficult to assess what might count. It did little to link rules-reform to the NGEU targets on green and digital, other than vaguely suggesting that countries would "benefit from a more gradual fiscal adjustment path" if they were to commit to implementing "important reform and investment measures."[10] And it made no related proposal for a permanent EU level debt facility, seeing little agreement coming from a divided Council itself as a missed opportunity.

Within this overall scenario of a proposed return to a modestly revised SGP with no permanent EU level debt facility, many analysts worry about the potentially negative effects on member state economic health as well as on investment for the twin green and digital transitions (Bertram et al. 2022; Hafele et al. 2023; Jurgeleit et al. 2022; Pekanov and Schratzenstaller 2023; Greentervention 2023). In response, some have called for revising the mathematical models and statistical instruments of the fiscal rules, such as by ensuring against potential procyclical effects by replacing the structural budget balance rule with an expenditure rule, and the output gap methodology used for the former with the potential output growth methodology used with the latter (Bertram et al. 2022; Jurgeleit et al. 2022). Others have proposed going beyond GDP for assessment of fiscal stability, such as by factoring in sustainability and well-being indicators (Hafele et al. 2023; Pekanov and Schratzenstaller 2023; Suttor-Sorel and Fiscal Matters 2023). One such suggestion would be for member states to commit to achieving climate targets (such as reducing greenhouse gas emissions) rather than committing to specific investments. This would have the added value of avoiding the onerous requirements of comprehensive and binding investment plans while benefiting from the flexibility of choosing the most efficient investments over time (Hafele et al. 2023). The experience of the NRRPs already suggests that performance-based financing risks emphasizing measurable output can lead to milestones and targets becoming goals in themselves, to the detriment of good policy outcomes (Bokhorst and Corti 2023; Zeitlin et al. 2023).

As it stands, despite the more user-friendly nature of the reform compared to the status quo ante, highly indebted countries are nevertheless likely to find themselves without the "fiscal space" or EU level funding to enable them to invest in the ways necessary to assure their EU sustainability and social investment obligations, and would arguably be subject to belt-tightening austerity were they not to meet their debt-reduction targets. At the same time, countries with the fiscal space would be able to invest as they see fit. But would they?

GERMANY AS THE ELEPHANT IN THE ROOM

Germany has a crucial role to play in enabling positive reform of the fiscal rules and the creation of an EU level fiscal capacity. But for the moment, all signs indicate that it is focused on pushing the EU to go back to the status quo ante, with support for the "frugal" position it took during the Eurozone crisis and in the early months of the pandemic, before the historic shift to temporary EU level debt.

The German Finance Minister Christian Lindner in particular has been calling for bringing back the full force of the Stability and Growth Pack rules and numbers in order to ensure that all member states tighten their belts to pay down deficits and debts, or suffer the consequences via the excessive debt procedure if they do not.[11] He has additionally opposed any perma-

[10] https://ec.europa.eu/commission/presscorner/detail/en/ip_23_2393 and https://economy-finance.ec.europa.eu/system/files/2023-04/COM_2023_240_1_EN.pdf.

[11] Letter to *New York Times* April 23, 2023, https://www.ft.com/content/8ec1d936-aabb-4f8a-b8db-ed45430888ab.

nent EU level fund, seeing it simply as "more debt" as opposed to investment in a more sustainable future.[12] And yet, while insisting on maintaining the German constitutional debt brake, the government got around its own rules by setting up enormous one-off, off-balance-sheet funds and relief packages to pay for the costs of the Ukraine war and for energy needs, not to mention its use of the state aid rules to invest heavily in its own industries, as noted earlier (in Footnote 5). And yet, at the same time, German governments have not only resisted any EU level permanent debt vehicle, they have more generally engaged in foot-dragging or downright blockage of many of the reforms needed to put the EU on an equal footing economically with the US in terms of meeting the challenges of the 21st century, such as completing banking union, establishing a Capital Markets Union, and finalizing a common European deposit insurance (Högenauer et al. 2023; Howarth and Quaglia 2021).

How do we explain the German government's obsession with debt, and in particular its seeming lack of policy learning with regard to the lessons of the Eurozone crisis, in which the turn to austerity through rapid deficit reduction meant anemic growth and the rise of the populist extremes? In other words, why has Germany not moved away from its pre-pandemic preference for fiscal restraint to "revaluation at home" (by boosting internal demand to rectify the Eurozone's structural imbalances) and/or to EU level fiscal redistribution via common debt? Possible explanations include ordo-liberal ideas and a "stability culture" that blind German policy makers to alternatives to fiscal consolidation; German companies' resistance to internal revaluation that might deprive them of their competitive advantage in EMU; and the assumed economic benefits of such a policy for Germany's export-oriented growth model (Schoeller and Heidebrecht 2023; Polyak 2022). But whatever the explanation, Germany's position fails to recognize the economic risks of a return to restrictive fiscal rules without any EU level investment facility, including the fact that Germany depends on flourishing neighbors for robust export markets (remember that China will soon have its own "Ch(m)recedes"). Moreover, Germany also ignores the political risks related to any return to austerity in the guise of fiscal stability, which is likely only to ignite further populist contestation.

DECENTRALIZE AND DEMOCRATIZE EU ECONOMIC GOVERNANCE

Whatever the outcomes of the reform of the fiscal rules and EU level debt initiatives, the increase in industrial policy and investment entails an enhanced role for "state" actors at the EU and national levels, with public entrepreneurs devising industrial strategies to revive economies and invest in the future (Mazzucato et al. 2021). NGEU and the RRF are clear examples of this. And in this context, the European Semester has had an important role to play, given its elaborate architecture for coordination. But it remains a technocratic exercise that is largely concentrated in the executive branches of national governments in coordination with the Commission, which discourages national ownership (De Angelis et al. 2022). Although the European Semester in the context of the NRRPs appears to have worked well, enhancing the Commission's steering capacity on reforms and investments while leaving member states largely in charge of their plans, it has reinforced centralizing tendencies between the Commission and national capitals. The European Parliament and national parliaments have had little input here, and the same goes for the social partners and civil society actors (Bokhorst and Corti 2023; Zeitlin et al. 2023; Vanhercke and Verdun 2021).

In view of the experience of the NRRPs so far, as well as in the eventuality of a more permanent EU level investment fund, most important is to ensure that the national planning processes (NRRPs) are not only democratized but also decentralized. Democratization means reinforcing the role of national parliaments in vetting national plans while ensuring participation by the social partners and civil society actors. Decentralization involves enhancing involvement of all the potential stakeholders at regional and local levels (industry, unions, and NGOs) not only to ensure that the industrial policy initiatives are appropriately targeted and work most effectively but also to guard against corruption and clientelism (Schmidt 2020a). Both together would serve to promote national ownership while helping to combat populist claims to be the only "democratic" alternative to EU-led technocratic rule.

But beyond encouraging the democratization and decentralization of national level dialogues in the context of the NPPRs, the Commission should also consider democratizing the EU planning process by opening up EU level dialogues with all stakeholders on its goals for industrial policy. We could call this the "Grand Industrial Strategy Dialogue," and task it with recommending overall targets and goals, say, for greener investing, more society-driven digitalization, and addressing social inequalities in addition to promoting the EU's "strategic autonomy" or economic "sovereignty". This could for example build on the existing Economic Dialogues and Monetary Dialogues regularly organized by the European Parliament with EU executive actors. But it would need to be more inclusive with regard to bringing in civil society actors as well as citizens—arguably on the model of the Conference for the Future of Europe—and more ambitious in terms of setting objectives for sustainable and equitable growth (Schmidt 2022).

More inclusive EU level dialogues accompanied by a more bottom-up approach to national planning in

[12] *Politico*, September 28, 2022 https://www.politico.eu/article/german-finance-minister-lindner-eu-debt-rules-energy-crisis-investment-climate/.

the European Semester, in particular if supported by permanent EU level investment, are likely not only to promote better economic performance but also build more political legitimacy. At the national level, they would help to counter the populist drift in many countries, which would certainly be fueled by any return to austerity policies. At the EU level, moreover, they would allow for more democratic deliberation about goals for sustainable and equitable development.

POLICY CONCLUSION

The EU is at a crossroads. Will it come up with a new unified EU level response to invest in the EU's future, including new industrial policy and investment vehicles to combat climate change and social inequality while responding to the security risks? Or will the EU and the member states at best muddle through, returning to a slightly modified version of the fiscal rules of the Eurozone crisis and leaving the member states to their own devices with regard to dealing with investment needs? This policy brief has argued that the only correct answer is the unified one that recognizes the interdependence of European economies and the need for solidarity, in particular in a political context of continuing populist contestation of EU liberal values and democracy. But beyond this, EU economic governance needs to be both democratized and decentralized, with enhanced roles for national parliaments and the European Parliament, given the redistributive function of EU level fiscal capacity, and with more bottom-up involvement of social partners and citizens at local, national, and EU levels. Beyond this, the EU would also do well to consider opening up on-going dialogues between EU institutional actors and all stakeholders on general industrial strategies as well as macroeconomic targets, so as to democratize and legitimize overall economic governance, as a replacement for the numbers-targeting rules.

REFERENCES

Bertram, L., F. Temory and J. Hafele (2022), *Updating the EU's Fiscal Rules: How Improving the EU's Potential Output Methodology Can Mitigate the Risk of Deepening Recessions,* ZOE Institute for Future-Fit Economies, Cologne.

Biegon, D. (2023), "Not a Matter for Technocrats", *IPS-Journal* (March 15), https://www.ips-journal.eu/topics/european-integration/not-a-matter-for-technocrats-6577/.

Blanchard, O., A. Leandro and J. Zettelmeyer (2021), "Redesigning EU Fiscal Rules: From Rules to Standards", Peterson Institute for International Economics, Working Paper 21-1.

Bofinger, P. (2020), "Easing the EU Fiscal Straightjacket", *Social Europe*, 14 December, https://socialeurope.eu/easing-the-eu-fiscal-straitjacket.

Bokhorst, D. and F. Corti (2023), *Governing Europe's Recovery and Resilience Facility: Between Discipline and Discretion, Government and Opposition*, https://www.cambridge.org/core/journals/government-and-opposition/article/governing-europes-recovery-and-resilience-facility-between-discipline-and-discretion/9A8DD6FA42CE44B44F4BD956B8EB0887.

Cornago, E. and J. Springford (2021), *Why the EU's Recovery Fund Should Be Permanent*, Policy Brief, Centre for European Reform, https://www.cer.eu/publications/archive/policy-brief/2021/why-eus-recovery-fund.

De Angelis, F., F. Mollet and L. Rayner (2022), "Rethinking EU Governance: The Foundation for an Inclusive, Green and Digital Transition", *Discussion Paper, European Policy Center*, 9 February, https://www.epc.eu/en/publications/Rethinking-EU-economic-governance-The-foundation-for-an-inclusive-gr~45b1cc.

De Grauwe, P. (2016), *Monetary Policy and Public Investment,* CEPS Comment, 14 January, https://www.ceps.eu/publications/monetary-policy-and-public-investment.

Enderlein, H. et al. (2012), *Completing the Euro: A Road Map Towards Fiscal Union in Europe*, Report of the Tommaso Padoa-Schioppa Group, Notre Europe Study No. 92.

Eisen, N. L., A. Inayeh, J. Kirkegaard, T. Kleine-Brockhoff, J. Rudolph and B. Stokes (2023), *Toward a Marshall Plan for Ukraine: New Ideas and Recommendations,* German Marshall Fund, https://www.gmfus.org/news/toward-marshall-plan-ukraine-0.

Greentervention (2023), "European Fiscal Rules: The Proposal of the European Commission Tested for 2024!" (19 June), *Greentervention* blog, https://greentervention.org/2023/06/19/eng-fr-regles-budgetaires-pour-quoi-et-comment-ameliorer-la-proposition-de-la-commission-europeenne/

Hafele, J., L. Korinek and L. Bertram (2023), *Linking EU Fiscal Rules to Climate Targets: A Proposal for Climate-Linked Extension of Budgetary Adjustment Paths,* ZOE Institute for Future-Fit Economies, Cologne, https://zoe-institut.de/wp-content/uploads/2023/03/Sustainability-linked-Fiscal-Leeway.pdf.

Heimberger, P. and A. Lichtenberger (2023), RRF 2.0: *A Permanent EU Investment Fund in the Context of the Energy Crisis, Climate Change and EU Fiscal Rules,* Policy Notes and Reports 63, Vienna Institute for International Economic Studies.

Hemerijck, A. (2023), "An EU 'Golden Rule' for Childhood Social Investment", *Social Europe*, May, https://www.socialeurope.eu/an-eu-golden-rule-for-childhood-social-investment.

Högenauer, A. L., D. Howarth and L. Quaglia (Guest Editors) (2023), "Banking Union at Ten", *Journal of European Integration* 45(1).

Howarth, D. and L. Quaglia (2021), "Failing Forward in Economic and Monetary Union: Explaining Weak Eurozone Financial Support Mechanisms", *Journal of European Public Policy* 28, 1555-1572.

Jones, E. (2020), *When and How to Deactivate the SGP General Escape Clause?*, Economic Governance Support Unit (EGOV), Directorate-General for Internal Policies, PE 651.378.

Jurgeleit, J., L. Oberhoff, C. C. Paetz and S. Watzka (2022), "The Macroeconomic Effects of Reapplying the EU Fiscal Rules: Returning to the Status Quo Ante or Moving to Expenditure Rules?", *IMK Policy Brief* 132.

Lonergan, E. and M. Blyth (2018), *Angrynomics*, Agenda, Newcastle upon Tyne.

Mang, S. and D. Caddick (2023), "Beyond the Bottom Line: How Green Economic Policy Can Drive Economic Change and Speed Up Climate Action", *New Economics Foundation*, 28 April, https://neweconomics.org/2023/04/beyond-the-bottom-line.

Pekanov, A. and M. Schratzenstaller (2023), "Options to Align the EU Fiscal Framework to Green Public Investment Needs", *Research Brief* 2/2023, WIFO Institute, Vienna.

Polyak, P. (2022), "External Enablers of Eurozone Austerity: Exploring the Link between the Ease of Suppressing Domestic Spending and Trading Partners' Demand", *New Political Economy* 27, 754-770.

Roth, A. and G. Wolff (2018), "Understanding (the Lack of) German Public Investment", *Bruegel Blog Post*, 19 June, https://www.bruegel.org/blog-post/understanding-lack-german-public-investment.

Schmidt, V. A. (2020a), *Europe's Crisis of Legitimacy: Governing by Rules and Ruling by Numbers in the Eurozone*, Oxford University Press, Oxford.

Schmidt, V. A. (2020b), "Theorizing Institutional Change and Governance in Europe's Responses to the COVID-19 Pandemic", *Journal of European Integration* 42, 1177-1193.

Schmidt, V. A. (2022), "Economic Crisis Management in the EU: From Past Eurozone Mistakes to Future Promise beyond the Covid-19 Crisis", in A. W. Ryde (ed.), *EU Crisis Management, Swedish Institute for European Policy Studies* (SIEPS), Stockholm, 19-39.

Schoeller, M and S. Heidebrecht (2023), "Continuity Despite Crises: Germany's Euro Policy in the Light of the Pandemic, War and Inflation", *Journal of European Public Policy*, DOI: 10.1080/13501763.2023.2218883.

Schwan, G. (2020), "A Fair, Humane and Realistic Asylum Policy", *Social Europe*, 10 December, https://www.socialeurope.eu/a-fair-humane-and-realistic-asylum-policy.

Schwarzer, D. and S. Vallée (2020), "Pushing the Hamiltonian Moment: Germany's Court Ruling and the Need to Build a Fiscal Capacity Force a Constitutional Debate", *DGAP Policy Brief* 10, German Council on Foreign Relations.

Sustainable Finance Lab (2022), *A Sustainable Fiscal Pact for Europe*, https://sustainablefinancelab.nl/wp-content/uploads/sites/334/2022/10/A-sustainable-fiscal-pact-for-Europe.pdf.

Suttor-Sorel, L. and Fiscal Matters (2023), *Investing in Our Future: Seven EU Economic Governance Reforms for a Stronger, Greener and More Resilient Europe,* Joint Policy Brief, Finance Watch.

Tordoir, S. (2023), "EU Fiscal Reform has Become a Defensive Fight", *Euractiv*, 3 May, https://www.euractiv.com/section/economy-jobs/opinion/eu-fiscal-rule-reform-has-become-a-defensive-fight/.

Van den Noord, P. (2023), A *Targeted Golden Rule for Public Investments? A Comparative Analysis of Possible Accounting Methods in the Context of the Review of the SGP*, PE 733.740, Economic Governance and EMU Scrutiny Unit (EGOV).

Vanhercke, B. and A. Verdun (2021), *The Recovery and Resilience Facility: Have Social Actors Been Sidelined?*, Policy Brief AK-Europa 08-2021-Economic.

Zeitlin, J., D. Bokhorst and E. Eihmanis (2023), *Governing the RRF: Drafting, Implementing, Monitoring the National Recovery and Resilience Plans as an Interactive Multilevel Process*, Foundation for European Progressive Studies (FEPS), Brussels.

Zeitlin, J. and Vanhercke (2018), "Socializing the European Semester: EU Social and Economic Policy Coordination in Crisis and Beyond", *Journal of European Public Policy* 25, 149-174.

Torben M. Andersen

Public Investment: Is There a Golden Rule Separating "Good" from "Bad" Debt?

KEY MESSAGES

- **Across EU countries there is no general tendency for public investment to be crowded out by fiscal rules**
- **The notion of investment in the public sector is different from the private sector, and it is problematic to base policy rules on the national account definition of investment**
- **A Golden Rule allowing debt financing of public net investment requires a fundamental change in accounting principles to be applied consistently and raises fundamental implementation issues**
- **Needs for government investment are increasing due to the green transition, energy supply disruption and digitalization, but do not require more complicated fiscal rules**
- **Policy focus on investment can be increased by a continuous in-depth monitoring of public investment and/or separate expenditure targets for public consumption and investment**

It is commonly agreed that governments need to increase investment to support decarbonization, energy security and digitalization. This, in turn, raises questions of how to finance such investments, and this has revived the debate whether fiscal rules are biased against public investments.

Since fiscal rules serve the purpose of counteracting political present-biases, it is paradoxical if the rules imply that public investment is suboptimally low. Such a bias may arise in the political process since investments have up-front costs while the benefits accrue later, over a sequence of years. This may arise not only because investments are included in expenditure targets, but also from the constraints arising from deficit/surplus targets.

In the ongoing debate on reforms of the fiscal rules in the EU, public investment also plays a role. The European Commission (2023) thus writes: "Reforms and investment are both essential. The green and digital transitions, the strengthening of economic and social resilience and the need to bolster Europe's security capacity will require large and sustained public investment in the years to come […] The proposals therefore aim to facilitate and encourage Member States implementing important reform and investment measures. Member States will benefit from a more gradual fiscal adjustment path if they commit in their plans to a set of reforms and investment that comply with specific and transparent criteria." The proposal for revised fiscal rules maintains the limit of 3 percent of GDP for budget deficits and 60 percent of GDP for debt, but aims to give governments more flexibility and encourage public investment. Hence, countries that exceed the limits have to undergo a fiscal adjustment over a four-year period to ensure that the deficit falls below 3 percent of GDP and debt is at a prudent level and being reduced at the end of the period. As long as the deficit exceeds the limit, a minimum fiscal adjustment of 0.5 percent of GDP per year applies. However, if the countries commit to reforms and investments in the green and digital transitions, the adjustment period can be extended to seven years.

Many aspects of this proposal can be discussed, but the contingency defined in terms of investment can be seen as a recognition of not only a need for public investment, but also a risk that fiscal rules may crowd out such investments.

For a start, it is useful to consider actual levels of public investment. Public investment as a share of GDP is rather steady for most countries, although there are examples of reductions, for instance in Italy and Spain after the Financial Crisis (Figure 1a). But there are also examples of countries, like Denmark and Sweden, having steady levels of investment despite debt consolidation. There is no clear relation between the level of investment and the size of the public sector (Figure 1b). There is thus no general tendency in public investment indicating that it is being crowded out by fiscal frameworks and numerical rules, and the systematic cross-country differences in levels unrelated to the public sector size suggest that there may be different country practices when it comes to recording public investment.

