



ISSN 2443-8014 (online)

Report on Public Finances in EMU

2021

INSTITUTIONAL PAPER 181 | JULY 2022

EUROPEAN ECONOMY



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Luxembourg: Publications Office of the European Union, 2022

PDF ISBN 978-92-76-43949-3 ISSN 2443-8014 doi:10.2765/755003 KC-BC-22-018-EN-N

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European Commission
Directorate-General for Economic and Financial Affairs

Report on Public Finances in EMU

2021

ABBREVIATIONS

Member States

BE	Belgium	HU	Hungary
BG	Bulgaria	MT	Malta
HR	Croatia	NL	The Netherlands
CZ	Czech Republic	AT	Austria
DK	Denmark	PL	Poland
DE	Germany	PT	Portugal
EE	Estonia	RO	Romania
EL	Greece	SI	Slovenia
ES	Spain	SK	Slovakia
FR	France	FI	Finland
IE	Ireland	SE	Sweden
IT	Italy	EA	Euro area
CY	Cyprus	EU	European Union
LV	Latvia	EU27	European Union, 27 Member States
LT	Lithuania	EA19	Euro Area, 19 Member States
LU	Luxembourg		
UK	United Kingdom (as of 1 February 2020, the UK is no longer a Member State of the EU) ⁽¹⁾		

Other

AMECO	Macro-economic database of the European Commission
CAB	Cyclically-adjusted budget balance
CAPB	Cyclically-adjusted primary budget balance
COFOG	Classification of the functions of government
COM	European Commission
CSR	Country-specific recommendations
DBP	Draft Budgetary Plan
DFE	Discretionary fiscal effort
DG ECFIN	Directorate-General Economic and Financial Affairs
DRM	Discretionary revenue measures
EB	Expenditure benchmark
EC	European Commission
ECB	European Central Bank
ECOFIN	Economic and Financial Affairs Council configuration
EDP	Excessive deficit procedure
EFC	Economic and Financial Committee
EFC-A	Alternates of the Economic and Financial Committee

⁽¹⁾ The United Kingdom left the European Union on 31 January 2020 on the basis of the Agreement on the withdrawal of the United Kingdom of Great Britain and Northern Ireland from the European Union and the European Atomic Energy Community (“the Withdrawal Agreement”, OJ C 384 I, 12.11.2019, p. 1). Union law, including fiscal surveillance, continued to apply to and in the United Kingdom for the duration of the transition period ending on 31 December 2020.

EMU	Economic and Monetary Union
EPC	Economic Policy Committee
ESA	European system of national and regional accounts
ESM	European Stability Mechanism
GDP	Gross domestic product
HICP	Harmonized index of consumer prices
IMF	International Monetary Fund
MFF	Multiannual financial framework
MTO	Medium-term budgetary objective
NGEU	Next Generation EU
OECD	Organisation of Economic Co-operation and Development
OG	Output gap
OGWG	Output Gap Working Group
PFR	Report on Public Finances in EMU
PEPP	Pandemic Emergency Purchase Programme
RRF	Recovery and Resilience Facility
RRP	Resilience and Recovery Plans
SB	Structural balance
SCP	Stability and Convergence Programme
SDP	Significant deviation procedure
SGP	Stability and Growth Pact
SPB	Structural primary balance
SURE	European instrument for temporary Support to mitigate Unemployment Risks in an Emergency
TSCG	Treaty on Stability Coordination and Governance
TFEU	Treaty on the Functioning of European Union (TFEU)

Units

bn	Billion
mn	Million
pp./pps.	Percentage point(s)
rhs	Right-hand scale
tn	Trillion
y-o-y	year-on-year

ACKNOWLEDGEMENTS

This report was prepared in the Directorate-General of Economic and Financial Affairs under the direction of Maarten Verwey, Director-General, Declan Costello, Deputy Director-General, Lucio Pench, Director Macroeconomic Policies, and Gilles Mourre, Head of Unit Fiscal Policy and Surveillance.

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FOREWORD

Russia's war against Ukraine is expected to weigh on economic growth and spur inflation. The unprecedented nature and size of the shock lead to considerable uncertainty. This report provides new insights on at least three challenges for fiscal policy in the current environment.

The first challenge for fiscal policy is how to best support the economy. The Eurogroup issued a statement in July which considers that supporting overall demand through fiscal policies in 2023 is not warranted. Instead, the focus should be on protecting the most vulnerable, while maintaining the agility to adjust, if needed. Fiscal policies in all countries should aim at preserving debt sustainability, as well as raising the growth potential in a sustainable manner to enhance the recovery, thus also facilitating the task of monetary policy to ensure price stability by not adding inflationary pressures. In this regard, fiscal measures aimed to mitigate the impact of rising energy prices should be targeted at the most vulnerable and remain temporary, while preserving the incentives for the green transition. As also explained in Part I of this report, fiscal policies should continue to be appropriately differentiated according to Member States' economic and fiscal situation. Implementing structural reforms and supporting investment for the green and digital transitions remain priorities. In addition, diversifying energy supplies and improving energy independence is important, taking into account the REPowerEU initiative and making efficient use of the RRF and other EU funds, where appropriate.

The second challenge is how to ensure a viable fiscal governance framework in the medium run. As described in part II, the Commission relaunched the public debate on the review of the EU Economic Governance. The Commission engaged with all stakeholders to build a broad-based consensus on the way forward in the form of dedicated meetings, workshops and an online survey. Several points of broad consensus emerged from the consultation, for instance that ensuring debt sustainability and promoting sustainable growth through investment and reforms are key to the success of the EU fiscal framework. Moreover, strong national fiscal frameworks can contribute to an effective economic governance framework. In this context, findings from panel regressions presented in Part IV show that national fiscal rules which are well-designed and complied with appear to support numerical compliance with EU fiscal rules.

The third challenge is how to improve the composition and efficiency of public expenditure. In times of stretched public finances and low potential growth, it is important to design fiscal policies as growth friendly as possible. Part II explains that better management practices can be part of the solution by increasing the efficiency of public investment. In addition, novel empirical evidence presented in Part III shows that the increased fiscal space during the environment of low interest rate-growth differentials allowed Member States with lower public indebtedness to improve their composition of public finances. New evidence from Part III also shows that that fiscal rules appear to have neither hampered nor supported public investment in the past.

As in previous years, this edition of the Report on Public Finances in EMU provides analytical, evidence-based contributions on highly policy-relevant questions. I am certain that it will support a fruitful discussion among policy-makers and academics.

Maarten Verwey

Director General Economic and Financial Affairs

EXECUTIVE SUMMARY

Almost two years after the start of the pandemic, Russia's war against Ukraine poses new challenges to the EU economy.

It is expected to weigh on economic growth and spur inflation ...

... while fiscal positions are projected to improve in the coming years

Despite entering the year on a weak note, the outlook for the EU economy before the outbreak of the war was for a prolonged and robust expansionary phase. The pandemic situation was improving, while most of the headwinds posed by logistic and supply bottlenecks and pressures on the price of energy and other commodities were expected to fade in the course of this year. Economic activity would continue to be supported by an improving labour market, large accumulated savings, favourable financing conditions and the deployment of the Recovery and Resilience Facility (RRF). The war has changed the picture, by bringing renewed disruptions in global supply, fuelling further commodity price pressures and heightening uncertainty. The EU is first in line among advanced economies to take a hit, due to its geographical proximity to Russia and Ukraine, heavy reliance on imported fossil fuels, especially from Russia, and high integration in global value chains. Large inflows of people fleeing the war – as many as 5 million in the first 10 weeks since the start of the war – pose a further organisational and coordination challenge for the EU.