PUBLIC INVESTMENT AND DEBT FINANCING

The debate on public investment and fiscal rules revolves around the question of when debt financing of public expenditure is justified. A key argument for fiscal rules is that a present bias in political decision-making creates an incentive to finance various expenditures with debt, thus pushing the financing into the future and therefore becoming a burden to future generations. The deficit bias view is summarized by Ball and Mankiw (1995, 108): "Thus,

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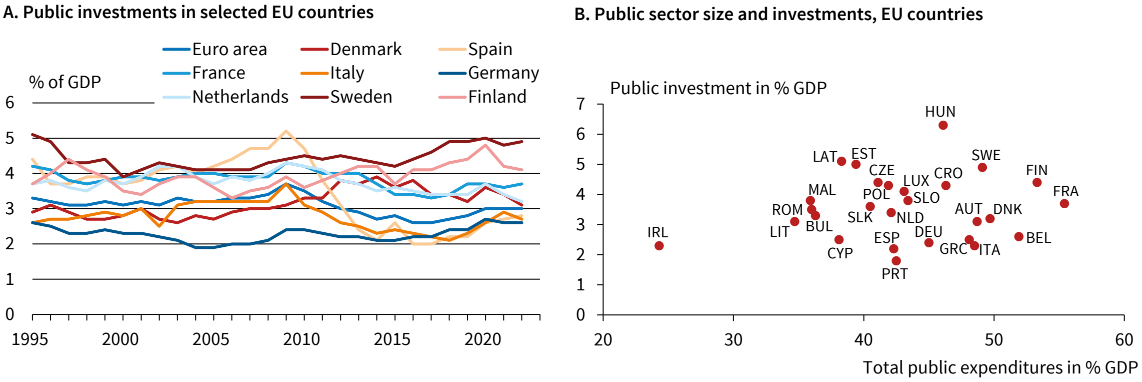
Figure 1

Public Investments and Public Sector Size



Source: Eurostat.

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the winners from budget deficits are current taxpayers and future owners of capital, while the losers are future taxpayers and future workers. Because these gains and losses balance, a policy of running budget deficits cannot be judged by appealing to the Pareto criterion or other notions of economic efficiency." A large political-economy literature has developed various arguments why deficit biases may arise (for an overview - see e.g., Persson and Tabellini 2000; Calmfors and Wren-Lewis 2011; Alesina and Passalacqua 2017). The key explanations run in terms of short horizons of voters, informational problems, political fragmentation, and common-pool problems. The welfare consequences of a deficit bias and the implied debt accumulation can be summarized by debt servicing causing a wedge between tax payments and current expenditures on, for instance, key welfare areas (social safety net or welfare services; see Andersen 2019). As an example, in Italy net interest payments amounted to 10 percent of GDP in the mid-1990s, more than total spending on education.

An alternative view is that debt is justified if it is caused by investment benefiting future generations. Investments have up-front costs, while the benefits accrue in the future. Under a balanced budget requirement, the dilemma that investments harm current generations to the benefit of future generations may become more visible. This may imply a suboptimally low level of investment, or that investments have detrimental implications for intergenerational distribution. Allowing debt financing makes it possible to invest in the future under the intergenerational Pareto condition that no cohorts are worse off, and future generations are better off (Andersen and Bhattacharya 2020). Moreover, intergenerational distribution arguments may justify debt if future generations are better off than current generations (Calvo and Obstfeld 1988).[1]

[1] To see this, assume a utilitarian social welfare function defined over the lifetime utility of different cohorts. If future generations are better off than current generations due to factors such as productivity growth, their marginal utility of consumption would be lower than for current generations. Hence, a utilitarian planner will redistribute from future generations to current generations, and such a policy would imply some debt accumulation.

The question thus becomes whether there is a case for treating public consumption and investment differently in the fiscal rules, or to phrase it differently, to separate the cases where debt financing is justified from the cases where it is not.

A GOLDEN RULE FOR PUBLIC INVESTMENT?

Public sector accounts are based on a cash accounting principle recording all current expenditures and revenues. While some liabilities, including public sector borrowing and debt, are reported, a complete balance sheet including all assets and liabilities and changes in their value is not made, as is the case for private cooperation following an accrual accounting principle. Specifically, under the latter principle, investments are recorded as assets, and depreciation and maintenance of the capital stock are recorded as current expenditures.

Recording investments as current expenditures in public accounts raises the question of whether accounting principles—and fiscal rules based on them—are biased against public investments, given that the public balance measures financial savings and not total net savings. This is the outset for the proposals for following a so-called Golden Rule approach, where budget rules are defined in terms of total net savings and investments can be debt-financed. The argument is that debt matched by increases in the real capital stock is not a burden on future generations, while debt-financing of current running expenditures is. The Golden Rule implies in the long run that all public debt is backed by real capital. The idea of a Golden Rule for public investment has a long history, going back to Pigou (1928) and Musgrave (1939) - see also Blanchard and Giavazzi (2004); and discussions of modified Golden Rules in Mintz and Smart (2006) and Blesse et al. (2023b).

On theoretical grounds, the Golden Rule principle sounds plausible, but the analogy to private companies is not straightforward. A change to an accrual accounting principle for the public sector is a major and difficult step. A private company makes an investment anticipating to generate revenue to cover the investment's costs (including maintenance and other items), financing costs, compensation for the risk, and possibly turn a profit. For the public sector, the situation is different. Generally, public sector activities and services are provided for free to the citizens, and this is a crucial part of the motivation for making the public sector responsible for providing these goods. Public activities are determined in a political process without any market test. Moreover, the costs and benefits affect different generations, raising intergenerational issues which do not arise for a private company.

While the public sector[2] needs to invest in buildings, roads, equipment, infrastructure, etc., the notion of investment is broader and appears in policy areas like education, health, and day-care, where current activities and thus expenditures may affect future employment, wages and so on, and therefore also public finances via both the expenditure and revenue sides of the budget. Recent advances in microeconometric work yield interesting and important insights on this point (Hendren and Supran-Kaiser 2020). The bottom line is that attaching special attention to public investment in the national account sense may introduce a potential distortion of expenditure programmes relative to other areas, which in the broader sense has an investment dimension. The notion of an investment for the public sector is thus broader than and different from that of a private company, and in practice the national account distinction[3] between consumption and investment does not precisely target the key elements in the political decision problem.

Moreover, it is not that the political bias is stronger for public investment than consumption. Ribbon-cutting when public investments are inaugurated may attract more attention and public interest than spending money on improvements in education, for instance, which will show its effects through less visible channels several years later. There is also evidence of substantial misallocation of public investment (so-called white elephants) and frequent cost-overruns. The IMF (2015) assesses that the average inefficiency in public investment processes is around 30 percent. Empirical evidence does not find clear evidence that the fiscal rules have had a negative effect on public investment (Blesse et al. 2023a).

PUBLIC POLICIES AND INVESTMENT

In broad terms, the benefit-cost criterion for public expenditures/investments compares the present value of the benefits generated to the present value of the costs. The latter includes the direct investment costs (including maintenance/reinvestment, etc.) but also includes indirect budget effects arising if the expenditure via behavioural responses affects tax bases and thus tax revenue (or via explicit user payments), or lower expenditures (e.g., on transfers). Debt-financing up to the point that can be covered by this revenue flow (if positive) is unproblematic. If the investment cost is larger, a financing issue arises.

The investment decision is straightforward if a specific public investment generates a future stream of net revenue covering the direct investment, and therefore in that sense finances itself (negative net costs). In this case the project does not worsen, or may even improve, fiscal sustainability, and debt-financing is unproblematic. But few investments are likely to pass that test. However, a neutral or positive effect on fiscal sustainability is not a necessary condition for the investment to be socially worthwhile. This requires that the present value of the benefit stream exceeds the present value of the net costs. Whether a project is socially worthwhile can thus not be judged solely from how it affects fiscal sustainability or whether it involves accumulation of capital. To take a concrete example, an investment in critical infrastructure may, via user payments and effects on economic activity, release a net revenue that covers the investment, but this is unlikely for an investment in a building used as a nursing home, even if the latter is justified on welfare terms.

It follows that debt-financing beyond the level that can be covered by the net revenue stream requires that the budget each year includes an expense that, in present value terms, covers the gap. But the determination of this expense is not trivial, since the project has a social surplus and hence there is a distributional question on how to share the costs. Moreover, this requires continuous monitoring of both the benefit flows and the net revenue flows over the horizon of the investment project.

An additional challenge of fiscal rules explicitly distinguishing between consumption and investment is how to define these concepts and avoid creative accounting, where expenditures are classified as investments to avoid budgetary constraints on running expenditures.[4] It is thus a difficult and demanding task to introduce the accrual accounting principle, or even elements of it, for the public sector due to a fundamental difference with regard to the private sector.

Finally, it is important to stress that there is no perfect alternative, and existing fiscal rules are also subject to problems, including the risk that investments are underprioritized in the political process discussed above. Moreover, budget rules treating consumption and investments on par can be evaded via

[2] The public production function depends on labour, real capital, and materials, and generally the wage share is high; that is, labour is the most important input for many activities. In most cases, the degree of substitution between capital and labour is small, and there is thus a tight link between the level of activity and the need for real capital.

[3] In national accounts (ESA 2010), public investments are defined in terms of general government gross fixed capital formation, which comprises the total value of general government acquisitions, less disposals, of fixed assets (tangible and intangible), plus additions to the value of non-produced assets (e.g., land improvements) - see Manescu (2021).

[4] These problems are also showing in assessments of the national Recovery and Resilience Plans (RRPs), which suggests that RRF funds are at least partly used to finance existing investment projects, see Corti et al. (2022).

schemes such as a private-public partnership that includes private financing. While such a partnership may be justified when it makes it possible to diversify risk, provide access to special expertise, or ensure well-defined incentive structures during either the construction or the use of the real capital, this decision should not be driven by incentives to evade budget rules.

POLICY CONCLUSIONS

Manageable and credible fiscal rules have to be simple and therefore involve trade-offs. On the one hand, there is a risk that current rules may imply that public investments—and in particular maintenance—are underprioritized in the political process, but on the other hand do fiscal rules building on specific (Golden) rules of which expenditures can be debt-financed raise difficult accounting issues and may lead to less focus on other forms of investment in the broad interpretation of the concept. Detailed rules that are sufficiently rich to capture all relevant aspects are inevitably very complicated, which raises its own issues in terms of implementation and compliance.

Fiscal frameworks and rules are not a question of fine-tuning of policies but provide guidelines for the political decision process. A pragmatic approach is thus needed, and the risk of “investment biases” can be reduced by a continuous monitoring of public investments in fiscal reporting and by fiscal watchdogs, including more consistent benefit-cost assessments of the projects. This also includes monitoring whether maintenance (reinvestment) gaps evolve and result in a depreciation of the capital stock and larger future investment needs. Expenditure targets can also be split into consumption and investment targets as guidelines. For the latter, separate and detailed reporting can serve to signal whether public investments are under-prioritized. The problem of creative accounting can be minimized via third-party assessments made by fiscal watchdogs.

In the present situation there may be an extraordinary need for public investment, as discussed in the introduction. EU countries are in different positions with respect to the scope for debt-financing—if found justified for specific projects—and debt-financing is possible for some countries and problematic for others due to high initial debt levels. It is neither obvious that the latter problem has its origin in an absence of rules on public investment nor that this problem is removed by introducing sophisticated fiscal rules for public investment. To overcome this hurdle there is no alternative to credible reforms.

REFERENCES

Alesina, A. and A. Passalacqua (2017), “The Political Economy of Government Debt”, in J. Taylor and H. Uhlig. eds., *Handbook of Macroeconomics,* Vol. 2, North Holland, Amsterdam, 2599-2651.

Andersen, T. M. (2019), “Intergenerational Conflict and Public Sector Size and Structure: A Rationale for Debt Limits”, *European Journal of Political Economy* 57, 70-88.

Andersen, T. M. and J. Bhattacharya (2020), “Intergenerational Debt Dynamics Without Tears”, *Review of Economic Dynamics* 35, 192-219.

Ball, L. and N. G. Mankiw (1995), *What Do Budget Deficits Do?*, Proceedings - Economic Policy Symposium - Jackson Hole, Federal Reserve Bank of Kansas City, 95-119.

Blanchard, O. J. and F. Giavazzi (2004), “Improving the SGP through a Proper Accounting of Public Investment”, *CEPR Discussion Papers* 4220.

Blesse, S., F. Dorn and M. Lay (2023a), “Do Fiscal Rules Undermine Public Investments? A Review of Empirical Evidence”, *ifo Working Paper*, No. 393, https://www.ifo.de/publikationen/2023/working-paper/do-fiscal-rules-undermine-public-investments-review-empirical

Blesse, S., F. Dorn and M. Lay (2023b), A *Targeted Golden Rule for Public Investments? A Comparative Analysis of Possible Accounting Methods in the Context of the Review of the Stability and Growth Pact,* European Parliament, Economic Governance and EMU Scrutiny Unit (EGOV).

Calmfors, L. and S. Wren-Lewis (2011), “What Should Fiscal Councils Do?”, *Economic Policy* 26, 649-695.

Calvo, G. A. and M. Obstfeld (1988), “Optimal Time-Consistent Fiscal Policy with Finite Lifetime”, *Econometrica* 56, 411-432.

Corti, F., D. Gros, T. Ruiz, A. Liscai, T. Kiss-Galfalvi, D. Gstrein, E. Herold, M. Dolls and C. Fuest (2022), “The European Added Value of the Recovery and Resilience Facility: An Assessment of the Austrian, Belgian and German Plans”, *EconPol Policy Report* 39.

European Commission (2023), *Commission Proposes New Economic Governance Rules Fit for the Future,* 26 April, https://ec.europa.eu/commission/presscorner/detail/en/ip_23_2393.

Heinemann, F., M. D. Moessinger and M. Yeter (2018), “Do Fiscal Rules Constrain Fiscal Policy? A Meta-Regression Analysis”, *European Journal of Political Economy* 51, 69-92.

Hendren, N. and B. Sprung-Keyser (2020), “A Unified Welfare Analysis of Government Policies”, *Quarterly Journal of Economics* 135, 1209-1318.

IMF (2015), *Making Public Investment More Efficient*, Staff Report, https://www.imf.org/external/np/pp/eng/2015/061115.pdf.

Manescu, C. B. (2021), “Public Investment Management in the EU: Key Features & Practices”, *European Commission Discussion Paper* 154.

Musgrave, R. A. (1939), “The Nature of Budgetary Balance and the Case for the Capital Budget”, *American Economic Review* 29, 260-271.

Mintz, J. M. and M. Smart (2006), *Incentives for Public Investment under Fiscal Rules, World Bank,* Washington DC.

Persson, T. and G. Tabellini (2000), *Political Economics - Explaining Economic Policy,* MIT Press, Cambridge.

Pigou, A. C. (1928), A Study in Public Finance, Macmillan, London.

Reuter, W. H. (2015), “National Numerical Fiscal Rules: Not Complied With, But Still Effective?”, *European Journal of Political Economy* 39, 67-81.

Sebastian Blesse, *Florian Dorn* and *Max Lay*

Reforming EU Fiscal Governance: A Golden Rule for Public Investment?*

EUROPE'S NEED FOR HIGHER INVESTMENT

Public budgets in EU member states have been under significant pressure in the past several years. Figure 1 shows that a number of countries did not manage to consolidate their public finances to comply with the EU's Stability and Growth Pact (SGP) in the aftermath of the Great Recession and the ensuing European debt crisis. In addition, the Covid-19 pandemic as well as the energy and inflation crises following the Russian invasion of Ukraine have led to swelling public expenditure to mitigate the economic shocks. Public debt increased in the EU on average, with particularly strong surges in certain member states (Figure 1). While high public-debt levels call for fiscal consolidation and compliance with fiscal rules, the need for higher public spending will increase even further in the coming years. Among others, the end of the EU's peace dividend calls for larger defense spending in Europe (Dorn et al. 2023). Demographic change and ageing societies will also lead to higher (public) expenditure levels and will put a strain on the EU's productivity and economic growth. At the same time, member states face structural challenges in transforming their economies towards green, digital, and more socially resilient economies. Above all, the decarbonization effort, i.e., the reduction of greenhouse gas emissions to tackle climate change and to mitigate the consequences of global warming, requires massive resources, especially in the form of investment.

KEY MESSAGES

- **The need for larger public investment in Europe drew attention to its role in the EU fiscal governance. The current reform proposal of the European Commission aims to incentivize higher public investment by softening deficit rules, likely at the cost of incurring higher deficits**
- **If fiscal rules are too rigid, they can deter public investment. Flexible rules can increase public investment, but depending on how they are designed, this can lead to higher levels of public debt**
- **We propose a modified golden rule that enhances public investment while maintaining fiscal sustainability: debt-financed spending should be limited to net investment, while debt-financed investment is capped by a deficit rule. Other primary expenditures (excluding net investment) need to be balanced**
- **Investment categories relevant to the golden rule must be narrowly and clearly defined to avoid creative accounting tricks. The narrow definition of investments should be limited to investment spending that produces new capital stock and may stimulate sustainable economic growth.**

The Next Generation EU (NGEU) recovery plan, with its large investment package, is a recent example how the EU aims to foster its structural transformation. The European Commission also launched the "Fit for 55" program in 2021, which aims to reduce greenhouse gas emissions by 2030 by 55 percent compared to 1990. For the EU to meet this goal, estimates for the necessary public and private investments point

* Our policy article is based primarily on the results and discussion of our research paper Blesse et al. (2023a), and of a policy report prepared at the request of the ECON Committee of the European Parliament (Blesse et al. (2023b). The opinions expressed in this document are the sole responsibility of the authors and do not necessarily represent the official position of the European Parliament.

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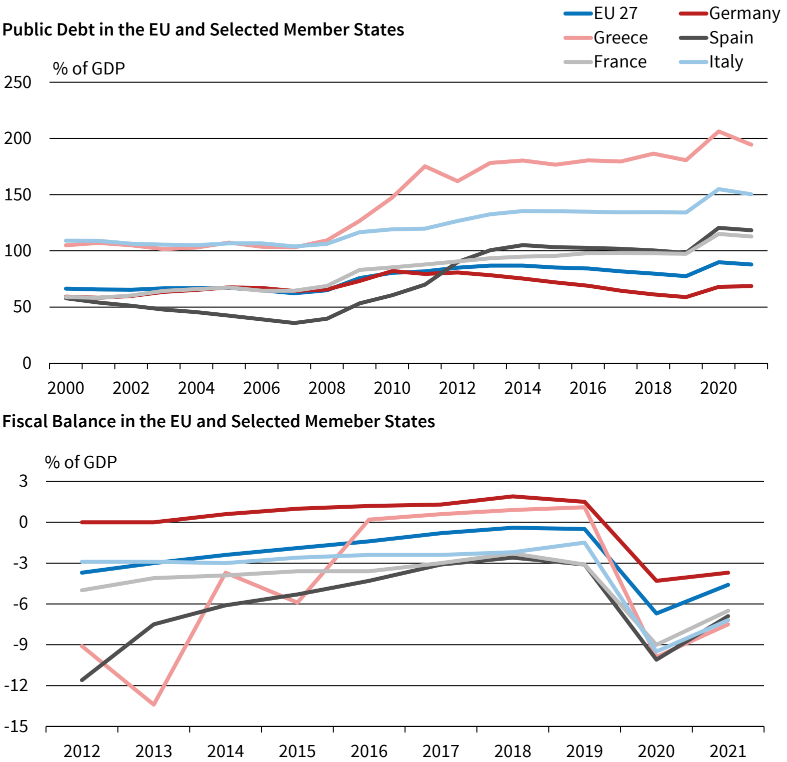
Figure 1
Public Debt and Fiscal Balance in the EU and Selected Member States



Notes: Financial balance describes the difference between total government revenue and total government expenditure.
Source: Blesse et al. (2023b); Eurostat.
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to an increase of roughly 57 percent in the period between 2021 to 2030 compared to the decade 2011 to 2020 (Benassy-Quéré 2022; European Commission 2021). The need for public investment is estimated to grow in the EU by an additional 0.6 percent of GDP per year (Darvas and Wolff 2022). Against this background, it seems odd at first sight that the general escape clause of the EU fiscal rules will be deactivated at the end of 2023, such that member states must again comply with the SGP rules, which limit their fiscal space in the short run. Some politicians believe this will hamper public investment and call for a reform of the EU economic governance to soften the rules. By contrast, others may argue that compliance with fiscal rules needs to be enforced more strictly in order to enable both public investments and fiscal sustainability in the long run.

The European Commission has launched a debate on the reform of the EU economic governance framework that has recently led to a first legislative proposal (European Commission 2023). An important element in the debate and reform process is the role of public investment. In this policy report we provide some guidance whether and how a special treatment for public investment should be made included in a reform of the EU's fiscal governance framework. We discuss the definition of public investment and provide some descriptive evidence on the relationship of public investment and fiscal space among EU member states. We also summarize key findings from the empirical literature on the effect of fiscal rules on public investment and discuss the recent reform proposals of the European Commission regarding the trade-off between public investment and a healthy fiscal balance. Finally, we present some policy conclusions and reform proposals on how a new governance architecture ought to be designed to deliver larger public investment without harming fiscal sustainability.

DEFINITION OF PUBLIC INVESTMENT

What is public investment? In a narrow sense, it is the expenditure on gross fixed capital formation (GFCF) by the general government, as defined in most systems of national accounts (such as the European one). This includes, amongst others, expenditure on buildings, machinery, intellectual property, military weapon systems and software or databases. Furthermore, one might also consider investment grants and other capital transfers to households and firms, such as for building energy-efficient housing, because society may benefit from their positive returns, for instance through reduced greenhouse gas emissions. However, empirical studies that study the effect of fiscal rules on public investment (see below) use different definitions. Some argue that spending on education or health more broadly can also be considered as an investment if it enhances human capital in the form of increased knowledge or longer maintenance of the labor force. Because of various usages of the term investment, it is important to clearly define what counts as a public investment in a reform model of the EU economic governance framework. This is intended to reduce the risk of EU member states circumventing the rules through creative accounting, such as for example by reinterpreting social or transfer payments as public investment.

FISCAL CAPACITIES AND PUBLIC INVESTMENT IN EUROPE

The need for higher public investment in Europe can be financed either from new government revenues, more efficiency in public goods provision, by cuts in future consumption spending, or via the issuance of new debt. Figure 1 shows that there is much heterogeneity among public debt levels and trends in the EU. The fiscal capacity for public investment might thus differ among EU member states, albeit subject to the same (supranational) fiscal rule framework of the European Stability and Growth Pact.

Figure 2 shows trends before and after the Great Financial Crisis in net public investment (*gross fixed capital formation [GFCF], minus depreciation*) for three debt groups of countries in the EU.[1] Net investment

[1] The composition of groups before and after the financial crisis may differ. The countries are categorized by their average public debt in the periods 2000-2009 and 2010-2021, respectively. Some countries, for example, are considered as medium-debt in the first period but belong to another debt group in the latter period.

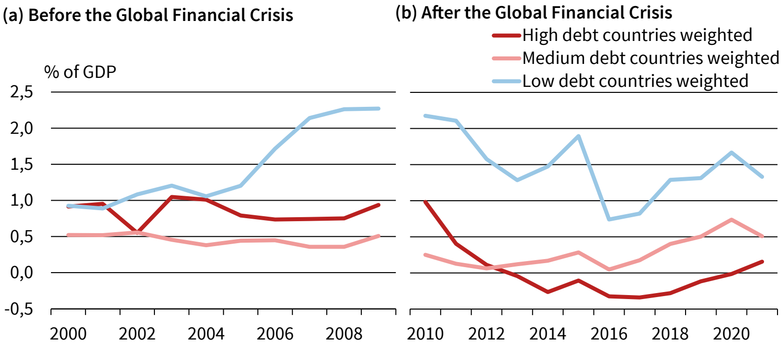
as a share of GDP was higher on average in the EU before the financial crisis than afterwards. The figures show that countries with low public debt levels (*below 60 percent of GDP*) exhibited higher levels of net investment in both periods. Low-debt countries include, among others, the Netherlands, Sweden, Denmark, Luxembourg, and several Eastern European EU member states (Blesse et al. 2023b). On average, these countries increased their net fixed capital formation by around 1.5 percent of GDP each year (in both periods). A different picture arises within the medium- and high-debt countries. Among medium-debt countries (*public debt between 60-90 percent of GDP*), which include Germany and Austria, net investment was still positive over the years, but at a low level, of between zero and 0.5 percent of their economic output in new fixed capital formation. In other words, public investment in these countries was just enough to compensate for depreciation. While net investment remained positive throughout the period for medium-debt countries, high-debt countries (*public debt above 90 percent of GDP*) faced a sharp decline after the Great Financial Crisis, which until recently resulted even in negative net investment levels. On average, public investment in high-debt countries was not even sufficient to offset the annual capital depreciation in the years 2013 to 2019. In the last decade, this group of countries included Italy, Spain, Portugal, Greece, and Cyprus. Belgium and France, however, continued having positive (albeit low) net investment although they part of the highly indebted group over the last decade.

Based on this descriptive evidence, it may be conceivable that lower fiscal space may indeed systematically hamper public investment. Specifically, highly indebted countries are forced to consolidate their public finances because of existing fiscal rules and might be therefore tempted to cut (discretionary) public investments. On the other hand, one may argue that fiscal consolidation and debt discipline among less indebted countries exert a positive impact on the level of public investment. Compliance with fiscal rules and fiscal consolidation could create the necessary financial capacities to invest in the medium term. First, persistent debt accumulation and the violation of existing deficit rules of the SGP are typically associated with higher government refinancing costs when borrowing money from the capital markets (Davoodi et al. 2022; Diaz Kalan et al. 2018). Second, non-compliance with fiscal rules and higher public debt could limit the fiscal capacity needed during economic shocks to apply stabilizing counter-cyclical fiscal policy (Larch et al. 2023; Kriwoluzky et al. 2020). Holding public debt at low or "sustainable" levels thus seems desirable to be able to cope with unexpected challenges and to meet the need for higher public investment in the medium term.

Figure 3b, moreover, shows that primary spending (as percent of GDP) has been higher among highly indebted countries than in the medium- and low-debt country groups in the years 2010-2019, if public investment is excluded. The higher the debt level, the higher the average primary spending on non-investment expenditure and the lower the average investment (recall Figure 2 above). As Figure 3 suggests, governments in high-debt countries are more likely cut public investment than (current) consumption spending to comply with fiscal constraints. That is, high-debt countries decrease net investments while sticking to a higher share of current consumption spending in other categories.[2]

Figure 2

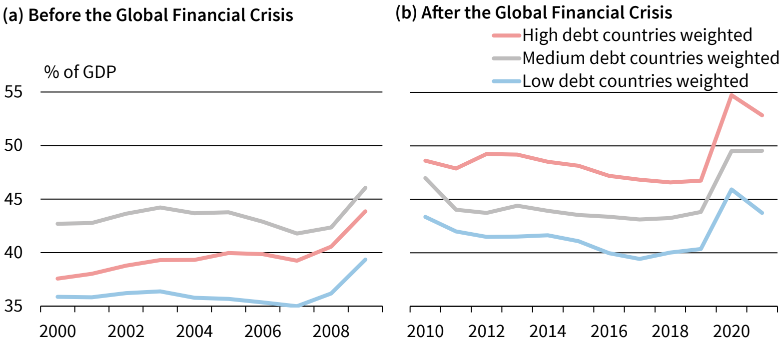
Net Investment in the EU



Notes: The country groups are categorised by their average public debt in the respective time period. Low debt = under 60 % of GDP, medium debt = between 60 % and 90 % of GDP, high debt = over 90 % of GDP.
Source: Blesse et al. (2023b); Eurostat. © ifo Institute

Figure 3

Primary Expenditure in the EU (excl. Public Investment)



Notes: The country groups are categorised by their average public debt in the respective time period. Low debt = under 60 % of GDP, medium debt = between 60 % and 90 % of GDP, high debt = over 90 % of GDP.
Source: Blesse et al. (2023b); Eurostat. © ifo Institute

EVIDENCE ON THE EFFECT OF FISCAL RULES

A reform of the EU fiscal governance architecture needs to address both the incentivizing of public investment and the achievement of fiscal sustainability among its member states. Addressing the latter, a recent meta-study by Heinemann et al. (2018) finds that fiscal rules are indeed effective in disciplining public finances, based on a systematic review of

[2] Some argue that low public investment is simply due to discretionary political decision-making and a social dominance over investment spending in some countries (see, among others, Schuknecht and Zemanek 2021). Social spending is less easy to reduce, especially in economically difficult times, partly because it is often offset by statutory entitlements of the electorate.

30 evaluations of numerical fiscal rules.[3] While aiming for stronger enforcement of, and compliance with, the SGP rules could help to achieve fiscal sustainability, the need for investments to tackle global challenges calls for a fiscal framework that does not undermine public investment. How EU fiscal rules can be reformed to achieve higher public investment without harming fiscal sustainability should be based on a sound understanding of fiscal rules and their impact on public investment. In a recent study for the European Parliament, as well as in a follow-up academic study, we systematically reviewed the empirical literature on the effect of fiscal rules on public investment (Blesse et al. 2023a and 2023b). The review is based on 20 empirical ex-post evaluations[4] of numerical rules regarding their effect on public investments or related sub-components (Blesse et al. 2023a).[5] Nine studies focus at the national level of several countries, while eleven use case studies at the subnational level.

Overall, the review does not show that fiscal constraints—such as the fiscal rules embedded in the SGP—have a general impact on public investment. Most of the reviewed studies (ten) do not report any statistically significant effect of fiscal rules on overall public investment. This is remarkable, given that intuition would suggest that public investment should be more prone to fiscal consolidation, given their larger degree of freedom in budgetary decision-making when compared to operating or consumptive expenditures. The observation of statistically non-significant effects of fiscal rules on public investment is not limited to specific types of rules, as it can be found for *expenditure rules* (Carreri and Martinez 2021; Gregori 2018; Dahan and Strawczynski 2013; Vinturis 2022), *balanced budget rules* (Grembi et al. 2016; Alpino et al. 2022; Salvi et al. 2020; Venturini 2020; Dahan and Strawczynski 2013; Vinturis 2022), *or debt rules* (Vinturis 2022). A minority of studies find significance for either positive (2 studies) or negative (4 studies) effects of fiscal rules on overall public investment (Blesse et al. 2023a).[6] The significance and direction of the effects seem to depend on how the fiscal rules are designed. For example, the two studies cited in this review that reported a significant rise in public investment are based on flexible fiscal rules (Burret and Feld 2018; Gregori 2018).

In general, fiscal rules can be categorized into *flexible rules and rigid rules* (Ardanaz et al. 2021). Rigid rules do not allow for exceptions. If the rules are too rigid, they do not allow policymakers to cushion the economy in a crisis. This may well undermine public investment. Evidence shows that numerical fiscal rules can limit both overall spending and public investment if the adopted rules are rigid (Daniele and Giommoni 2021; Venturini 2020; Jürgens 2022; de Biase and Dougherty 2022). In contrast, flexible rules are positively associated with public investment (Ardanaz et al. 2021; Dahan and Strawczynski 2013; Vinturis 2022). The European Commission (2017, 153-154) also states that public debt levels are less constraining for public investment in countries where fiscal rules are weaker, especially in the long run. Flexible rules, for example, may allow cyclical adjustments to the rule's numerical fiscal targets, and well-defined escape clauses may allow higher deficits during an economic crisis to avoid procyclicality.

Flexible rules may also include investment-friendly rules (investment clauses) with a differential treatment of investment expenditures or investment provisions, for example by the exclusion of public investment from the fiscal constraints. The so-called golden rule also belongs to this family of investment-friendly rules. Golden rules for public investment typically allow for new borrowing for investment spending, which creates new public capital while restricting operating expenditure to zero deficits, e.g., wages for civil servants. Evidence shows that overall public investment and the share of investment visá-vis consumptive expenditures increase if public investment is excluded from relevant threshold values from supranational fiscal frameworks (Vinturis 2022). However, only a few evaluations of investment clauses can be used to review whether higher capital spending comes at the cost of lower operational spending or higher levels of public debt (Blesse et al. 2023a and 2023b). Cross-country evidence at the national level shows some heterogeneity of investment-friendly rules across countries: there is some evidence for a positive relationship between fiscal rules and fiscal sustainability as well as investment-friendly clauses and public investment in emerging and developing economies (Ardanaz et al. 2021). However, other studies investigating the effects in advanced economies find no significant effect of investment-friendly rules on public investment on average (Delgado-Téllez et al. 2022; Dahan and Strawczynski 2013).

A few studies examine the effect of the introduction or the presence of investment clauses at the subnational level. Findings at the local level can inform the debate on the design of golden rules at the na-

[3] This is especially the case for primary deficits, but less so for debt, revenues, or expenditures. Unlike the heterogeneity regarding different budgetary outcomes, the fiscal rule types (debt, deficit, revenue, or expenditure) do not seem to matter for the statistical significance of the fiscal rule effects.

[4] Four studies report results only for sub-components of public investment but not for overall public investment.

[5] Importantly, the review considers effects of fiscal rule presence (i.e., the introduction or the abolishment of fiscal rules or the respective changes in fiscal rule components), but explicitly does not cover the empirical estimates of compliance with fiscal rules. Moreover, the review does not reflect whether different fiscal rules (and their features, such their rigidity, escape clauses, or their cyclical adjustment and so forth) provide enough fiscal room for investment. Most of the studies underlying this literature review focus on public investment as government spending on gross (fixed) capital formation at the national level or capital expenditure at the subnational level, i.e., public investment in the narrow sense. In addition, findings on specific government expenditures that are regularly used in the debate as public investment in the broader sense (e.g., health or education spending) are also considered in the review, but not discussed in this policy report.

[6] At the national level, 7 studies report non-significance, while 3 studies also find significant negative relationships (Blesse et al. 2023a).

tional level, notwithstanding obvious concerns about the generalizability of the effects of fiscal institutions at the local level to the national one. Overall, the evidence from the subnational level also suggests that flexible rules and especially investment-friendly rules increase public investment (Burret and Feld 2018; Gregori 2018; Daniele and Giommoni 2021; Carreri and Martínez 2021). Gregori (2018), for example, shows at the Italian municipality level that investment-clauses allowing for more capital spending (within a cap on overall spending) increase public investment at the cost of both consumption spending and higher public deficits. Another study shows that the introduction of a golden rule for public investment in combination with a cap on current expenditures is effective in decreasing the likelihood of running overall and operational deficits, without affecting local public goods provision (Carreri and Martínez 2021). Finally, Burret and Feld (2018) show for Swiss cantons that public investment rises if it is not restricted by the requirements of the balanced budget rule, while the introduction of balanced budget rules reduces public deficits. However, the authors argue in favor of more comprehensive rules, covering current accounts and capital budgets, to avoid creative accounting. Overall, evidence suggests that introducing more flexibility in fiscal rules, like a golden rule for investment, may well increase public investment. However, depending on how exactly the flexible rules are designed, incentivizing higher public investment may come at the cost of other spending or at the cost of higher public debt.

PUBLIC INVESTMENT IN THE EUROPEAN COMMISSION'S REFORM PLANS

The European Commission released in November 2022 an orientation document for the reform of the EU economic governance framework to strengthen enforcement of debt sustainability and to enhance investment (European Commission 2022), which eventually resulted in a legislative proposal in April 2023 (European Commission 2023). Overall, the reform elements would give more scope to higher public investment, but likely at the cost of higher public debt and less transparency (Blesse et al. 2023b).

Key elements of the reform are country-specific fiscal adjustment paths to account for country-specific differences in debt sustainability, while keeping to the SGP's numerical deficit and debt rules. However, the numerical rules are no longer suggested as hard thresholds, but rather as reference points to be targeted by all member states in the medium term. The legislative proposal of the European Commission (2023) also includes an expenditure rule for the country-specific adjustment period. During the fiscal-structural plan, the growth of cyclically adjusted primary expenditure shall not exceed the growth of medium-term output, on average. According to the current reform plans, the country-specific four-year fiscal adjustment path towards the 60 percent debt threshold could be extended by up to three more years if the expenditures ("national medium-term fiscal-structural plans") are underpinned by commitments towards reforms and investment aligned with European Commission priorities. During the extended consolidation periods, EU member states would have an incentive to undertake higher public investment at the cost of deficits rising above the 3 percent threshold.

However, the member states' fiscal adjustment paths need to be consistent with ensuring that debt is steered along or kept on a downward path by the end of the adjustment period at the latest, or that it remains at prudent levels with a deficit staying below 3 percent of GDP over the medium term. That way, the member states would have more time and leeway in their fiscal adjustment trajectory to better integrate (investment) priorities in their budgets. This framework would give member states more scope to exceed the deficit thresholds, providing incentives to use this leeway for higher public investment at the expense of higher deficits during the extended period.

But the reform plan provides lower incentives for national governments to change their spending behavior and to shift expenditures to structural reforms and long-term public investment in their national budgets during their legislative period. While the debt-financed public investment that goes above the 3 percent deficit threshold are defined as having to be aligned with EU priorities without leading to investment cuts elsewhere over the planning period, the modification may also lead to higher deficits in other primary expenditure than investment. National governments could still use the margins for more deficits in spending other than investment (up to the 3 percent deficit threshold). While the European Commission argues that these deficit-financed investment should not lead to investment cuts in the national budgets elsewhere over the planning period, the assessment of national Recovery and Resilience Plans (RRPs) has shown that it is not easy to detect budgetary shifts and additional investment beyond priorities of national plans afterwards (Corti et al. 2022). It is not easy to detect which investments would have been made without the softening of the deficit limit, and which are only made possible by the deficit clause for public investment. Moreover, using the new element of the clause to exceed the 3 percent deficit threshold for a longer period would give the European Commission the power to set EU investment priorities and to influence public investment in national budget plans that work towards meeting EU priorities. Most critical, softening fiscal rules within the SGP and transferring more power to the European Commission to influence national investment priorities have been devised so that they will not require adjustments to the treaty's legal framework.

The European Commission and the member states would receive much discretionary power to assess and negotiate national budgets and consolidation paths. In the end, the assessment of the budget plans and consolidation paths seems quite complex and less transparent. Multilateral adjustment paths may account for country-specific characteristics, but this is not likely to make the fiscal framework more transparent and effective. To be more effective, the adjustment plans' assessment and surveillance should be conducted by an independent fiscal board rather than the European Commission (for instance, by giving the European Fiscal Board more power and independence). To sum up, the recent reform plans of the European Commission (2022 and 2023) would soften the fiscal rules within the EU economic governance framework, and would give more scope for higher debt-financed public investment, but likely at the cost of fiscal sustainability.

POLICY CONCLUSION: PROPOSAL FOR A TARGETED GOLDEN RULE FOR PUBLIC INVESTMENT

Despite the need for large strategic investments, EU member states have shown relatively low net public investment as a share of GDP in the past decade. Among countries with medium or high public debt ratios, net investment was close to or even below zero. To address the need for higher public investment, the European Commission has put forward plans for a reform of the EU economic governance framework (European Commission 2022 and 2023) that would soften the fiscal rules to give more scope for higher debt-financed public investment, but likely at the cost of fiscal sustainability. This trade-off is in line with findings of our literature review on the effect of fiscal rules on public investment, which suggest that overly rigid rules may well hamper public investment, while flexible rules or investment-friendly rules seem to boost public investment at the cost of higher public deficits. However, a reform of the EU economic governance framework must address both the challenges of large and strategic investment to promote the transition towards a digital and green, climate-friendly societies and economies on the one hand and ensuring fiscal sustainability on the other. Only by complying with fiscal sustainability, the overarching societal goals of climate change mitigation, digitalization, and sustainable and inclusive growth can be achieved. How can a new EU governance architecture be designed to avoid such a trade-off and to incentivize higher public investment vis-á-vis other (consumption-related) public expenditures while keeping to the target of healthy fiscal balances and limiting public debt as a share of GDP?

In a policy report for the EU Parliament, we proposed a modified targeted golden rule to achieve higher public investment while ensuring healthy fiscal balances (Blesse et al. 2023b). The design of such a simple and modified golden rule for public investment in the EU fiscal framework would guarantee high transparency, high predictability, and low complexity, which are important factors to increase compliance among member states (Reuter 2020). Our approach includes two pillars:

1. *Limiting debt-financed spending to net investments:* Under a targeted golden rule, new net investments which change the stock of public debt are to be mirrored by the creation of new productive public capital (Blanchard and Giavazzi 2004; Bassetto and Lepetyuk 2007). Allowing deficit spending for gross investment instead could be counterproductive, as it likely promotes overspending and may hamper fiscal sustainability. In this reform proposal, other expenditure (except net investments) must be balanced and financed through current revenues. Current (primary) spending needs to be balanced (excluding net investments), for example by applying a balanced budget rule. As the literature review has shown, excessively rigid rules may hamper public investment (Blesse et al. 2023a and 2023b). We therefore suggest implementing structural and cyclically adjusted budget rules and an escape clause allowing flexibility regarding debt-financed spending during an economic crisis. To account for different (current) fiscal spaces at the time of introduction because of member states' varying interest burdens and yield spreads, a balanced-budget rule could be limited to primary balances (excluding the interest burden from current accounts) excluding net investment. The idea is that allowing productive investment (as an exception) financed by issuing public debt goes hand in hand with a balanced budget for current spending, higher incentives for public investment, and potentially self-financing of public debt in the long run.
2. *Debt-financed investment limited by a deficit rule:* In a second pillar, the investment-friendly golden rule should be equipped with clauses that cap net investment at a limit set by a deficit rule. The rule sets the threshold for allowing debt-financed investment as a share of GDP (Mintz and Smart 2006). This is thus expected to increase incentives for an efficient use of public capital and to avoid excessive deficit spending. Sticking to the EU's simple numerical deficit and debt rules would limit deficit-financed net investment to the rule's deficit threshold and avoid excessive deficit spending. This is in line with the findings of the literature review on the effect of excessively flexible rules as well those of experts arguing that comprehensive golden rules for public investment may harm fiscal sustainability if debt-financed public investment is not limited and revenue growth is lagging (Blesse et al. 2023b; de Biase and Dougherty 2022; Bassetto 2006). The optimal numerical target for the deficit spending

limit (deficit rule) and debt-financed investment depends on how the needs for additional investment for the structural transformation are assessed. For example, net investment ratios could be either accounted on an annual basis or averaged over several years.[7] Moreover, the targeted threshold also depends on the definition of net investment. It is recommended to clearly and narrowly define the public investment categories that can be classified as public investment and thus eligible to be financed by debt. The narrow definition of investment should be limited to investment spending that produces new capital stock and may stimulate sustainable economic growth. This reduces the risk of creative accounting labelling other (e.g., social) expenditures as investments.