According to the Commission's spring 2022 forecast discussed in Part I of this report, euro-area GDP is estimated to grow by 2.7% in 2022 and 2.3% in 2023, down from 4.0% and 2.7% in the winter 2022 interim forecast. The forecast for inflation has been revised up significantly. In the euro area, inflation is projected at 6.1% in 2022 and 2.7% in 2023. This compares with 3.5% and 1.7%, respectively, in the winter 2022 interim forecast.

The fast recovery and positive revenue developments drove a significant reduction in government deficits in 2021. Starting from a historically high level of around 7% of GDP in 2020, the general government deficit in the euro area dropped to 5.1% of GDP in 2021. The economic expansion, working of automatic stabilisers and rather strong revenue developments, due to a tax-rich growth composition, explain the decrease in deficits despite the extension of COVID-19-related temporary measures where needed. The general government deficit in the euro area is forecast to continue declining in 2022 and, at unchanged policies, also in 2023, as temporary measures taken in response to COVID-19 continue to be unwound and economic expansion improves the cyclical components of the budget. These deficit-decreasing factors are set to override the additional costs of measures to mitigate the impact of high energy prices and to deal with the humanitarian crisis following the invasion of Ukraine by Russia. In 2021, the aggregate debt-to-GDP ratio of the euro area decreased to around 97% from the historical peak of almost 100% in 2020. It is forecast to decline further, thanks to a favourable interest rate-growth differential ('snowball' effect). In particular, the projected increase in the GDP deflator is set to have a sizeable debt-decreasing impact over the forecast horizon, while higher interest rates will affect the implicit cost of debt only in the longer term.

The balance of risks surrounding the forecast is skewed towards adverse outcomes.

The unprecedented nature and size of the shocks ushered in by the war make the baseline projections presented in this forecast subject to considerable uncertainty. The realisation of the key working assumptions underpinning them – regarding the evolution of the geopolitical situation and its reverberations in e.g. commodity markets and trade – is subject to high risks. Namely, further increases of import prices could strengthen the stagflationary forces unleashed by the war. Greater than expected second round effects could amplify them. In addition, strong inflationary pressures could lead to tighter financial conditions than those underpinning the forecast, with negative impact on domestic demand and strains on public budgets and the banking sector. A stronger-than-expected deceleration of economic activity in the US and China would further dent growth in the EU. Finally, COVID-19 remains a risk factor. At the same time, private consumption could prove more resilient to increasing prices if households were to use more of their savings for consumption. Investments fostered by the RRF could generate a stronger impulse to activity through e.g. stronger cross-sector and cross-country spillovers. Finally, an accelerated reduction of fossil fuel dependency and green transition could reduce the negative impact of high energy prices faster than assumed.

In this situation, fiscal policies should continue to be appropriately differentiated

Fiscal policy should be prudent in 2023, while standing ready to react to the evolving economic situation. Fiscal policy in all Member States should combine higher investment with controlling the growth in nationally-financed primary current expenditure, while allowing automatic stabilisers to operate and providing temporary and targeted measures to mitigate the impact of the energy crisis and to provide humanitarian assistance to people fleeing from Russia's invasion of Ukraine. At the same time, fiscal policies should continue to be appropriately differentiated across Member States. High-debt Member States should ensure prudent fiscal policy, in particular by limiting the growth of nationally-financed current expenditure below medium-term potential output growth, taking into account continued temporary and targeted support to households and firms (subject to State Aid rules) most vulnerable to energy price hikes and to people fleeing Ukraine. Low/medium-debt Member States should specifically ensure that the growth of nationally-financed current expenditure is in line with an overall neutral policy stance, taking into account continued temporary and targeted support to households and firms (subject to State Aid rules) most vulnerable to energy price hikes and to people fleeing Ukraine. All Member States should expand public investment for the green and digital transitions and for energy security, including by making use of the RRF, other EU funds and REPowerEU.

The report describes developments in fiscal surveillance in 2021 and on the fiscal governance framework.