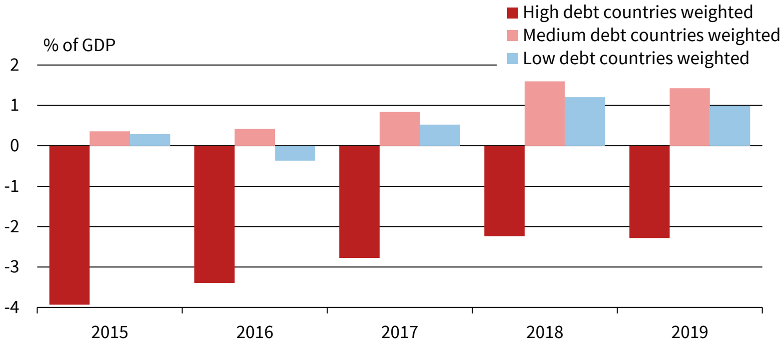
The expected impact of the modified golden rule on the public finances of EU member states would be that limited debt-financed public investment is allowed while keeping other spending categories balanced. Politicians may well use the deficit rule's numerical threshold a as reference point for how far their leeway extends to finance public investment by debt in the future, as this debt-financed spending cannot be used for other expenditures. Assuming a budget deficit rule of 3 percent of GDP subject to the SGP limit, this could give rise to higher debt-financed public investment of 1.5-3.0 percent of GDP in low- and medium-debt EU member states, and by up to 3.0 percent of GDP for highly indebted countries compared to the average share of net investment over the period 2010-2021 (see Figure 2). Public investment could even be higher than this deficit threshold if politicians use further revenues for financing such investment at the cost of other expenditures or by raising revenue through taxation. Moreover, Figure 4 shows that the low- and medium-debt EU countries already complied, on average, with the proposed balanced budget condition for primary expenditure between 2015-2019. Highly indebted countries, by contrast, would need to balance their primary current budgets by increasing their revenues, reducing their relatively high levels of primary expenditure (Figure 3), or by shifting other current expenses towards higher public investment. Highly indebted countries have higher primary expenditure as a share of GDP than low- and medium-debt countries in the EU. The incentive to use the modified golden rule's allowance for debt-financed investment may, however, foster highly indebted countries to implement structural reforms.

Spending decisions are ultimately at the discretion of policymakers. They can decide which priorities they want to set in their spending policy within their fiscal leeway. However, adjusting the EU fiscal framework by including the modified golden rule for public investment with the two pillars may well increase incentives and fiscal leeway for larger public investment to foster the EU's green and digital transitions (as intended by the European Commission), while ensuring fiscal sustainability through sticking to deficit and debt rules. Countries would have an incentive to change the composition of their spending, by shifting a share of it towards sustained public investment, while keeping overall spending unchanged, ensuring fiscal sustainability in the process.

[7] Implementing a golden rule for net investment could be complex. In the EU, a standardized statistical system for the valuation of the capital stock and its depreciation would be required. This is already done for the compilation of financial statistics among EU member states. These methods can be continued for reporting net investment across member states. However, some may favor a regular valuation of the individual capital stocks and depreciations across assets and countries to report the real economic value and costs.
To ensure transparency and comparability across countries, all countries would then need to implement an accrual-based public sector financial accounting system based on harmonized European accounting standards (as set forth by the European Public Sector Accounting Standards, EPSAS). However, implementing an accrual-based accounting system in the public sector and a harmonized system like EPSAS may entail high additional implementation and administration costs and possibly lead to lower public investment (see Dorn et al. 2021).

Figure 4

Fiscal Balance (Expenditure excl. Net Investment)



Notes: Financial balance describes the difference between total government revenue and total government expenditure without net investments.
Source: Blesse et al. (2023b); Eurostat.

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REFERENCES

Alpino, M., Z. Asatryan, S. Blesse and N. Wehrhöfer (2022), "Austerity and Distributional Policy", *Journal of Monetary Economics* 131, 112-127.

Ardanaz, M., E. Cavallo, A. Izquierdo and J. Puig (2021), "Growth-friendly Fiscal Rules? Safeguarding Public Investment from Budget Cuts Through Fiscal Rule Design", *Journal of International Money and Finance* 111, 102319.

Bassetto, M. (2006), "Politics and Efficiency of Separating Capital and Ordinary Government Budgets", *The Quarterly Journal of Economics* 121, 1167-1210.

Bassetto, M. and V. Lepetyuk (2007), "Government Investment and the European Stability and Growth Pact", *NBER Working Paper* 13200.

Bénassy-Quéré, A. (2022), "How to Ensure that European Fiscal Rules Meet Investment", VoxEU.org, 6 May.

Blanchard, O. J. and F. Giavazzi (2004), "Improving the SGP Through a Proper Accounting of Public Investment", *CEPR Discussion Papers* 4220.

Blesse, S., F. Dorn and M. Lay (2023a), "Do Fiscal Rules Undermine Public Investments? A Review of Empirical Evidence", *ifo Working Paper* 393.

Blesse, S., F. Dorn and M. Lay (2023b), "A Targeted Golden Rule for Public Investments?", *EconPol Policy Report* 42(7); Previously Published as Study Requested by the ECON committee, European Parliament, https://www.europarl.europa.eu/thinktank/en/document/IPOL_STU(2023)74149.

Burret, H. and L. Feld (2018), "(Un-)intended Effects of Fiscal Rules", *European Journal of Political Economy* 52, 166-191.

Carreri, M. and L.R. Martínez (2021), "Economic and Political Effects of Fiscal Rules: Evidence from a Natural Experiment in Colombia", *Working Paper*, September.

Dahan, M. and M. Strawczynski (2013), "Fiscal Rules and the Composition of Government Expenditures in OECD Countries", *Journal of Policy Analysis and Management* 32, 484-504.

De Biase, P. and S. Dougherty (2022), "The Past and Future of Subnational Fiscal Rules: An Analysis of Fiscal Rules Over Time", *OECD Working Papers on Fiscal Federalism* 41.

Daniele, G. and T. Giommoni (2021), "Corruption under Austerity", *CESifo Working Paper* 8909.

Darvas, Z. and G. Wolff (2022), "How to Reconcile Increased Green Public Investment Needs with Fiscal Consolidation", VoxEU.org, 7 March.

Davoodi, M. H. R., P. Elger, A. Fotiou, M. D. Garcia-Macia, X. Han, A. Lagerborg, W. R. Lam and M. P. A. Medas (2022), "Fiscal Rules and Fiscal Councils: Recent Trends and Performance during the COVID-19 Pandemic", *IMF Working Paper* 22/11.

Delgado-Téllez, M., E. Gordo, I. Kataryniuk and J. J. Pérez (2022), "The Decline in Public Investment: 'Social Dominance' or Too-Rigid Fiscal Rules?", *Applied Economics* 54, 1123-1136.

Diaz Kalan, F., A. Popescu and J. Reynaud (2018), "Thou Shalt Not Breach: The Impact on Sovereign Spreads of Noncomplying with the EU Fiscal Rules", *IMF Working Paper* 18/77.

Dorn, F., S. Gaebler and F. Roesel (2021), "Ineffective Fiscal Rules? The Effect of Public Sector Accounting Standards on Budgets, Efficiency, and Accountability", *Public Choice* 186, 387-412.

Dorn, F., N. Potrafke and M. Schlepper (2023), "NATO Defense Spending in 2023: Implications One Year After Russia's Invasion of Ukraine", *EconPol Policy Brief* 50.

European Commission (2017), *Government Investment in the EU: The Role of Institutional Factors*, Report on Public Finances in EMU 2017.

European Commission (2021), *Impact Assessment Report Accompanying the Proposal for a Directive of the European Parliament and of the Council on Energy Efficiency*, SWD (2021), 623, final.

European Commission (2022), *Communication on Orientations for a Reform of the EU Economic Governance Framework*, COM (2022), 583, final.

European Commission (2023), *Proposal for a Regulation of the European Parliament and of the Council on the Effective Coordination of Economic Policies and Multilateral Budgetary Surveillance and Repealing*, Council Regulation (EC) No. 1466/97.

Gregori, W. D. (2018), "To What Extent Do Fiscal Spending Rules Affect Budget Composition?", *Public Sector Economics* 42, 325-345.

Grembi, V., T. Nannicini and U. Troiano (2016), "Do Fiscal Rules Matter?", *American Economic Journal: Applied Economics* 8(3), 1-30.

Heinemann, F., M. D. Moessinger and M. Yeter (2018), "Do Fiscal Rules Constrain Fiscal Policy? A Meta-Regression-Analysis", *European Journal of Political Economy* 51, 69-92.

Kriwoluzky, A., L. Pagenhardt and M. Rieth (2020), "Fiskalregeln mildern wirtschaftliche Rückschläge in Krisenzeiten", *DIW Wochenbericht* 87, 989-997.

Larch, M., J. Malzubris and S. Santacroce (2023), "Numerical Compliance with EU Fiscal Rules: Facts and Figures from a New Database", *Intereconomics* 58, 32-42.

Mintz, J. M. and M. Smart (2006), *Incentives for Public Investment under Fiscal Rules*, World Bank, Washington DC.

Jürgens, E. (2022), "The Effects of Fiscal Rules on Public Investments Over the Cycle", *FMM Working Paper* 84.

Reuter, W. H. (2020), *Benefits and Drawbacks of an 'Expenditure Rule', As Well As of a 'Golden Rule', in the EU Fiscal Framework*, Euro Area Scrutiny, Study for the ECON Committee, European Parliament.

Salvi, M., C. A. Schaltegger and L. Schmid (2020), "Fiscal Rules Cause Lower Debt: Evidence from Switzerland's Federal Debt Containment Rule", *Kyklos* 73, 605-642.

Schuknecht, L. and H. Zemanek (2021), "Public Expenditures and the Risk of Social Dominance", *Public Choice* 188, 95-120.

Venturini, F. (2020), "The Unintended Composition Effect of the Subnational Government Fiscal Rules: The Case of Italian Municipalities", *European Journal of Political Economy* 63, 101874.

Vinturis, C. (2022), "How Do Fiscal Rules Shape Governments' Spending Behavior?", *Economic Inquiry* 61, 322-341.

Anne-Laure Delatte

EU Economic Governance and the Climate Crisis

KEY MESSAGES

- **Government support for firms and households accounts for a substantial part of national budgets**
- **Traditional support measures for the corporate sector mostly benefit carbon-intensive sectors and dwarf new green support measures**
- **Untargeted, across-the-board income support measures to households are not efficient because they benefit high-income households, which tend to have a larger carbon footprint**
- **Non-standard monetary policy has taken the form of an unprecedented economic stimulus, which has mostly benefited carbon-intensive sectors**
- **The EU must use institutional leverage to change the allocation of fiscal and monetary support**

The Covid-19 pandemic crisis, which partly resulted from the decline in biodiversity, was the first episode in a likely long series of major disturbances calling for massive government support. In fact, IPCC scientists anticipate a higher frequency of shocks driven by climate change in the next three decades (IPCC 2021). In this context, it is important to acknowledge that climate shocks will likely disturb both supply and demand in the future, a fact that will likely fuel more inflation episodes as well as more volatility and uncertainty in general over the coming decades. These new macroeconomic conditions emphasize the key role of governments in protecting citizens and navigating a transition toward a sustainable economic system. And indeed, the European Commission has set the objective of cutting carbon emissions by at least 55 percent by 2030 to become climate neutral by 2050. The missions of protecting citizens and becoming a climate-neutral economy pose a historical challenge to government budgets and, more generally, raise the issue of articulating the EU's ambitions within domestic economic and political contexts. Is the EU's current economic governance well equipped to face these challenges? What can the EU do within the current economic and political governance framework? What feasible changes in economic governance can be thought of to foster a game-changer role for the EU in the climate crisis? The institutional setup of the European Union makes the answer to this question tricky.

In fact, current political governance involves a non-standard policy mix characterized by a common currency for most Eurozone member countries but not for the rest, country-specific budget and tax policies, and fiscal transfers from the EU that are not intended to be permanent. In sum, monetary policy runs at the federal level for Eurozone member countries, while tax policies are still mostly a national government responsibility. This is not optimal from an economic point of view, but it is the political status quo and derives from historical circumstances. Finally, there is an extra layer of institutional complexity, since euro area treasuries are to follow common rules under the Stability and Growth Pact and their budget position is under the surveillance of the European Semester. The political process is rarely smooth, and enforcement is obviously never guaranteed. In this context, the EU is currently revising its economic governance framework[1] in accordance with guidelines agreed by the European Council in March 2023. However, there is still room for debate.

I will try to emphasize the incentivizing role that the EU's economic governance can play on national tax policies and on federal monetary policy to make them compatible with the 2030 Climate Target Plan. In my first point, I focus on two categories of government support: traditional government support to firms on the one hand, and new support to households to compensate for the impact of climate change on the other. I emphasize the limits of both current schemes and argue that EU institutions could use leverage to adapt the framework to the objective of cutting carbon emissions. My second point concerns the greening of monetary policy and discusses how EU institutions may encourage the tilting of its corporate bond portfolio toward low-carbon-intensive activity.

THE TALE OF TWO GOVERNMENT SUPPORTS

Extreme climate events will continue to put pressure on government budgets over the coming decades. While Eurozone members still largely benefit from the massive acquisition of government bonds by the ECB and abundant global savings, it is unquestionably essential to pursue virtuous budgetary and taxation policies, and to fight against the waste of government resources. In

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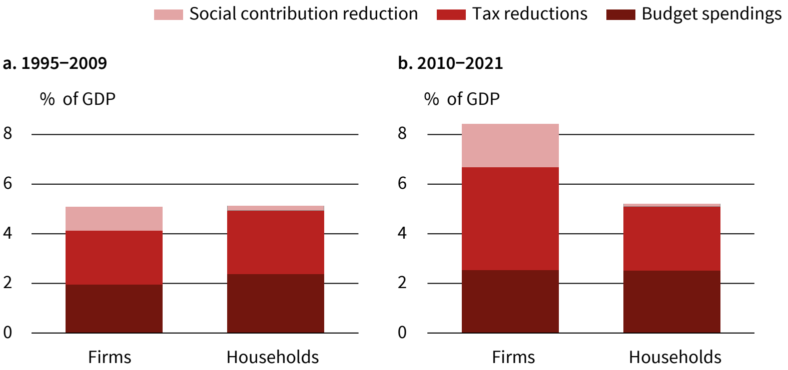
[1] https://ec.europa.eu/commission/presscorner/detail/en/ip_23_2393.

Figure 1

Government Support to Firms and Households in France 1995–2021



Source: INSEE, budget laws and social security laws; Delatte (2023). © ifo Institute

this context, two domestic government support forms deserve the EU institutions' attention.

GOVERNMENT SUPPORT TO FIRMS AND THE CLIMATE CRISIS

Tax policy can assist in the transition toward a carbon-neutral production system. To this end, economists generally recommend providing strong government support to the development of low-carbon technologies. According to recent patent data, a combination of subsidies and a sufficiently high carbon tax would steer firms toward clean technologies (Acemoglu et al. 2012).

However, this reasoning does not account for the fact that the existing stock of government support to firms is primarily targeted at carbon-intensive sectors. In fact, government support has in general been neutral to the sectoral structure of the economy, which, in carbon-intensive economies such as ours, means that tax subsidies primarily benefit carbon-intensive sectors. This is not surprising from a pre-climate-crisis perspective, but the objective of cutting carbon emissions by 55 percent by 2030 calls for dramatically changing the allocation of support. In other words, tax policy during this transition does not need to start from scratch, but should simply depart from the status quo, which is likely to trigger strong resistance from vested interests.

For example, in France, the amount of money that the government has allotted to supporting the corporate sector has doubled over the last 45 years (as a percentage of GDP), averaging 8.5 percent of GDP since 2010, equivalent to EUR 190 billion per year (Figure 1). Interestingly, half of government subsidies have benefited the most carbon-intensive sectors (including all manufacturing industries; see Figure 2). In the French scheme, only one-quarter of total government support is budgetary in the form of government subsidies, the rest being tax and social security exemptions. For example, the largest French corporate tax credit, with a volume of EUR 20 billion (0.7 percent of GDP), is distributed regardless of the sector but on payroll criteria.[2] Relying on exemptions instead of subsidies implies a lack of data transparency, because only budget support is recorded in the national accounts while tax and social security exemptions count as losses and are hence not recorded as spending. This lack of visibility diminishes the attention they receive in the public spending debate.

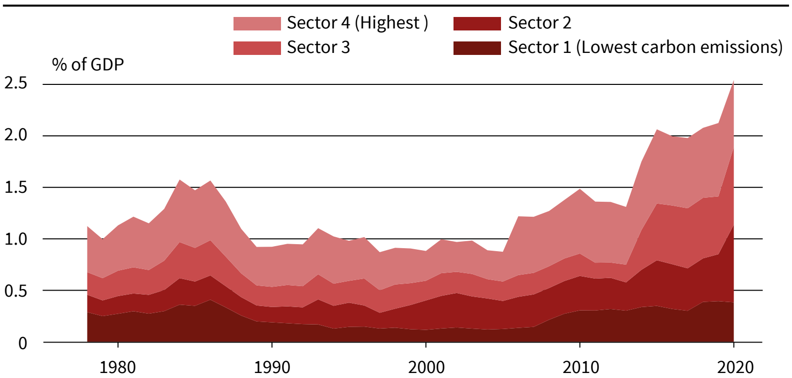
In total, the French government distributes annually the equivalent of 8.5 percent of GDP in aid to companies, with only one-quarter of it going to low-carbon-intensive sectors.[3] At the same time, the green budget, i.e., government support for the ecological transition, amounts to just EUR 37 billion. In other words, the existing stock of government support, which is mostly directed to brown activity, massively dwarfs the new green budget.

What the EU Can Do about This Issue

EU competition policy offers the most straightforward leverage in EU economic governance because, while state aid is decided and funded domestically, it must follow specific rules set by the EU (TFEU Article 107). It is striking therefore that state aid has significantly increased in France despite its general prohibition in the EU. As it turns out, the Treaty leaves room for several policy objectives with which state aid can be considered compatible. These exemptions unambiguously explain the expansion of public aid in the EU. It is worth noting that the "Block Exemption" qualification was extended on March 9, 2023, following the US Inflation Reduction Act, suggesting that a "public aid race" could well develop in the context of shocks with global impact. Despite the reporting obligations, it is not feasible to monitor the scope of public aid because of the numerous exceptions.[4] As a consequence, it would be useful to overhaul the public aid framework and discuss linking it to *green condition-*

Figure 2

Sectoral Composition of French Government Support



Source: Eurostat; INSEE; Delatte (2023). © ifo Institute

[2] Note that this tax credit was turned into a social contribution reduction in 2019.

[3] Here I make the (somehow realistic) assumption that tax subsidies and exemptions follow the same distribution across economic sectors.

[4] Here I make the (somehow realistic) assumption that tax subsidies and exemptions follow the same distribution across economic sectors.

ality, such as carbon emissions, the proportion of investment in fossil fuels, and the like.

GOVERNMENT SUPPORT TO HOUSEHOLDS

The richest 10 percent of the global population accounted for nearly 48 percent of global emissions in 2019, while 63 percent of the global inequality in individual emissions is now due to the gap between low and high emitters within countries (Chancel 2021). In turn, climate risks disproportionately affect the poorest households, who are more exposed and more vulnerable. In the context of the EU's objective of reducing carbon emissions, governments should allocate enough budget resources to offset the climate impact on low-income households. Given the potential cost of this new category of government support, one efficient way to proceed would be to avoid compensation measures across the board, instead tightly targeting low-income households. In this vein, it is important to remember that progressive taxation, which taxes the richest more heavily than the poorest, reduces the purchasing power of the richest and hence their carbon emissions. It also provides the resources to provide transfers to compensate for the effect of climate change on low-income households.

The recent package of measures implemented by governments to address the impact of inflation is an interesting case study. According to the ECB, real wages have fallen by almost 4 percent since 2019 and are expected to fall further in the coming months (Bodnár et al. 2022). The effect of inflation is certainly not homogeneous across all income levels: for example, in France, the bottom 50 percent of the population consumes 100 percent of its income, whereas the top 10 percent consumes 60 percent and saves 40 percent. This implies that in their daily life, the bottom 50 percent suffers 1/0.6 = 1.67 times more from consumer goods inflation than the top 10 percent. The gap is particularly pronounced when food prices increase faster than those for other goods, as has been the case in the current inflation episode (in France, y-o-y inflation on food still stood at 14 percent in May 2023). This calls for targeted tax responses. The hardest-hit income levels should get the greatest tax support. This is a matter of government spending efficiency. Yet, various governments have implemented across-the-board income tax support such as subsidizing the price of gas for every citizen. In France, the government's contribution to motorists' fuel costs began on April 1, 2022, with a total of EUR 7.6 billion (0.2 percent of GDP) budgeted in 2022 to finance such a rebate.

This is not efficient, since the demand for energy of high-income households is less elastic to prices than that of low-income households. It means that for the better-earning, absorbing a higher price did not pose much of a burden, so subsidizing fuel costs not only was unnecessary, but runs against the general interest of reducing the consumption of fossil fuels. In this sense, a subsidy for public transportation may have been more efficient and would have been compatible with carbon emission reduction goals.[5] More generally, any tax support to absorb the effects of climate change on households should meet the following criteria: 1) targeted toward the bottom of the income distribution, and 2) compatible with the long-run climate change mitigation objectives.

What the EU Can Do about This Issue

While tax policy is almost exclusively under domestic governance, the recent developments offer an opportunity to create leverage at the EU level. The unanimous-decision rule should be replaced by a qualified-majority rule for tax decisions, so that tax harmonization takes place on a best-case basis and not the other way around. Among other harmonization possibilities, a minimum corporate tax rate could be considered at the EU level (e.g., 25 percent) as well as a common minimum tax on top wealth and top income in order to end tax competition in the EU. In this new context, with more leeway, EU member states could transfer part of the tax revenue they collect to the EU to contribute to EU resources as well as to compensation measures.

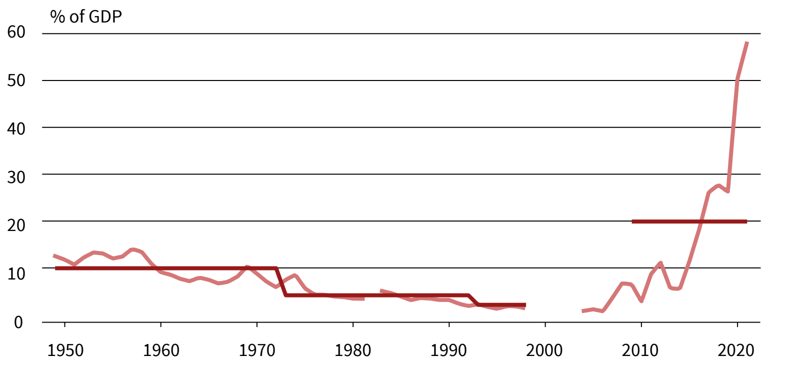
GREENING MONETARY POLICY

Monetary policy returned in force in 2008 on an unprecedented scale. In addition to managing short-term liquidity, central banks began lending directly to governments, banks, and corporates to an extraordinary degree. Figure 3 shows all operations carried out by the Banque de France to finance businesses, banks, and the government since 1949.[6] The J-shaped curve indicates that the Banque de France has never been so present in financing the economy than after 2008. In fact, the objective since then has been to act directly on the cost of long-term borrowing to make it cheaper and thus stimulate investment. It implies that the Banque de France has acted directly on quantities, as it did during the post-WWII period and the *Trente Glorieuses* (the thirty-year period of economic growth in France between 1945 and 1975). However, the conditions were radically different then, since contemporary monetary action is neutral; the principle in place in the aftermath of World War II was to deliberately interfere with the structure of the economy. In sum, central banks are more active today than even during the *Planification* period in the 1960s.

[5] Subsidizing public transportation is more efficient conditional on the distribution of public transportation users being biased towards middle- and low-income households.

[6] Category "Loans to the economy" 1949–1999 and then 2004–2021 with the addition of "Refinancing operations," "Bonds denominated in euros issued by eurozone residents," and "Bonds held under monetary policy operations."

Figure 3
Banque de France Financing Operations



Source: Baubeau (2018); Monnet (2018); Banque de France annual reports 2004–2020. © ifo Institute

In this context, in July 2022 the ECB's Governing Council decided to start greening its stock of corporate bond holdings, with a view to removing the existing bias toward emission-intensive firms. This so-called "tilting" of the Corporate Sector Purchase Programme (CSPP) reinvestments will start on October 1, 2022, aiming not only to mitigate climate-related financial risks on the Eurosystem's balance sheet, but also to send a signal to financial markets, encouraging them to switch their investment decisions from carbon-intensive to low-carbon assets. This decision, together with the fact that the ECB is a very active public actor today, underlines that greening the existing stock represents an outstanding opportunity to bring about a fast and efficient transition.

While the principle of tilting is an extraordinary step, given the market neutrality constraints under which the ECB has been operating so far, the speed is still very slow. In a recent speech, Isabel Schnabel, a permanent member of the ECB's Governing Council, pointed out that, at the current rate of tilting of the ECB corporate bond portfolio, polluting companies would continue to dominate the portfolio until at least the end of the 2020s, all other things being equal. That is a very long time, given the pace at which temperatures are rising (Schnabel 2023).

What the EU Can Do about This Issue

The EU governance should unambiguously play a part in speeding up this tilting. The most obvious institutional channel is the European Parliament, to which the ECB is accountable (Article 284 (3) of the Treaty on the Functioning of the European Union). However, despite the "Monetary Dialogue" and the annual report of the EP on Monetary Policy, the leverage of the European Parliament is still very limited. It would be key for the EP to gain an effective control on monetary policy.

POLICY CONCLUSION

It is crucial to link government support for the corporate sector to carbon emissions, an area where EU political governance could help. To be efficient in budgetary terms, government support to protect citizens against climate shocks should target low incomes instead of doling out across-the-board income support measures. The allocation of the ECB's corporate bond portfolio is largely biased toward carbon-intensive firms; therefore, the European Parliament should gain more control to actively promote the reorienting of this portfolio toward low-carbon-intensive firms.

REFERENCES

Acemoglu, D., P. Aghion, L. Bursztyn and D, Hemous (2012), "The Environment and Directed Technical Change", *American Economic Review* 102, 131–166.

Baubeau, P. (2018), The Bank of France's Balance Sheets Database, 1840–1998: An Introduction to 158 Years of Central Banking", *Financial History Review* 25, 203–230.

Bodnár, K., E. Gonçalves, L. Górnicka and G. Koester (2022), *Wage Developments and Their Determinants since the Start of the Pandemic*, ECB Economic Bulletin, 8/2022, https://www.ecb.europa.eu/pub/economic-bulletin/articles/2023/html/ecb.ebart202208_02~2328747465.en.html.

Chancel, L. (2021), *Climate Change & the Global Inequality of Carbon Emissions*, 1990–2020, World Inequality Database, https://wid.world/news-article/climate-change-the-global-inequality-of-carbon-emissions/.

Delatte, A. E. (2023), *L'Etat droit dans le Mur,* Fayard, Paris.

IPCC (2021), *Climate Change 2021: The Physical Science Basis*, https://www.ipcc.ch/report/ar6/wg1/.

Monnet, E. (2018), *Controlling Credit: Central Banking and the Planned Economy in Postwar France*, 1948–1973, Cambridge University Press, Cambridge.

Schnabel, I. (2023), *Speech at the International Symposium on "Central Bank Independence"*, Stockholm, January 10.

Oliver Falck, *Anna Kerkhof* and *Christian Pfaffl*

Taxation and Innovation: How R&D Tax Credit Schemes Foster Innovation in the Private Sector

KEY MESSAGES

- **Research and Development (R&D) is crucial to secure continued economic growth and prosperity**
- **Private sector investments in R&D are typically too low, which constitutes a market failure**
- **Governments use R&D tax credit schemes to compensate for this failure**
- **Input-based tax credit schemes and lenient corporate taxation are especially useful to stimulate private sector R&D activities**

Innovations form the backbone of sustained economic growth and, as such, they play a key role in safeguarding prosperity. Governments, aware of this, invest heavily in public research at universities and research institutes, and strive to create ideal conditions for private sector research and development (R&D), usually through specific R&D tax credit schemes or direct funding.

THREE TYPES OF MARKET FAILURE

Public support of R&D activities in the private sector is economically warranted because the private sector's incentives to invest in R&D are typically too low. Three types of market failure lead to this underinvestment:

1) Spillover effects. If a company invests in R&D and generates new ideas, the ideas usually do not remain solely within that company but permeate the entire market, for instance through imitation by other companies, or by way of job-switching employees taking their knowledge and skills with them. Thus, many market participants end up benefiting from new ideas without having generated them themselves. The investing company, however, does not take such positive spillover effects into account. As a result, its investment into R&D is lower than would be desirable from an economic point of view.
2) Uncertainty. It is highly uncertain whether investments in R&D will pay off. In particular, it is unclear a priori whether such investments will lead to actual innovations, and even if they do, it is uncertain whether these innovations will be profitable for the company doing the investing. Companies cannot insure themselves against this kind of uncertainty. Thus, especially for small and medium-sized enterprises (SMEs), whose financial leeway is more limited, investments in R&D represent a financial risk.
3) Public goods. Many important areas of our society depend on the provision of public goods, i.e., goods that are non-rival and non-excludable in consumption (e.g., health care). It is precisely these areas that often benefit from innovation, and the provision of important public goods suffers if innovation activities slacken off.

This article provides an overview of existing R&D tax credit schemes, documenting which ones are most effective. To that end, we summarize the results from an evidence review that systematically examines the existing literature. We conclude by discussing potential policy implications for Germany.

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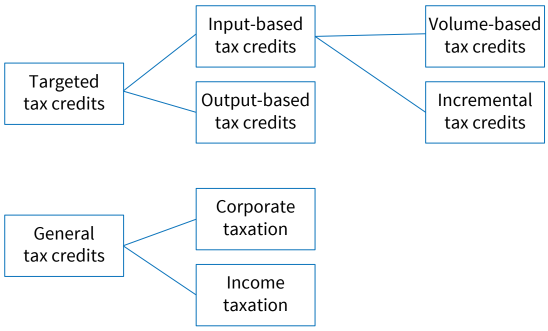
Figure 1

Overview of Tax Credit Schemes



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R&D TAX CREDIT SCHEMES

R&D tax credit schemes can be broadly divided into targeted and general tax credit schemes (Figure 1). Targeted R&D tax credit schemes are tied directly to a company's R&D activities, for instance by basing them on actual R&D expenditures. General tax credit schemes, in turn, support private sector R&D activities more broadly, e.g., through lenient income and corporate taxation.

TARGETED TAX CREDIT SCHEMES

Targeted R&D tax credit schemes can be further divided into input-based and output-based schemes. Input-based schemes consider all expenses incurred in connection with companies' R&D activities, including, e.g., personnel and material costs. Based on that, the researching companies receive tax benefits in the form of tax breaks, tax allowances or special depreciation options.

Input-based tax credit schemes can be volume-based or incremental; mixed forms are also possible. In case of volume-based funding, a company's total eligible R&D expenditures are used to calculate the tax credit. Incremental tax credit schemes, on the other hand, take only those R&D expenditures into account that exceed a certain reference value (e.g., the expenditures from the previous year or the average expenditure over the last three years). Unsurprisingly, incremental tax credit schemes involve more administrative effort than the volume-based sort. On the other hand, incremental tax credit schemes can better avoid windfall effects, since the public does not fund any R&D expenditures that the company would have made anyway.

In contrast to input-based tax credit schemes, the output-based sort considers the actual innovative output of companies that invest in R&D. This means that researching companies can only benefit from output-based tax credits if their R&D activities are ultimately successful. Output-based tax credits are usually provided through so-called licensing or patent box schemes, where corporate revenues generated through the company's innovations benefit from tax breaks.

GENERAL TAX CREDIT SCHEMES

A relatively new branch of the economic literature examines the relationship between general tax credit schemes—e.g., income and corporate taxation policies—and R&D activities in the private sector.

Income taxation can affect the occupational decisions of R&D workers. For example, differences in income taxes can determine whether and where high-skilled workers locate. Moreover, income taxes have been shown to affect both motivation and performance of R&D personnel.

Analogous to income taxation, corporate taxes determine whether and where researching companies and self-employed researchers locate. In addition, corporate taxation plays a major role in determining companies' R&D intensity, such as through influencing how many high-skilled workers can be hired and how well they can be paid.

R&D TAX CREDIT SCHEMES IN GERMANY AND INTERNATIONALLY

Until the introduction of R&D tax credit schemes, Germany only supported selected R&D activities both in the private and the public sectors through a project-based scheme that is still in force. The volume of such project-related funding is based on the target group (such as universities, start-ups, companies), size (e.g., SMEs), and type of R&D activity (e.g., some corporate R&D). Most of the project-related funding is provided through grants that the supported companies do not have to repay. In addition, some R&D funding programs grant loans or involve participation, equity holding, or financial securities on behalf of the state.

Germany's first R&D tax credit scheme ("Forschungszulagengesetz," FZulG), introduced on January 1st, 2020, complements the above project-based R&D funding. Eligible are all companies that have their registered office in Germany, are subject to German taxation, and conduct R&D. In-house R&D, contractual research, as well as R&D that is carried out by individual entrepreneurs all qualify for the tax credit, which is input- and volume-based. It does not compete with existing R&D project-based funding, i.e., tax credits can generally be granted in addition to project-based funding (though not for the same expenditures). The assessment base for in-house R&D expenditures was initially limited to €2 million euros per year, which at a credit rate of 25 percent results in a maximum subsidy amount of €500,000 per year and company. The Second Covid Tax Assistance Act increased the maximum assessment base to €4 million for eligible expenses incurred after June 30, 2020, and before July 1, 2026.

Internationally, R&D tax credits and tax deductions are the most frequently used policy instruments to support private sector R&D activities. According to the Worldwide R&D Incentives Reference Guide 2020, published by the auditing firm EY, 60 percent of the 47 countries surveyed grant tax credits, while 64 percent offer the option of tax deduction. Accelerated depreciation of R&D-related assets and tax breaks also play an important role in 40 percent of the surveyed countries, whereas tax allowances are important in only 5 percent. Like Germany, most countries use volume-based tax credit schemes. Only Italy and Mexico pursue a purely incremental system, while some other countries combine both types of R&D tax credit schemes.

Outside Germany, patent boxes—i.e., output-based tax credit schemes—have also become a widespread instrument to promote private sector R&D activities. In recent years, for example, several European countries (including Belgium, France, Hungary, Portugal, Spain, the United Kingdom, and the Netherlands) as well as the United States have included patent boxes in their tax legislation.

Since the financial scope of SMEs is typically limited, some countries offer tax relief specifically for the R&D activities of such companies. For example, 12 of 28 OECD countries currently offer tax breaks for researching SMEs, with countries such as Italy and France specifically promoting young companies through tax credits or tax allowances.

Finally, some countries have created tax incentives for immigrating high-skilled (namely, R&D-oriented) workers. In Denmark, for example, immigrating workers whose income is above a certain threshold benefit from reduced income taxation for a period of three years; similar regulations exist in Belgium or Sweden (but not in Germany).

EVIDENCE ON THE EFFECTIVENESS OF R&D TAX CREDIT SCHEMES

We will now present the results of an evidence review that systematically examines the existing literature (Falck et al. 2021, ifo Forschungsbericht 123-2021) on R&D tax credit schemes. We start by summarizing studies on targeted tax credit schemes, which we further divide into studies on input-based and output-based sorts. In a second step, we review the existing literature on general tax incentives.

INPUT-BASED R&D TAX CREDIT SCHEMES

A total of fifteen studies provides credible causal evidence on the effectiveness of input-based tax credit schemes. Twelve of the studies examine the effect of volume-based tax credit schemes, eight of which consider European countries, with the remaining four examining Canada, Japan, the US, and Australia. All twelve studies use microdata at the firm level. Three of the twelve studies on volume-based tax credits assess a 2008 tax reform in the UK, under which companies with up to 500 employees were declared SMEs, whereas the upper limit had previously been set at 250 employees.

Guceri (2018) exploits that reform to compare firms that unexpectedly benefited from SME-specific R&D tax credits (i.e., firms with more than 250 but less than 500 employees) with firms that were not rated as SMEs (> 500 employees). The author shows that the total R&D expenditures of the “sudden SMEs” increased by about 15-20 percent. In particular, the companies hired more R&D personnel, but refraining from increasing expenditures per R&D worker.

Guceri and Liu (2019) use the same reform to show that the eligible R&D expenditures of sudden SMEs—as opposed to their total R&D expenditures—increased by about 33 percent relative to firms not deemed SMEs.

Dechezlepretre et al. (2020) examine the tax reform’s impact on innovation outcomes in terms of the number of patents granted. The authors show that the number of patents granted to firms newly declared as SMEs increased by 60 percent relative to non-SME firms. They also demonstrate that R&D tax credit schemes led to spillover effects on technologically related firms.

Two further studies evaluate a tax reform in Italy, where a volume-based tax credit scheme to foster private sector R&D expenditures was introduced in 2006, temporarily abolished in 2009, and reintroduced a few months later with limited funds. Italian companies could apply for the funding on a “first come, first served” basis. The limit on state funding was quickly reached, leading to the rejection of around two-thirds of applications.

Cantabene and Nascia (2014) use this setting to make a comparison between supported and non-supported companies, regardless of whether the latter had applied for funding or not. They show that the tax credit had a positive effect on absolute R&D expenditures as well as on R&D intensity. Acconcia and Cantabene (2018) consider the same tax reform but compare supported companies exclusively to those that were not supported but applied for funding. Their results confirm the findings by Cantabene and Nascia (2014).

Acheson and Malone (2020) examine an Irish tax reform that, like the reform in the UK discussed above, caused a number of companies to unexpectedly become eligible for volume-based R&D tax credit schemes in 2009. In line with the results from the aforementioned studies, the authors find that tax credits have a positive impact on R&D expenditures of newly funded companies.

Agrawal et al. (2019) examine a change in the Canadian R&D tax credit scheme of 2004, whereby larger companies became eligible for public support. The authors show that the reform was followed by

17 percent higher R&D expenditures among the newly eligible companies.

Haegeland and Moen (2007) show that the introduction of a tax credit scheme in Norway in 2002 boosted the growth rates of R&D expenditures, with the effect primarily driven by companies that conducted little or no R&D before. By contrast, the R&D expenditures of companies that had already conducted R&D continuously before 2002 hardly changed at all.

Holt et al. (2016) analyze a tax credit scheme introduced in Australia in 2012. They show that subsidized companies have on average 14 percent higher R&D expenditures than non-subsidized ones.

Moretti and Wilson (2014) consider companies in the US biotech industry that benefit from volume-based tax credits. The authors document significant positive effects on the number of outstanding scientists in researching companies, but many of these gains occur at the expense of firms in adjacent states with lower levels of support.

Two further studies examine the shift from incremental to volume-based R&D tax credit schemes. Bozio et al. (2014) evaluate a tax reform in France from 2008. They find positive effects of the reform on R&D expenditures, but no effect on innovation outputs in terms of the number of patents granted up to two years after the reform. Kasahara et al. (2014) examine a similar reform from 2003 in Japan. They find that R&D expenditures would have been about 3 percent lower without the switch from incremental to volume-based funding, i.e., the tax reform had a positive effect on firms' R&D expenditures.

Three of the fifteen evaluation studies on input-based R&D tax credit schemes examine the impact of US incremental tax credit schemes, using firm-level microdata. The first one, Berger (1993), studies the effect of such a scheme introduced in the US in 1981 and documents a positive effect on the R&D expenditures. Hines (2007) investigates the period from 1986 to 1990, when R&D tax credits in the US were reduced at both the extensive and intensive margins, showing that affected firms spent less on R&D as a result. Rao (2016) examines the entire period from 1981 to 1991, confirming the findings of both studies above.