First, the general escape clause granted Member States enough budgetary flexibility to deal with the COVID-19 crisis.

Second, the Commission engaged with all stakeholders with the aim of reaching a consensus on the way forward of the EU economic governance framework

Third, the report reviews a few public proposals to reform the EU fiscal rules

Part II provides an overview of the main developments related to the fiscal surveillance in 2021 and the fiscal governance framework.

First, the general escape clause of the Stability and Growth Pact had a decisive influence on fiscal policy and fiscal surveillance in 2021. In June 2021, the Commission adopted a report under Article 126(3) of the Treaty on the Functioning of the EU for all Member States except Romania, which was under an excessive deficit procedure. The Commission concluded that, at that juncture, a decision on whether to place Member States under an excessive deficit procedure should not be taken. This was justified by the exceptional uncertainty created by the macroeconomic and fiscal impact of the COVID-19 outbreak, including for designing a credible multi-year path for fiscal policy. The Council adopted predominantly qualitative fiscal Recommendations for 2022, which were reflecting the persistent exceptionally-high degree of uncertainty.

Second, the report describes the main findings of the relaunch of the public debate on the review of the EU economic governance framework. In September 2021, the Commission President von der Leyen announced in her State of the Union address that the Commission will provide orientations on possible changes to the economic governance framework with the objective of achieving a broad-based consensus on the way forward well in time for 2023. Therefore, the Commission adopted a Communication that relaunched the public debate on the review of the EU Economic Governance in October 2021. The 2021 Communication complemented the 2020 assessment, taking into account a different economic context and the lessons we can draw from the crisis.

The Commission engaged with all stakeholders to build a broad-based consensus on the way forward in the form of dedicated meetings, workshops and an online survey. In particular, Member States were involved in thematic discussions at the relevant Council Committees.

Several points of broad consensus emerged from the consultation. In particular, (i) ensuring debt sustainability and promoting sustainable growth through investment and reforms are key to the success of the EU fiscal framework, (ii) strengthening the medium-term dimension of the EU fiscal surveillance appears a promising avenue, (iii) insight can be drawn from the governance of the Recovery and Resilience Facility and (iv) simplification and better enforcement remain key objectives. Notwithstanding these emerging points of consensus, there is clearly still a long way ahead and the devil will be in the detail.

Third, the report provides an overview of some of the proposals to reform the EU fiscal rules that are part of the wider public debate on the review of the EU economic governance framework. These proposals focus on several key dimensions of the debate, notably on the need to simplify the framework, to ensure debt sustainability and macroeconomic stability, to incentivise investment and improve the quality of public finances, to strengthen enforcement.

Finally, it stresses the importance of sound management practices for efficient public finances

This year's report focuses on two analytical themes:

The first theme focuses on the effect of negative interest rate-growth differentials, broad-based in the EU, but with a high degree of variation across Member States

New evidence finds that favourable interest rate-growth differentials had a very limited impact on the quality of public finances

Fresh evidence also shows that fiscal rules seem to have neither hampered nor supported public investment in the past

Finally, the report emphasises that better management practices can increase the efficiency of public investment. Improving the existing public management practices can be particularly important to master the deep transformational changes related to the green and digital transitions. Studies show that in advanced economies about a fifth of public investment spending is estimated as lost to inefficiencies, half of which can be saved through better public investment practices throughout the investment cycle. Despite limited data availability, much can be learned from good practices and challenges in the EU. Existing evidence points to room for improvement especially in terms of long-term planning and prioritisation, including medium-term planning, transparent implementation as well as monitoring and ex-post reviews.

This year's Report on Public Finances in EMU also looks at two analytical themes of fiscal policy that are particularly important in Europe's current economic context.