OUTPUT-BASED R&D TAX CREDIT SCHEMES

Three papers analyze the causal effect of output-based tax credit schemes on private sector R&D activities. Bornemann et al. (2020) examine the introduction of a patent box system in Belgium in 2008 and compare R&D activities from Belgian companies that benefited from the tax credits with companies from Germany, France, and Sweden. The authors consider four different outcomes: patent applications, patent grants, patent quality (measured by citations), and the number of R&D workers in the researching companies. Their analysis shows that the number of patent applications and grants increased after the tax reform in Belgium, while the quality of patents decreased. The number of R&D workers, in turn, almost doubled.

Schwab and Todtenhaupt (2019) study the impact of patent boxes in different countries. Their main finding is that such schemes tend to increase innovation output in terms of patent applications only when the physical presence of the company in the country where the application is filed is not necessary. In contrast, if physical presence is required, the effect of R&D support on the number of patents is much smaller and not statistically significant. The authors also find evidence for reallocation effects, i.e., patent boxes do not ensure that innovation output increases in aggregate, but that more patents simply tend to be filed where the tax credit is highest.

Köthenburger et al. (2019) reach a similar conclusion. The authors investigate whether patent boxes lead to intra-firm profit shifts of multinational enterprises (MNEs) across national borders. Their study reinforces what Schwab and Todtenhaupt (2019) also show: locations of MNEs where patent boxes exist report on average 8.5 percent higher profits than the same MNE locations where patent boxes do not exist.

GENERAL R&D TAX CREDIT SCHEMES

Ten studies examine the effect of general R&D tax credit schemes, eight of which analyze the impact of corporate taxation; of these, three examine the impact of income taxation on private sector R&D activities. The most comprehensive study comes from Akcigit et al. (2018), whose data cover taxation and innovation in the US over the entire 20th century. The authors show that higher corporate taxation reduces US companies' R&D activities in terms of the absolute number of R&D workers as well as both the quality and quantity of patents issued by companies.

Mukherjee et al. (2017) use firm-level data to study the effect of a gradual change in corporate taxation between 1990 and 2006 in the US Their results are consistent with those of Akcigit et al. (2018). In particular, they show that higher corporate taxes negatively affect innovation inputs, outputs, and outcomes of private sector companies. Specifically, companies for which the corporate tax was increased reduce their R&D expenditures by about 4.3 percent, file about one fewer patent, record about 14.2 percent fewer patent citations in the two years following the tax increase, and register about 5.1 percent fewer new products in the year following the tax increase.

Atassanov and Liu (2020) study the effect of corporate tax increases and decreases in the US between 1988 and 2006. Like Mukherjee et al. (2017), they find that corporate tax cuts have a positive impact on the quality and quantity of companies' innovation outputs. More specifically, companies from states where corporate taxes were reduced file about 0.63 (0.79) more patents three (four) years later than comparable companies in states where taxes were left unchanged; moreover, each patent received an average of 0.75 additional citations. Corporate tax increases have an opposite impact, but their overall effect is smaller. The authors also demonstrate that small and less liquid firms respond more strongly to corporate taxation changes than large and solvent firms.

Moretti and Wilson (2017), who examined the effect of corporate taxation on the location of high-skilled R&D workers in the US from 1976 to 2010, show that high corporate taxation reduces the number of high-skilled R&D workers who locate to a particular state. A plausible explanation for this is that corporate taxes reduce companies' demand for R&D personnel.

Looking outside the US, three papers examine the effect of corporate taxation on R&D activities of private sector firms in China. Howell (2016) shows that state-owned enterprises (SOEs) increased their R&D expenditures following a reduction in the corporate tax burden, while privately owned enterprises (POEs) decreased them. However, both types of companies recorded more new products and processes. The author explains the differing impact of the reform on the R&D expenditures of SOEs and POEs by the fact that POEs invested more in physical capital that was not declared as R&D - which was now relatively cheaper for them - and were thus also able to increase their innovation outcomes.

Cai et al. (2018) examine the effect of a tax reform that entailed a 10 percent reduction in the corporate taxation rate for manufacturing firms founded in January 2002 or later. The authors show that the reduction had a positive effect on both innovation inputs and outputs of the affected firms; in particular, their number of patent applications increased by 5.7 percent on average. Chen et al. (2020) use a Chinese tax reform from 2008 to determine the effect of general tax breaks on private sector R&D expenditures. Here, firms whose expenditures are above a certain threshold benefit from the tax breaks, while firms below do not. The authors show that tax breaks increase R&D expenditures by 25 percent for large firms, 17 percent for medium firms, and 10 percent for small firms.

Finally, Guceri and Albinowsky (2021) examine how economic uncertainty moderates the impact of corporate taxation on private sector R&D activities. They demonstrate that economic uncertainty counteracts the impact of tax credit schemes. In particular, companies hesitate to invest into R&D activities during times of financial stress, while economic certainty bolsters the will to invest.

A further three studies, focused on the US, examine the effect of income taxation on private sector R&D activities. Akcigit et al. (2020) demonstrate that higher income taxation has a negative effect on the quality and quantity of patents, as well as on the probability of generating a successful patent (with many citations). Moreover, R&D workers are less likely to locate to U.S. states with higher income taxation.

Akcigit et al. (2016) find that increases in the top income tax rates in the US, Europe, and Japan have had negative effects on the relocation of high-skilled R&D workers, and that the internal structure of companies also plays a major role in the migration of highly skilled R&D personnel: scientists who have worked for MNEs are more likely to move to take advantage of differences in income taxation. However, if the company is particularly strong in R&D within its industry, scientists are more willing to stay. Moretti and Wilson (2017) confirm these findings. The authors show that with larger differences in income taxation between two US states, the top R&D personnel are more likely to locate to the states with the lower taxation.

POLICY CONCLUSION

The evidence report paints a predominantly positive picture of the effectiveness of R&D tax credit schemes. In particular, the literature suggests that both targeted (input-based) and general tax credit schemes have a positive impact on private sector R&D activities.

What do these results imply for Germany? It is still too early to evaluate the effectiveness of the country's first R&D tax credit scheme, introduced in January 2020. However, a look at other countries suggests that the tax credit scheme is likely to have a positive impact on private sector R&D activities.

Two further lessons for Germany can be derived from the evidence report. First, with the introduction of R&D tax credits, the direct funding of private sector R&D projects will, and should, be put to the test. The literature mainly covers countries where direct funding of R&D does not play a major role. The fact that targeted tax credit schemes still have the desired effect in these countries suggests that Germany might no longer need its broad-based direct funding. One step forward could be to use direct project funding only to pursue specific goals, such as promoting certain R&D collaborations, regional projects, or selected technologies (e.g., in the area of environment and climate).

Second, the evidence report underlines the importance of general tax credit schemes for private sector R&D activities. The finding that lower corporate taxes tend to increase R&D activities is particularly important for Germany, a high-tax country in international comparisons, and should be considered in future debates on taxation.

REFERENCES

Acconcia, A. and C. Cantabene (2018), "Liquidity and Firms' Response to Fiscal Stimulus", *The Economic Journal* 128, 1759-1785.

Acheson, J. and R. Malone (2020), "Respect Your Elders: Evidence from Ireland's R&D Tax Credit Reform", *The Economic and Social Review* 51, 105-131.

Agrawal, A., C. Rosell and T. S. Simcoe (2014), *Do Tax Credits Affect R&D Expenditures by Small Firms? Evidence from Canada*, National Bureau of Economic Research.

Akcigit, U., S. Baslandze and S. Stantcheva (2016), "Taxation and the International Mobility of Inventors", *American Economic Review* 106, 2930-2981.

Atanassov, J. and X. Liu (2020), "Can Corporate Income Tax Cuts Stimulate Innovation?", *Journal of Financial and Quantitative Analysis* 55, 1415-1465.

Berger, P. G. (1993), "Explicit and Implicit Tax Effects of the R&D Tax Credit", *Journal of Accounting Research* 31, 131-171.

Bornemann, T., S. K. Laplante and B. Osswald (2020), "The Effect of Intellectual Property Boxes on Innovative Activity & Effective Tax Rates", *WU International Taxation Research Paper Series* 2018-03.

Bozio, A., D. Irac and L. Py (2014), *Impact of Research Tax Credit on R&D and Innovation: Evidence from the 2008 French Reform*, Banque de France.

Cai, J., Y. Chen and X. Wang (2018), "The Impact of Corporate Taxes on Firm Innovation: Evidence from the Corporate Tax Collection Reform in China", *NBER Working Paper* 25146.

Cantabene, C. and L. Nascia (2014), *The Race for R&D Subsidies: Evaluating the Effectiveness of Tax Credits in Italy*, Economia e Politica Industriale.

Chen, Z., Z. Liu, J. C. S. Serrato and D. Y. Xu (2020), "Notching R&D Investment with Corporate Income Tax Cuts in China", *American Economic Review* 111, 2065-2100.

Dechezleprêtre, A., E. Einiö, R. Martin, K. T. Nguyen and J. van Reenen (2020), "Do Tax Incentives Increase Firm Innovation? An RD Design for R&D", *NBER Working Paper* 22405.

Fuest, C., A. Peichl and S. Siegloch (2018), "Do Higher Corporate Taxes Reduce Wages? Micro Evidence from Germany", *American Economic Review* 108, 393-418.

Griffith, R., H. Miller and M. O'Connell (2014), "Ownership of Intellectual Property and Corporate Taxation", *Journal of Public Economics* 112, 12-23.

Guceri, I. and M. Albinowski (2021), "Investment Responses to Tax Policy under Uncertainty", *Journal of Financial Economics* 141, 1147-1170.

Guceri, I. (2018), "Will the Real R&D Employees Please Stand Up? Effects of Tax Breaks on Firm-Level Outcomes", *International Tax and Public Finance* 25, 1-63.

Guceri, I. and L. Liu (2019), "Effectiveness of Fiscal Incentives for R&D: Quasi-experimental Evidence", *American Economic Journal: Economic Policy* 11, 266-291.

Hægeland, T. and J. Møen (2007), *Input Additionality in the Norwegian R&D Tax Credit Scheme*, Statistics Norway, Oslo.

Hines, J. R. (2007), *On the Sensitivity of R&D to Delicate Tax Changes: The Behavior of US Multinationals in the 1980s*, University of Chicago Press, Chicago.

Holt, J., A. Skali and R. Thomson (2016), "The Additionality of R&D Tax Policy in Australia", *CIT Working Paper* 3.

Howell, A. (2016), "Firm R&D, Innovation and Easing Financial Constraints in China: Does Corporate Tax Reform Matter?", *Research Policy* 45, 1996-2007.

Kasahara, H., K. Shimotsu and M. Suzuki (2014), "Does an R&D Tax Credit Affect R&D Expenditure? The Japanese R&D Tax Credit Reform in 2003", *Journal of the Japanese and International Economies* 31, 72-97.

Köthenbürger, M., F. Liberini and M. Stimmelmayr (2018), "Tax Effects of European Patent Boxes", *KOF Analyses* 2018(1), 73-82.

Li, Q., M. S. Ma and T. Shevlin (2021), "The Effect of Tax Avoidance Crackdown on Corporate Innovation", *Journal of Accounting and Economics* 71(2-3), 101382.

Moretti, E. and D. J. Wilson (2014), "State Incentives for Innovation, Star Scientists, and Jobs: Evidence from Biotech", *Journal of Urban Economics* 79, 20-38.

Moretti, E. and D. J. Wilson (2017), "The Effect of State Taxes on the Geographic Location of Top Earners: Evidence from Star Scientists", *American Economic Review* 107, 1858-1903.

Mukherjee, A., M. Singh and A. Žaldokas (2017), "Do Corporate Taxes Hinder Innovation?", *Journal of Financial Economics* 124, 195-221.

Rao, N. (2016), "Do Tax Credits Stimulate R&D Spending? The Effect of the R&D Tax Credit in Its First Decade", *Journal of Public Economics* 140, 1-12.

Schwab, T. and M. Todtenhaupt (2019), "Thinking Outside the Box: The Cross-Border Effect of Tax Cuts on R&D", *WU International Taxation Research Paper Series* 2016-07, 16-073.

Shao, Y. and C. Xiao (2019), "Corporate Tax Policy and Heterogeneous Firm Innova-tion: Evidence from a Developing Country", *Journal of Comparative Economics* 47, 470-486.

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Income and Tax Burden of the Middle Class in Europe*

KEY MESSAGES

- Middle class incomes in the EU are highest in Luxembourg, Denmark, Finland, Austria, and Sweden, and lowest in Eastern European countries. The middle class in Bulgaria and Romania are at the bottom of EU nominal incomes, but their living costs are just half of the EU average
- When accounting for differences in purchasing power in the EU, the middle class in Luxembourg, Austria, Germany, and Finland can buy the most with their income. The purchasing power of the middle class in Eastern Europe is the lowest, but inequality in incomes of the middle class in different EU member states is less pronounced when cost of living is considered
- The tax burden of the EU middle classes differs depending on the household's country of residence. The effective tax rates follow a progression in all countries. Lower-middle incomes are taxed less, while upper-middle ones are taxed the most
- Families are generally less burdened by the tax and transfer system than singles with the same gross incomes. However, countries differ in whether families with single-earner households are more likely to enjoy tax advantages, or families with equal earners
- In general, the middle class in Denmark, Belgium, Germany, Finland, Lithuania, Slovenia, and the Netherlands is taxed the most. Among others, France, Poland, Italy, Luxembourg, Sweden, and Austria, impose average tax burdens on their middle classes. The middle classes in Spain, Greece, Estonia, Portugal, Cyprus, Bulgaria, and Romania all rank below the average tax burden in the EU

A strong middle class is important for political stability in democracies and can be an anchor against political extremism (Dorn et al. 2020). With their consumption and labor input, middle class households make a significant contribution to economic growth and a prosperous society. With their taxes and other levies, the middle-income groups also contribute significantly to revenues and thus to the government budgets and the financing of EU welfare states. At the same time, the middle class has come under pressure in many countries in recent years (OECD 2019). In many European countries, it is therefore questionable whether and to what extent the middle class will be able to bear further fiscal and financial burdens during the current crises and to meet the state's additional financing needs to cope with major challenges such as climate change, the energy transition, the security policy shift, or demographic change. If financial burdens become too high, they can curb incentives to work, innovative strength, and dampen economic prosperity—and even jeopardize political stability in Europe. In this article we provide an overview of the middle class situation in Europe, by making a comparison of their income and tax burdens across the EU member states.[1]

INCOMES OF THE MIDDLE CLASS IN EUROPEAN COMPARISON

Who belongs to the middle class varies from country to country and depends on the underlying definition. We use the OECD measure to statistically delineate which households are middle-income. According to the OECD definition, membership to an income class depends on the ratio of income to the median household income in the country. Accordingly, households belong to the middle class if they have 75 percent to 200 percent of the country's median household income at their disposal. Those sitting between 75 percent and 100 percent of the median income belong to the lower middle class; those with an income between 100 percent to 150 percent belong to the middle class, and those with an income between 150 percent to 200 percent of the median belong to the upper middle class. Income is taken as the means-weighted disposable household income (= net income plus transfers received). The number and age of household members are taken into account for weighting households according to the OECD definition. The calculations are based on the EU Statistics on Income and Living Conditions (EU-SILC[2]), the most comprehensive European

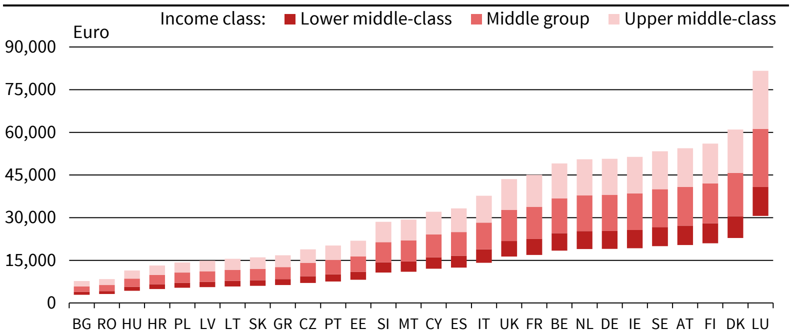
* The article is largely based on a chapter written in German for a study commissioned by the Hanns-Seidel Foundation (Dolls et al. 2023). The study examines the distribution of income and effective tax burden of the middle class in Germany and in an EU comparison (Ferber 2023).

[1] The European comparison made here uses data on household finances prior to 2020. The UK was still a member of the EU at that time. The UK's exit from the EU occurred on January 31, 2020, and since we have comparable UK data for income and price levels, the UK was included. The comparison with the UK as one of the major economies in Europe is interesting. The UK has an economic output per capita that is at a similar level to that of Germany or France.

[2] We are grateful for access to microdata from the EU Statistics on Income and Living Conditions (EU-SILC) provided by Eurostat under contract RPP 331/2017-EU-SILC-LFS. The results and their interpretation are the responsibility of the authors.

Figure 1

Disposable Income of the Middle-class in Europe, 2019



Notes: Data basis EU-SILC, own calculations. Income thresholds are based on means-weighted disposable household incomes. Countries are sorted according to the upper income limit of the middle class. Household incomes in the UK are only available up to 2017 and have been uprated according to the Harmonized Index of Consumer Prices (HICP).
Source: Authors' calculations. © ifo Institute

household survey for income and distribution analyses. The EU-SILC wave used is based on survey data from 2020, with the information on income requested therein referring to the previous year, i.e., 2019.

Who has the Highest Nominal Disposable Incomes, Who the Lowest?

Figure 1 shows the nominal disposable income thresholds of the EU middle class and of the lower, middle, and upper middle-class subcategories in 2019.[3] In a European comparison, the middle class in Luxembourg had the highest disposal income in 2019 (between €30,618 and €81,649).[4] This is no surprise, as Luxembourg's median household income and GDP per capita are also the highest in the EU. Even compared to second-placed Denmark, a household with lower-middle income in Luxembourg would already belong to Denmark's middle-income group. At the bottom end, Bulgaria has the lowest average household income in the EU, where households having a means-weighted disposable income of between €2,908 and €7,755 formed the middle class in 2019. Disposable incomes are only slightly higher in Romania. The middle classes of other Eastern European countries are also in the bottom third in Europe, as are the middle classes in Portugal (18th rank) and Greece (20th).

In the top quarter of the EU's ranking for middle class disposable household income according to EU-SILC data are Finland (rank 3rd), Austria (4th), Sweden (5th), Ireland (6th), Germany (7th), the Netherlands (8th), and Belgium (9th). According to EU-SILC data, in Germany, for example, households with a means-weighted disposable income of between €19,013 and €50,701 belong to the middle class. France, the UK, and Italy follow at a slight distance, on ranks 10th-12th.

Who has the Highest Purchasing Power, Who the Lowest?

More income does not automatically mean that one can afford more, as the cost of living varies among European countries (Dolls et al. 2023). In other words, even with similar income levels, households can consume a different amount of goods and services in different countries. The cost of living in Italy corresponds to the EU average. By contrast, life is cheaper than the EU average in Spain, Cyprus, Portugal, and Greece, among others. In these countries, more goods and services can be consumed with the same disposable income than in countries such as Germany, France, the UK, or the Scandinavian countries. The most expensive countries in the EU to live in are Denmark, Ireland, and Luxembourg. The cheapest places to live are Bulgaria and Romania, where the cost of living is only about half as high as the EU average.

Because of these price differences, the nominal incomes do not show which middle class has the highest and which the lowest purchasing power given their disposable incomes. Figure 2 shows income thresholds of the EU middle class and its subcategories (lower, middle, upper middle class) in 2019 at Purchasing Power Standards (PPS).[5] PPS is an artificial currency that eliminates the effect of cross-country differences in price levels, offering a way to compare the income thresholds directly between member states.

Overall, income inequality among the middle classes becomes lower when the respective purchasing power is considered, leading some countries to be ranked better or worse than in terms of nominal income. The middle class in Luxembourg, despite having some of the highest price levels in Europe, still enjoyed the highest purchasing power in 2019, about one-third higher than

[3] The following should be noted in Figure 1: In countries where the euro is not the national currency, the conversion to euros is made at the average exchange rate in 2019. These include Bulgaria, Romania, Hungary, Croatia, Poland, Czech Republic, the UK, Sweden, and Denmark.

[4] Luxembourg can hardly be considered as a benchmark in terms of price levels, income, and wealth. With a population of just under 640,000, Luxembourg is smaller than several major cities and regions in other countries.

[5] Income thresholds in PPS are calculated using purchasing power parities (PPP).