Part III sets out new evidence on the impact of negative interest rate-growth differentials on the quality of public finances in the EU. Over recent decades, the difference between the implicit interest rate paid on public debt and the nominal economic growth rate tended to narrow and finally turned negative in most advanced economies, including the EU. The decrease in nominal interest rates accounts for this trend. Over the past two decades, Member States experienced negative interest rate-growth differentials about half the time. However, the frequency and persistence of negative differential episodes has differed widely across Member States.

This part provides new evidence if and under which conditions Member States have improved the quality of their public finances in times of low interest rate-growth differentials. It follows up on the findings from last year's report that shows that smaller fiscal efforts partly offset debt reduction during negative interest rate growth episodes, in particular in highly indebted Member States. Overall, the empirical analysis points to a very limited impact of favourable interest rate-growth differentials on several measures of the quality of public finances in EU Member States in the past two decades. Member States with lower public indebtedness appear to use the interest windfalls from lower differentials to increase productive spending.

In addition, the part explores if fiscal rules have had an impact on public investment in the EU. The findings from panel regressions show that the concern that fiscal rules are a key reason behind the low public investment is not supported by econometric evidence. The empirical evidence shows that fiscal rules appear to have not hampered nor supported public investment in the past. In addition, the panel regressions show no clear evidence that golden rules have supported public investment in the past. Overall, the findings imply that a careful design of fiscal rules is key.

The second theme of the report analyses if compliance with national fiscal rules have supported compliance with the EU fiscal rules

Stylised facts show that numerical compliance with fiscal rules is higher at EU than at national level and in countries with well-designed rules

New evidence shows that national rules can foster numerical compliance with EU rules if they are complied with

The second theme investigates if national fiscal rules have supported numerical compliance with the EU fiscal rules. Member States have put in place various fiscal rules at the national level to address the deficit bias and support compliance with the EU fiscal rules. These national rules are quite diverse in terms of design, and can resemble the EU fiscal rules at very different degrees. While ample evidence shows that fiscal rules can play an important role for fiscal policy and budgetary policy, their implications for compliance with EU fiscal rules have not been investigated.

The analysis is based on a novel dataset of numerical compliance with EU and national fiscal rules, focusing on EU Member States over the period 1999 to 2019. As such, the numerical compliance indicators have no official or legal status, but they still represent a valid broad measurement of the adherence to fiscal rules. Stylised facts show that numerical compliance with fiscal rules is higher at EU than at national level as well as for Member States with well-designed fiscal rules.

Findings from panel regressions show that national and EU fiscal rules seem to reinforce each other under certain conditions. Panel estimations suggest that the presence of national fiscal rules *per se* has no implications on compliance with EU fiscal rules. However, having national rules that are complied with or are well-designed according to the Commission's fiscal rules database seems to support compliance with EU fiscal rules. Against the usual caveats on panel regressions, the results suggest that efforts to improve the design of rules and their monitoring and enforcement should be continued.

Part I

Public finances in EMU

Please cite this as follows:

European Commission (2022), Public finances in EMU, Report on Public Finances in EMU 2021, Institutional Paper 181, 12 July, 7-18.

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KEY FINDINGS

This part provides an overview of the economic and fiscal situation in the EU and describes the main elements of the ECB's 2021 monetary policy strategy review.

Almost two years after the start of the pandemic, Russia's war against Ukraine poses new challenges to the EU economy

- According to the Commission's 2022 spring forecast, euro-area GDP is estimated to grow by 2.7% in 2022 and 2.3% in 2023, down from 4.0% and 2.7% in the winter 2022 interim forecast. In turn, the forecast for inflation has been revised up significantly. In the euro area, inflation is projected at 6.1% in 2022 and 2.7% in 2023.
- The fiscal positions are projected to improve in the coming years, albeit considerably less than earlier forecast, thanks to the fast recovery and positive revenue developments. The euro area government deficit dropped from around 7% of GDP in 2020 to 5.1% of GDP in 2021 and is expected to continue declining to 3.7% in 2022 and 2.3% in 2023. The aggregate debt-to-GDP ratio of the euro area has decreased from its historical peak of almost 100% of GDP in 2020 to around 97% in 2021 amid favourable economic conditions. It is projected to decline to about 93% of GDP thanks to a favourable 'snowball' effect, while remaining well-above the level of the pre-COVID-19 crisis.
- The fiscal stance, excluding temporary emergency measures but including support from the EU budget, is projected to remain expansionary between 2020 and 2022 for the euro area. In 2020, the fiscal stance was slightly expansionary. In 2021, the fiscal expansion was driven largely by nationally-financed net current primary expenditure. The fiscal stance has also been supported by public investment spending financed by the national budgets and spending financed by the RRF and other EU funds.

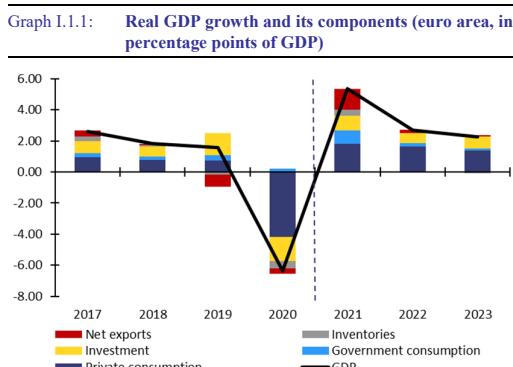
The ECB unveiled its new monetary policy strategy review in 2021

- The main rationale for the review was that the euro-area economy had to cope with major challenges since the previous review in 2003, such as the effective lower bound to monetary policy rates, the declining trend growth as well as the digitalisation and climate change.
- Key results of the review are (i) the adoption of a symmetric inflation target of 2% over the medium term, (ii) the agreement on an ambitious climate change action plan and (iii) the emphasis that the fiscal and monetary policy mix can play an important role.
- The ECB announced that it would conduct regular reviews of its monetary policy strategy in the future, with the next one expected to take place in 2025.

1. ECONOMIC AND FISCAL ENVIRONMENT

1.1. ECONOMIC ACTIVITY

The growth outlook has deteriorated since the outbreak of the war in Ukraine, testing euro area's economic resilience (Graph I.1.1)⁽²⁾. According to the Commission's spring 2022 forecast, euro -area GDP is estimated to have rebounded by 5.4% in 2021, before decelerating to 2.7% in 2022 and further to 2.3% in 2023 (Graph I.1.1). This means that while the euro area has regained its pre-pandemic output level in the third quarter of 2021, the forecast implies downward revision of euro-area growth especially for 2022.



The economic forecast is underpinned by strong working assumptions. The uncertainty around slowing down GDP volumes is extreme. Strong working assumptions were taken concerning the duration and intensity of the geopolitical tensions, as well as the size, distribution, labour market integration and budgetary impact of the refugee inflows. Also, the forecast relies on the assumption that the pandemic will not pose significant disruptions to economic activity in the EU over the forecast horizon.

Domestic demand remains the main engine of growth (Graph I.1.1). In both 2022 and 2023, real GDP growth is expected to be driven by domestic demand. In particular, private consumption and investment are set to continue growing, albeit at a

lower pace than previously expected. On the one hand, inflation, uncertainty and aggravated supply bottlenecks are expected to be constraining factors; on the other hand, the post-pandemic reopening momentum, large, accumulated savings and the deployment of the RRF would act as favourable factors. After providing a significant contribution to growth over the past two years, not least through increased health spending, public consumption is projected to grow more modestly. Finally, net exports are projected to provide only a marginal positive contribution to growth, with both export and import volumes slowing down.