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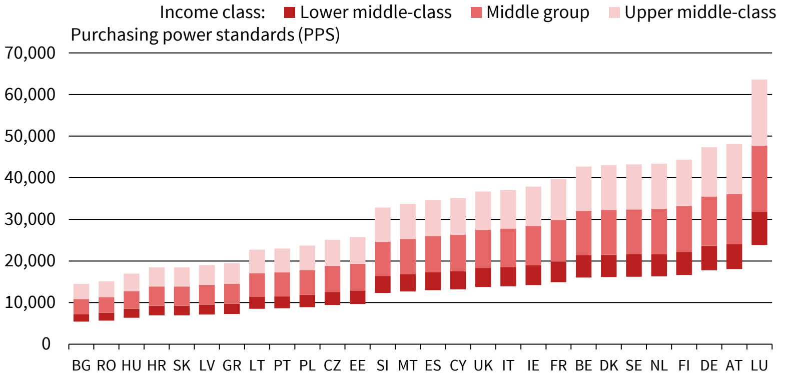
that of the middle classes in Austria and Germany, the second- and third-placed countries, and about twice as high as the EU average. The middle classes in Austria and Germany, in turn, enjoy about a 40 percent higher purchasing power than the EU average. In the top quarter of the ranking for purchasing power of middle-class disposable household income according to EU-SILC data are Finland (rank 4th), the Netherlands (5th), Sweden (6th), Denmark (7th) and Belgium (8th), all with a purchasing power between 25 percent and 30 percent above the EU average. France, Ireland, Italy, and the UK follow at a slight distance, on ranks 9th-12th, with a purchasing power close to EU average (between 7 percent and 16 percent). There is a relatively clear drop in purchasing power between roughly the upper and lower half of middle-class incomes between Slovenia and Estonia. The middle classes of Eastern European countries occupy the bottom quarter, as does the middle class in Greece (22nd). Although the gap to other countries is smaller in terms of purchasing power, Bulgaria and Romania still have the lowest average household incomes in the EU, barely above 50 percent of the EU average in 2019.

EFFECTIVE TAX BURDEN OF THE MIDDLE CLASS IN THE EU

Having shown how the middle classes compare in terms of income and purchasing power in the EU, this section analyzes the effective tax burden of middle-class households, which includes income taxes, statutory social security contributions, and social transfers received. For the calculation of the effective tax burden, we rely on the European Commission's EUROMOD microsimulation model.[6] EUROMOD contains all information on the tax and transfer systems of the member states, so that disposable income after deduction of all taxes and contributions as well as social benefits can be calculated for all households in the EU-SILC data. The calculation of the effective tax burden is based on the legal status in force in the EU member states in 2019. On the one hand, the analysis of the effective tax burden is thus consistent with the analysis of income distribution (i.e., the rules of the simulated tax and transfer systems and the household incomes are each based on 2019), and on the other hand, we consider the legal status before the Covid-19 pandemic. Numerous temporary measures were introduced during the pandemic, the current Ukraine crisis and the ensuing high inflation rates, most of which

Figure 2

Purchasing Power of Disposable Income of the Middle-class in Europe, 2019



Notes: Data basis EU-SILC and Eurostat, own calculations. Income thresholds are based on means-weighted disposable household incomes in PPS. Countries are sorted according to the upper income limit of the middle class. Household incomes in the UK are only available up to 2017 and have been uprated according to the Harmonized Index of Consumer Prices (HICP).
Source: Authors' calculations.

are also included in EUROMOD and could thus potentially distort our results in international comparisons due to one-off effects.

For the European comparison, the average tax burden is calculated for two household types using the EUROMOD microsimulation model, once for a single household and once for a family with two adults and two children.[7] For the disposable income of the family with two children, we again consider two different assumptions. In the first, we assume a household in which one adult (as single wage-earner) generates the entire household (labor) income. In the second assumption, we consider a household in which both adults earn the same income. The average effective tax burden is calculated as follows:

(1) (Total tax payments + Total social security contributions - Total social benefits received) / Gross household income.

To obtain a more differentiated picture of the average burden on the middle class, this is calculated for the three median incomes of the respective middle-class subcategories. This makes it possible to examine how progressive individual tax and transfer systems are in Europe, i.e., to what extent the burden of higher taxes

[6] The results presented here are based on EUROMOD I4.0+. Originally maintained, developed, and managed by the Institute for Social and Economic Research (ISER), EUROMOD has been maintained, developed, and managed since 2021 by the Joint Research Centre (JRC) of the European Commission in collaboration with EUROSTAT and national teams from EU countries. We are indebted to the many individuals who have contributed to the development of EUROMOD.

[7] In Germany, for example, this increases the splitting advantage for income tax. The average tax and contribution burden in Germany is higher for families with two incomes.

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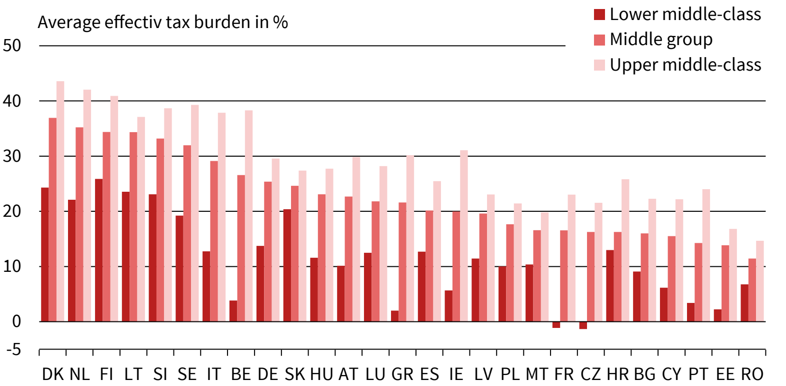
Figure 3

Single-Earner Family: Average Effective Tax Burden of the Middle-Class in Europe, Two Adults with Two Children, 2019



Note: Own calculations with EUROMOD for the countries of the EU27, excluding the United Kingdom. Countries are sorted in descending order according to the tax and contribution burden of the middle. Assumption: One adult (as sole wage earner) generates the entire household income.
Source: Authors' calculations.

and social security contributions increases with higher income and whether the relief provided by lower social benefits received decreases with higher income. The results show for all countries that tax and transfer systems are progressive, i.e., the average burden is lowest for households in the lower middle and highest for those in the upper middle categories.

How High is the Tax Burden for Middle-Class Families in Europe?

First, the average effective tax burden of a family with two adults and two children is mapped for each middle-class income bracket in 2019. In Figure 3 a single-earner household is assumed, in which one adult generates the total gross labor income. Lower middle income families with two children in France and the Czech Republic are net transfer recipients and thus experience a negative burden (net relief) from the tax and transfer system. This means that these families receive more social benefits that more than offset their tax payments and social security contributions.[8] In many other European countries, the average burden for the lower middle class is also relatively low. State benefits for families, especially child benefit payments, account for a significant portion of gross income. On average, the lower middle class family pays just below 11.5 percent in taxes and social security contributions. In Germany, too, the burden on the lower middle class is still moderate compared with the rest of the middle class, with almost 14 percent effective taxation of gross household income going. In a European comparison, Germany is thus in the top third (9th place). With just below 13 percent, the lower middle class in Italy, Croatia, and Spain has a similarly high effective tax burden. In 16 countries, the average effective tax burden of the lower middle class is below 13 percent. The tax burden for lower middle-class families in the seven countries in the top group ranges from 19 percent in Sweden to 26 percent in Finland (Figure 3).

On average, European middle-class families face an effective tax burden of almost 23 percent, varying from around 11 percent in Romania and 14 percent in Estonia and Portugal, to just under 35 percent and 37 percent in the Netherlands and Denmark, respectively. With an effective tax burden for the middle class of around 25 percent, and around 30 percent for the upper middle class, Germany ranks as average. For families in the upper middle class, the greatest possible splitting advantage in income tax under the assumption of a single-earner household has a particularly tax-reducing effect in Germany. Since many EU countries apply individual taxation rather than spousal splitting (what the OECD calls "standard marital status reliefs"), families where the spouses earn unequal income have no tax advantage from spousal splitting like they have in tax systems like Germany's. On average among European countries, the ratio of effective tax burden for upper middle-class families in a single-earner household is just below 29 percent. Even for the upper middle-class, the highest effective tax burden rate occurs in Finland (41 percent), the Netherlands (42 percent) and Denmark (44 percent), while Romania (15 percent) and Estonia (17 percent) have the lowest effective taxes and net burden for families.

Figure 4 shows how the ranking of countries' average tax burden changes when families with two equal incomes (dual earners) and two children are considered. On average, the tax burden of such families is just under 6 percent for the lower middle class in an EU comparison, 17 percent in the middle, and 24 percent in the upper-middle-class group. Lower-middle-income families receive net benefits, on average, in Belgium, France, Greece, Ireland, and Estonia. Middle-class families in Denmark and Slovenia, in turn, have the highest effective tax burden, with the lower middle classes having an average effective tax burden of 29 percent and 22 percent, the middle group 34 percent and 30 percent, and the upper middle classes 37 percent and 35 percent, respectively. The tax burden on equal-income families is also above average in Lithuania, Finland, and Germany. In Germany, for example, the average effective tax burden for dual-earner families is higher than for single-earner families, as the splitting advantage in income taxation is reduced and even disappears when the spouses earn the same income. The effective tax burden for middle-class families with similarly high incomes of both partners is thus above average in Germany in an EU comparison.

Overall, the effective tax burden for families with two children varies within the middle class in a European comparison and depends on whether single- or dual-earner households are considered. The coun-

[8] It should be mentioned again that the figures show the average burden for the respective median gross income of the income distribution group. In reality, therefore, there are likely lower middle-income households that are net taxpayers in France and the Czech Republic.

tries with the highest effective tax burdens for all middle-class groups include Denmark, Sweden, and Finland, as well as Slovenia. While in the Netherlands single-earner families bear higher tax burdens, in Germany it is the dual-earner families with two equal incomes that bear some of the highest tax burdens in an EU comparison. In contrast, middle-class families in Romania, Portugal, and Estonia enjoy comparatively low tax burdens. Italy and France occupy the middle of the country rank.

How High is the Tax Burden for Middle-Class Singles in Europe?

Single households generally receive fewer social benefits than families because of the absence of such family-related transfer payments as child benefits. In terms of taxes, families have also more potential for taxation relief through joint spousal assessment (i.e., spousal splitting, applied to married couples) and child allowances. That is why single households in all European countries are burdened on average more than families across the entire middle class (Figure 5). In the lower-middle-class segment, the average tax burden as a single person in the EU is 26 percent, which is 15-20 percentage points higher than the effective tax burden on families with two children. Denmark (38 percent), Slovenia (36 percent), and Germany (35 percent) have the highest average effective tax burdens for singles in the lower middle-class.

The picture is similar for the middle and upper middle class: Belgium and Denmark tax single households in the middle (43-44 percent) and upper middle (47-49 percent) the most. Germany ranks third in terms of the average tax burden on singles in the middle and upper middle class. In the upper middle, 44 percent of gross household income goes to the state as taxes and social security contributions, while in the middle it is 41 percent. The effective tax burden in other European countries is lower, averaging about 32 percent for the middle group of the middle-class, and around 35 percent for the upper middle class. In France, the tax burden for single households is roughly at the EU average for all three middle-class subcategories. Italy, Austria, Finland, and the Netherlands all rank above average in terms of the tax burden for single households, while Greece, Spain and Portugal are consistently below average. At the lowest end of the ranking are single middle-class households in Cyprus, Estonia, Romania, Malta, and Bulgaria (Figure 5).

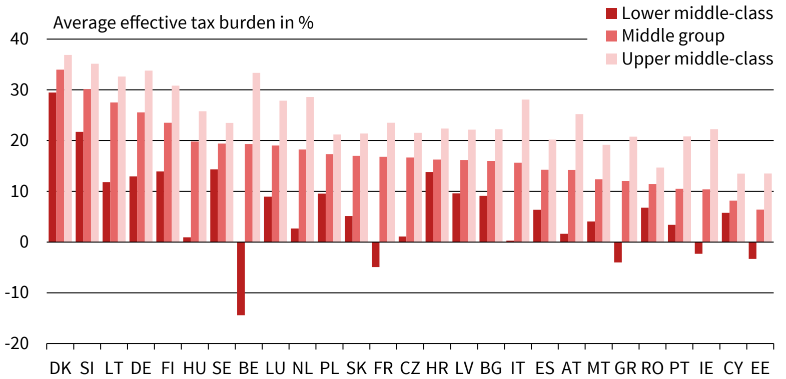
CONCLUSION AND POLICY IMPLICATIONS

The net burden from tax and transfer systems differs across the EU, as well as across the different income groups. The effective tax burden follows a progression in all countries, with lower-middle-income households being taxed less, while upper-middle-income households are taxed the most. In some countries, such as Belgium, effective tax burdens vary significantly across the middle-class segments. Families are generally less burdened by government taxes than single households. However, countries differ as to whether single-earner or dual-earner households are more likely to enjoy higher tax advantages.

What policy conclusions follow from this comparison of the income and the effective tax burden of the EU middle-classes? The comparison of the income levels shows that differences between middle-class incomes become smaller when national price levels and purchasing power are considered. Moreover, the tax burden of the middle-class is already quite high in many countries. Denmark, Belgium, Germany, Finland, Lithuania, Slovenia, and the Netherlands all lie at the high or above-average levels, depending on household type and income class. The upper middle class of these countries sometimes pays more than one-third of their income to the state in taxes and levies. France, Poland, Italy, Luxembourg, Sweden, and Austria impose average tax burdens on their middle class, while Spain, Greece, Estonia, Portugal, Cyprus, Bulgaria, and

Figure 4

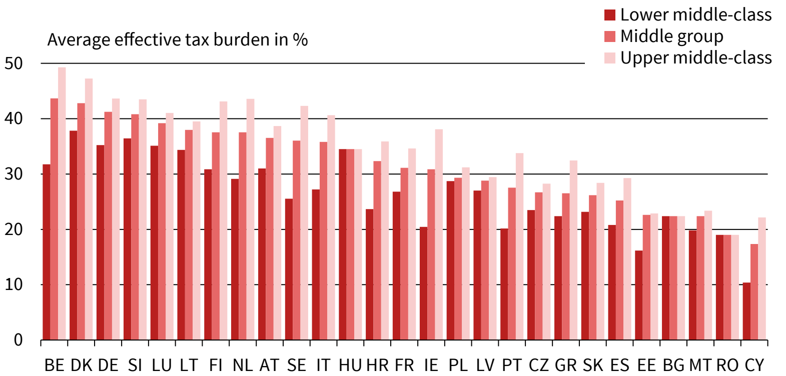
Dual-Earner Family: Average Effective Tax Burden of the Middle-Class in Europe, Two Adults with Two Children, 2019



Note: Own calculations with EUROMOD for the countries of the EU27, excluding the United Kingdom. Countries are sorted in descending order according to the tax and contribution burden of the middle. Assumption: One adult (as sole wage earner) generates the entire household income.
Source: Authors' calculations.

Figure 5

Single Households: Average Effective Tax Burden of the Middle-Class in Europe, 2019



Note: Own calculations with EUROMOD. Countries are sorted in descending order according to the tax and contribution burden of the middle.
Source: Authors' calculations.

Romania tend to impose a below-average or low tax burden. Governments in the latter group of countries seem to have more leeway as regards their tax policies, although income levels of the middle class are also lower in an EU comparison.

In addition, households in many of the higher-taxed countries also receive offsetting benefits from the state if, for example, the welfare state or provision of public goods are more generous. As a result of their robust welfare states, Scandinavian and Continental European countries seem to be more resilient during crises (Dolls and Lay 2023). That said, many (social) transfers and subsidies, by dint of not being targeted contribute to a higher tax burden and an inefficient use of taxes.

If the state needs more revenue to cope with the multiple challenges expected to arise in the coming years, policymakers need to consider a trade-off between spending cuts in other (social) areas, raising taxes at the costs of a higher burden to the taxpayers, or issuing higher public debt at the cost of future generations. The optimal strategy to address future fiscal demands will necessarily vary across EU member states, depending on their existing effective tax and public debt levels.

REFERENCES

Dolls, M., F. Dorn, D. Gstrein and M. Lay (2023), "Die Lage der Mittelschicht im europäischen Vergleich", in M. Ferber (ed.), *Gerechtigkeit für die Mitte? Die Verteilung der Steuer- und Abgabenlast in Deutschland und im EU-Vergleich*, Hanns-Seidel-Foundation, Munich, 70-98.

Dolls, M. and M. Lay (2023), "The Role of Income Support Systems as Income Stabilizers in Times of Crisis", *EconPol Policy Brief* 52.

Dorn, F., C. Fuest, L. Immel and F. Neumeier (2020), "Economic Deprivation and Radical Voting: Evidence from Germany", *ifo Working Paper* 336.

Ferber, M. (ed., 2023), *Gerechtigkeit für die Mitte? Die Verteilung der Steuer- und Abgabenlast in Deutschland und im EU-Vergleich*, Hanns-Seidel-Foundation, Munich.

OECD (2019), *Under Pressure: The Squeezed Middle Class*, OECD Publishing, Paris.

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Immigrant Narratives in German Newspapers

KEY MESSAGES

- **We measure immigrant narratives in German newspapers and assign each sentence to one of seven themes**
- **Using natural language processing (NLP) tools and customized dictionaries, we analyze over 100,000 articles**
- **45 percent of narratives are on Foreign Religion, 23 percent on Cultural Integration, and only 12 percent on Economic themes**
- **Changes in sentiment in immigrant narratives come mainly from shifts between themes**
- **Southern and Eastern European immigrants receive much more positive coverage than Arabs and Turks**

Narratives about immigrants matter for both natives and immigrants because narratives shape attitudes, political outcomes, and perceptions of discrimination. A recent and growing literature has shown that media narratives influence how people think and act (Shiller 2017; Andre et al. 2021; Esposito et al. 2023; Bursztyn et al. 2022) as well as that specific framing of immigration matters for how migrants are perceived (Djourelova 2023; Keita et al. 2022). However, no study has examined narratives about immigrants in a systematic way. We fill this gap by studying narratives in German national and regional newspapers between 2005 and 2019.[1] We focus on Germany as the largest member state of the European Union, home to a large and diverse immigrant population, and one of the main destination countries for asylum seekers worldwide. Germany also features a rich and diverse landscape of regional newspapers, opening up the possibility to link immigrant narratives to specific local conditions.

APPROACH

Our definition of narratives, following Shiller (2017), is rather broad, including not only causal statements about the role of immigrants, but also statements characterizing immigrants as an actor or group. Contrary to much of the text-as-data literature in economics, we use individual sentences as the unit of analysis, as sentences are the fundamental building blocks of longer texts like newspaper articles. To provide a comprehensive dataset capturing immigrant narratives, we combine more traditional dictionary-based approaches with the capabilities of modern Natural Language Processing (NLP) techniques that detect linguistic features like grammar, word types, and dependencies. Specifically, we use the Python package spaCy (Honnibal et al. 2020), which allows us to extract linguistic features such as dependencies and word-types.

For each sentence, our method aims to detect (i) whether the sentence is about immigrants; (ii) if it fits into one or more of seven narrative themes that we identify; and (iii) if it has a (theme-specific) negative, neutral, or positive sentiment. Instead of following an unstructured topic-modelling approach, we classify narratives into seven pre-defined themes. Those themes are based on key topics in the economics of immigration literature and our reading of 500 randomly chosen German newspaper articles about immigrants and the existing literature on drivers of concerns about migration. The seven themes contain the economy-related narratives Work, Welfare, and Entrepreneurship, the society-related narratives

[1] The underlying paper, "Immigrant Narratives." can be accessed here: https://www.cesifo.org/en/publications/2022/working-paper/immigrant-narratives.

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Foreign Religion[2] and Cultural Integration, as well as Immigrant Criminality, and Immigrants-as-Victims. The last theme differs from the others by focusing on all narratives that depict immigrants as victims of crimes or discrimination against immigrants.

First of all, we identify sentences to be about immigrants if they contain immigrant actors (e.g., based on nationalities and foreign names) or immigration-specific words from our theme-specific dictionaries. Secondly, for each of the seven themes, we construct dictionaries to capture words related to the theme. Using NLP tools, we construct a pipeline that assigns themes to sentences. Concrete examples of how we use these NLP tools are pronoun tracking (to identify which actor introduced in a prior sentence is referred to) and Part-of-Speech tagging (enabling us to identify the perpetrator or the victim of a crime—to assign a sentence as either about Immigrant Criminality, or Immigrants-as-Victims). Lastly, rather than relying only on context-agnostic sentiment dictionaries, we also assign a theme-specific positive, neutral, or negative sentiment to each of the words in the theme-specific dictionaries. We fine-tune the theme-specific sentiment assignment by using spaCy to account for weakening and strengthening adjectives, as well as negating statements in sentences.

DATA

We obtained individual articles about immigrants published by German newspapers from Factiva, an international newspaper database. We queried articles from 65 regional and 5 national newspapers between 2005 and 2019 using a Boolean search filter that combines immigrant-specific search terms with a geographic location within Germany. Based on Entity Recognition and lists of foreign and German locations, we further ensure that an article is concerned with immigrants in Germany. After discarding articles that are likely about events or people not based in Germany, our dataset contains 107,428 articles. Unless otherwise specified, the following analyses are based on running our approach on this dataset.

Moreover, we use municipality-level newspaper sales data by the German Audit Bureau of Circulation (IVW). Using the data from IVW and administrative data from the German statistical office, we can calculate local characteristics in the coverage area of newspapers.

VALIDATION

To validate our approach, we recruited 16 human coders among native German speaking university students from different parts of Germany and carefully trained them for the task. Each student coded a batch of 437 articles, which equals around 18,000 to 20,000 sentences. We use the sample of articles coded by students to study heterogeneity among human coders and to assess the performance of our algorithm compared to standard approaches. Our algorithm has an accuracy rate of 96.6 percent in the classification of immigrant narrative sentences, and clearly outperforms alternatives based on simple keyword matching, providing the best balance between true positives and false negatives. While our new theme-specific dictionaries contribute a lot to the initial classification performance, correct sentiment assignment is particularly improved using specific NLP functionalities and, especially, our sentiment adjustment functions that leverage weakening and negating statements.

NARRATIVE THEMES OVER 15 YEARS

To study the relative prevalence of the different narrative themes over time across all articles, we sum up the number of narratives within a theme and divide by the sum of all narratives. When doing this, a given sentence can be classified into more than one theme. For example, a sentence about unemployment among young Muslims would be classified to be about both Work and Foreign Religion, while a sentence about unemployment among Turkish immigrants would be counted to be only about Work. Although newspaper narratives are not equivalent to the spread of narratives among the population, they provide a useful way to study prevailing narratives. The composition and sentiment of a sentence is influenced by many factors, including the journalist's private preferences as well as—given the profit-orientation of newspapers—the preferences of their readers.

Figure 1a shows the composition of immigrant narratives by year across all newspapers in our sample between 2005 and 2019. The results are quite striking. While economists usually highlight the economic implications of immigrants for the labor market or welfare state, media coverage focuses much more on Foreign Religion and Cultural Integration. Economy narratives are relevant, but at a clearly smaller scale than the societal themes and with considerable fluctuations. Over the entire 15 years, out of all sentence-level narratives identified in our sample, 12 percent concerned the Economy, 45 percent Foreign Religion, 23 percent Cultural Integration, 12 percent Immigrant Criminality, and 7 percent Immigrants-as-Victims. This is in line with the literature on concerns about immigration, which has highlighted that cultural concerns trump economic concerns (Card et al. 2012). Over the period covered by the study, the share of narratives about Foreign Religion and Immigrant Criminality has increased, at the expense of Cultural Integration.

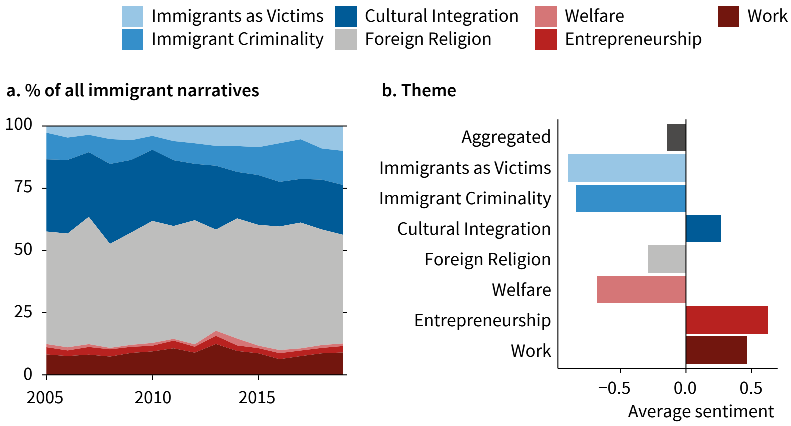
To study with what sentiment the narrative themes are conveyed, we aggregate the sentiment

[2] We define all religions except Christianity and Judaism as foreign religions given that they have been introduced to Germany mostly by immigrants arriving after the Second World War. In practice, this predominantly captures narratives about Muslims and Islam in general.

across all sentences by theme. Figure 1b shows that the theme-specific sentiments of Immigrants-as-Victims and Immigrant Criminality are overwhelmingly negative, and Cultural Integration is more positive than Foreign Religion. Furthermore, Work and Entrepreneurship carry predominantly positive sentiment, whereas Welfare is largely negative. We also analyzed theme composition and sentiment between different newspaper sections (news, politics, and local news). We find that Cultural Integration is most prevalent, and aggregated sentiment most positive, in the local news sections. Furthermore, Immigrant Criminality is most prevalent in politics and general news sections.

Figure 1

Narrative Theme Shares over Time



Source: Authors' compilation of articles from Factiva (balanced sample 2005–2019). © ifo Institute

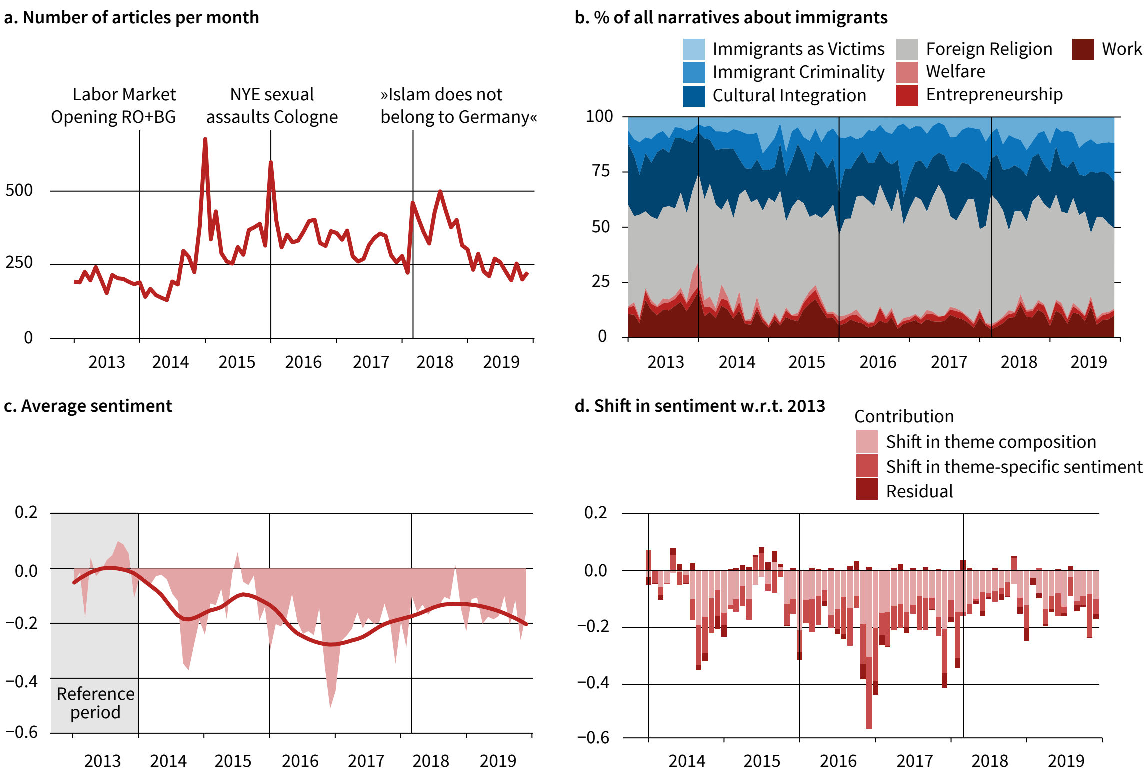
RESPONSE TO THE 2015 REFUGEE CRISIS AND THREE REVELANT EVENTS

In the following, we restrict our analysis to a balanced set of 41 newspapers in the years 2013 to 2019, covering the 2015 refugee crisis and three relevant events: (i) the opening of German labor markets for Bulgarians and Romanians on January 1st, 2014; (ii) a mass incidence of sexual assaults by mostly Arab men on December 31st, 2015, in Cologne (iii), and the statement on March 15th, 2018, by the conservative German minister of the interior Horst Seehofer that for him, "Islam does not belong in Germany." Figure 2a shows the monthly number of articles about immigrants in Germany. The vertical lines indicate the three events. In terms of the number of articles, the labor market opening barely shows up. The sexual assaults and Seehofer's statement, instead, generated major increases in the number of articles. January 2016 is the month with the second-highest number of articles related to immigrants in Germany throughout our balanced panel of seven years.

Figure 2b shows how the theme shares changed over time, with each event showing up clearly. Labor market opening for Bulgarians and Romanians was associated with an increase in the Work and Welfare theme shares, both before the opening and after it. Sexual assaults in Cologne were followed by more articles on Immigrant Criminality, and Seehofer's statement on Islam considerably increased the Foreign Religion theme share. The share of Immigrant Crim-

Figure 2

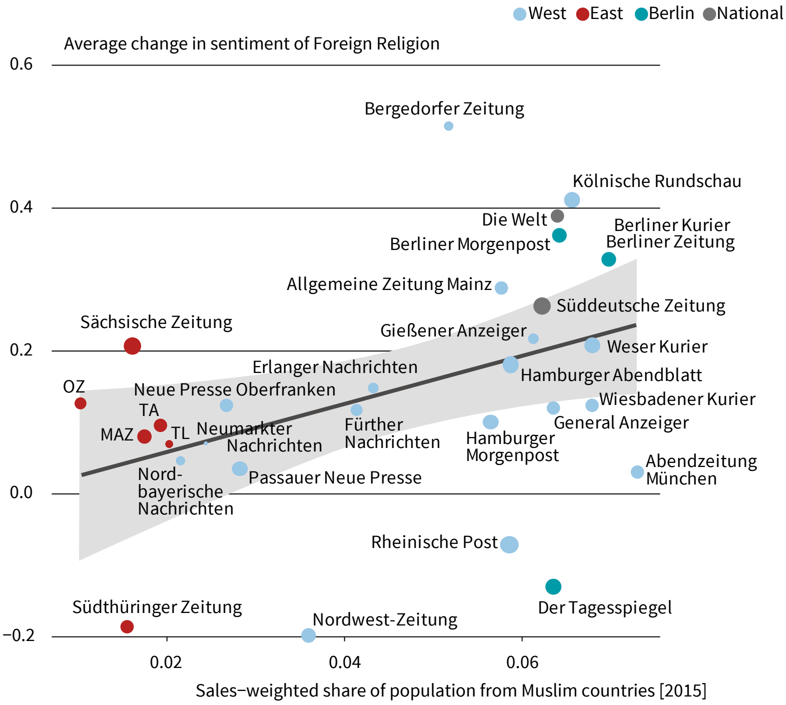
Salience of Immigration, Narrative Theme Shares and Sentiments



Source: Authors' compilation of articles from Factiva (balanced sample 2013–2019). © ifo Institute

Figure 3

The Local Share of Immigrants from Muslim Countries Predicts a More Positive Response in a Large Societal Discussion about the Role of Islam in Germany



Note: MAZ: Märkische Allgemeine Zeitung; OZ: Ostthüringer Zeitung; TA: Thüringer Allgemeine; TL: Thüringische Landeszeitung.
Source: Authors' compilation of articles from Factiva (balanced sample January to May 2018). © ifo Institute

inality remained at a higher level from 2016 onward, increasing from 8 percent in 2013 to 16 percent in 2016 and 2017, and averaging 14 percent in 2018 and 2019.

Figure 2c depicts aggregated sentiment over time on a monthly basis. Labor market opening had only a marginal effect on aggregated sentiment. Sexual assaults in Cologne were followed by a rapid deterioration of the average sentiment, while Seehofer's statement generated a backlash that made aggregated sentiment somewhat less negative compared with previous months. Overall, aggregated sentiment was positive for 7 months in 2013, but thereafter only one month in 2015, and never thereafter. The lowest value of aggregated sentiment in December 2016 and in January 2017 followed an Islamist terrorist attack in a Christmas market in Berlin, which also shows up as a peak in Immigrant Criminality in Figure 2b.

Figure 2d provides a decomposition of the changes in aggregated sentiment in terms of changes caused by shifts in the theme composition and shifts of theme-specific sentiment. The decomposition shows that most of the deterioration of aggregated sentiment after the start of the refugee crisis in 2014 can be attributed to shifts between themes, rather than to shifts in theme-specific sentiments.

NARRATIVE CHANGES AROUND EVENTS AND THE ROLE OF NEWSPAPERS' LOCAL CHARACTERISTICS

As the statement of the then-minister happened in relative isolation to other salient events and unleashed a large societal discussion, we study this event in more detail. As the share of immigrants from Muslim countries varies widely across Germany, we examine whether this discussion was conveyed more positively toward Foreign Religion by newspapers in areas with more Muslims. To study this, we consider the change in the sentiment of Foreign Religion by newspapers two months after compared to two months before the event.

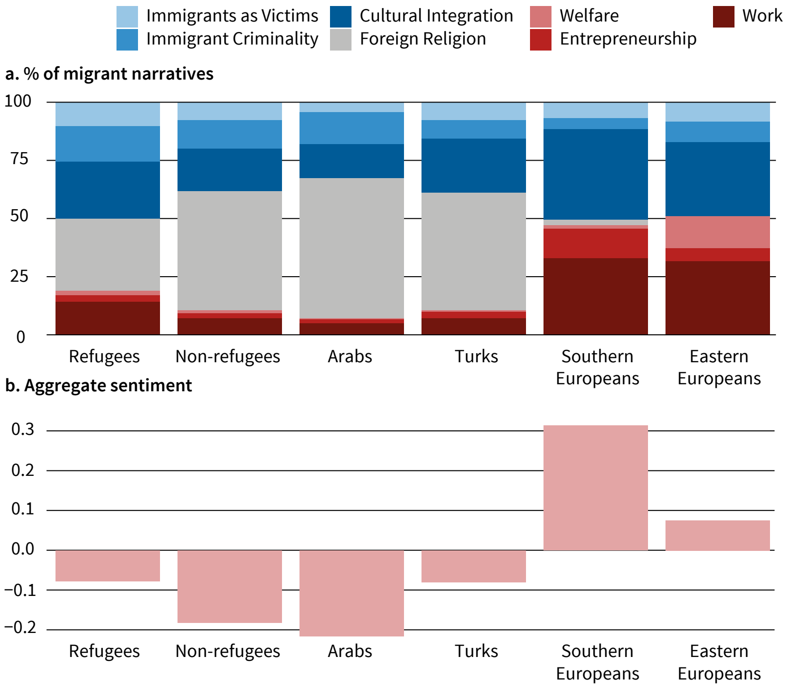
Figure 3 relates the change in the average sentiment on Foreign Religion to the local share of immigrants from Muslim countries in 2015 for each of the newspapers, which is calculated by weighting local characteristics with the sales of the respective newspaper in each municipality. We find that Foreign Religion narratives became more positive in areas with more Muslim immigrants. This is in line with the contact hypothesis of immigration (Allport 1954), which states that intergroup contact can reduce prejudices. We find that journalists in places with more Muslims were more likely to write more positively on Foreign Religion.

NARRATIVES BY MIGRANT GROUP

To study how different migrant groups are portrayed in the German newspaper landscape, we identify the following salient migrant groups. First, we straightforwardly distinguish between refugees and non-refugees based on whether there is an explicit reference to refugees or asylum seekers in the article. Second, we distinguish immigrants from the largest origin country groups in Germany: Southern Europeans (predominantly Greeks and Italians who migrated before the mid-1970s), Turks (mostly migrated before the mid-1970s), Arabs (mostly refugees from Syria and Iraq) and Eastern Europeans (mostly labor market migrants after the 2005 EU enlargement). We identify the presence of those migrant groups in an article based on mentions of nationalities and first and last names that are characteristic to that migrant group.

We find large differences in narratives between migrant groups by origin country. Figure 4a shows that there are strong differences in theme shares between migrant groups. Articles about refugees contain less Foreign Religion narrative than articles that are not about refugees and more about Economy-related themes. Furthermore, 4b shows that aggregate sentiments about refugees are more positive than about other migrants on average, which is in line with the literature showing that migrants who fled persecution are perceived more positively than those who are seeking economic opportunities (Bansak et al. 2016). Comparing Arabs and Turks, who are predominantly Muslim but arrived in Germany in different periods, reveal that narratives about Arabs are more likely to contain Foreign Religion. Even though Turks are an established immigrant group engaged in many ways in German society, still more than half of all narratives contain Foreign Religion. The two European migrant groups, Eastern and Southern European migrants, are often portrayed with Cultural Integration and Work and Entrepreneurship narratives, which are more positive than the other themes. The articles about Eastern European migrants are much more likely to be about Welfare concerns than articles about any other group, which drives down aggregate sentiment. Moreover, we find that narrative theme shares differ more by group than over time, showing the persistence of group-specific narratives.

Figure 4
Narrative Theme Shares and Aggregate Sentiment by Immigrant Group



Source: Authors' compilation of articles from Factiva (balanced sample 2013–2019). © ifo Institute

POLICY CONCLUSIONS

Our work proposes a new way to capture media narratives about immigrants. The method combines customized dictionaries and advanced natural language processing (NLP) tools, and we apply it to more than 100,000 articles from newspapers in Germany. Foreign Religion and Cultural Integration are the most common themes, accounting together for two-thirds of immigrant narratives. We find that the largest margin of adjustment affecting aggregate sentiment in newspaper articles are shifts between different themes. Analysis of narratives concerning separate immigrant groups suggests this may be well driven by shifts in the salience of immigrant groups, with Southern and Eastern Europeans being more often depicted in the context of Economy, and Foreign Religion being the most common theme in articles about Arabs and Turks. In future work, our approach could be used to study how media pluralism at the local level and newspaper ownership affects narratives about immigrants and how media narratives relate to attitudes towards immigration among readers.

Our work can also inform policies to promote immigrant integration. In terms of media coverage, -it is striking that Cultural Integration is predominantly positive, while Foreign Religion is mostly negative. As Cultural Integration is relatively most common in local news sections, our results suggest that reserving more space and resources for local news and culture sections could promote more positive media coverage of immigrants. Furthermore, our work can inform journalists about how immigrant narratives and narratives about specific themes are shaped. In the end, knowing your biases may be the first step towards reducing them.

REFERENCES

Allport, G. W. (1954), *The Nature of Prejudice*, Addison-Wesley, Reading, Mass.

Andre, P., I. Haaland, C. Roth and J. Wohlfart (2021), "Narratives about the Macroeconomy", *CEBI Working Paper* 18/21.

Bansak, K., J. Hainmueller and D. Hangartner (2016), "How Economic, Humanitarian, and Religious Concerns Shape European Attitudes Toward Asylum Seekers", *Science* 354(6309), 217-222.

Bursztyn, L., A. Rao, C. P. Roth and D. H. Yanagizawa-Drott (2022), "Opinions as Facts", *Review of Economic Studies*, rdac065.

Card, D., C. Dustmann and I. Preston (2012), "Immigration, Wages, and Compositional Amenities", *Journal of the European Economic Association* 10, 78–119.

Djourelova, M. (2023), "Persuasion through Slanted Language: Evidence from the Media Coverage of Immigration", *American Economic Review* 113, 800-835.

Esposito, E., T. Rotesi, A. Saia and M. Thoenig (2023), "Reconciliation Narratives: The Birth of a Nation after the US Civil War", *American Economic Review* 113, 1461-1504.

Keita, S., T. Renault and J. Valette (2022), "The Usual Suspects: Offender Origin, Media Reporting and Natives' Attitudes Towards Immigration", *CEPII Working Paper* 2022-10.

Honnibal, M., I. Montani, S. van Landeghem and A. Boyd (2020), "spaCy: Industrial-strength Natural Language Processing in Python", *Zenodo*.

Shiller, R. J. (2017), "Narrative Economics", *American Economic Review* 107, 967–1004.

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July 06

Four-Day Work Week? No Longer in Keeping with the Times!

Debates about the number of working days per week are nothing unusual in Germany. In the 1950s, the six-day week was the norm until the unions pushed through the reduction of working hours with the slogan "On Saturday, daddy belongs to me." After many decades in which the five-day week was the norm, Germany and other countries are now intensively discussing the introduction of a four-day week.

June 19

The German Economic Model – Decline or Second Economic Miracle?

What is the future of Germany's economic model? The Russian attack on Ukraine has triggered a debate about the further development of prosperity in Germany. There are growing concerns about economic decline. Rising energy prices, the high costs of climate protection, an increase in geopolitical conflicts, and a shrinking workforce could put an end to the successes of the German economic model.

May 31

Mercantilist Policies for Climate Action?

The fight against climate change requires a combination of global efforts, including investments in renewable energy systems and other climate-neutral technologies. Given positive externalities and incomplete carbon pricing, there is a compelling argument for governments to support the production of such clean energy technologies.

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