Investment growth is held back by rising costs and heightened uncertainty but is supported by the RRF and the need for frontloaded energy saving investment. Amid heightened uncertainty and lower confidence, households' reported more pessimistic views on their past and future financial situation, as well as their reduced intentions to make major purchases, possibly linked to increased fears that the high inflation will cut their purchasing power. The inability of firms to fully pass-on higher production costs to consumers is set to squeeze corporate profit margins. Heightened uncertainty around the unfolding of the geopolitical situation and its impact on the demand outlook are set to weigh on companies' investment decisions and delay the realisation of investment plans. Moreover, financial conditions are tightening, and material shortages continue constraining investment from the supply side. At the same time, capital utilisation rates remain at record high, while the full deployment of the RRF and the needed frontloading of energy saving investment in the context of Repower EU is set to support construction.

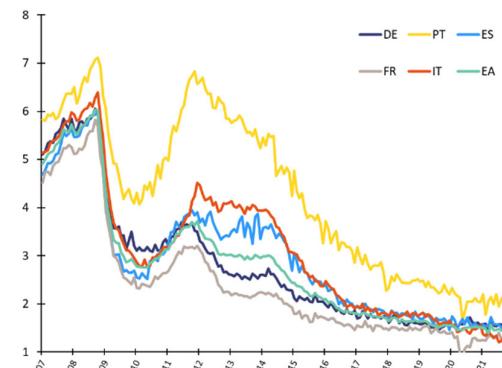
Net exports are expected to contribute only mildly to GDP growth. Volumes of exports and imports of goods and services in the euro area are forecast to grow less than previously expected. This reflects weaker global demand, intensified and new supply disruptions, and some adjustment to soaring prices, but also the impact of sanctions and countersanctions. The outlook for export market growth has especially deteriorated in Member States that formerly had close trade links with Russia.

⁽²⁾ The Commission spring 2022 forecast, published in February 2022, only covers projections for real GDP and inflation. Therefore, this Chapter refers to the Commission spring 2021 forecast unless otherwise mentioned.

After performing strongly in 2021, the labour market is expected to improve slightly. With unemployment rates at record-low levels, labour markets in the EU have tightened considerably. This strong performance was broad-based across countries, sectors and socio-economic groups, with the exception of the low skilled. Job creation is expected to ease markedly this year. After falling to 7.7% last year, the unemployment rate is projected to decline to 7.3% in the euro area in 2022 and to fall further to 7.0% in 2023. People fleeing the war in Ukraine to the EU are expected to enter labour markets gradually, with tangible effects only from next year.

Financial conditions are tightening (Graph I.1.2). The war has triggered a further abrupt tightening of financial conditions in the EU, across different market segments. Similarly to what was experienced elsewhere, EU financial assets in both risk and risk-free market segments have experienced losses amidst a significant pick-up in volatility. Various composite financial conditions indicators for the euro area confirm the tightening of financial conditions in the euro area, particularly after the start of the war in Ukraine.

Graph I.1.2: Interest rates on loans to non-financial corporations (selected Member States)



Source: Commission spring 2022 forecast.

In 2022, soaring energy prices are the dominant driver of inflation, which is now expected to be higher, broader and more persistent. Given the important weight of fuel and energy in the consumption basket, the transmission of energy price shocks to the private consumption deflator is strong, fast, and amplified by second-round effects of higher production costs and nominal wage

growth. The inflationary effects of energy import prices are expected to remain present in 2023. According to the Commission's spring 2022 forecast, after reaching 2.6% in 2021, inflation in the euro area is forecast to increase to 6.1% in 2022, before declining to 2.7% in 2023.

The balance of risks surrounding the forecast is skewed towards adverse outcomes. The unprecedented nature and size of the shocks ushered in by the war make the baseline projections presented in this forecast subject to considerable uncertainty. The realisation of the key working assumptions underpinning them – regarding the evolution of the geopolitical situation and its reverberations in e.g. commodity markets and trade – is subject to high risks. Namely, further increases of import prices could strengthen the stagflationary forces unleashed by the war. Greater than expected second round effects could amplify them. In addition, strong inflationary pressures could lead to tighter financial conditions than those underpinning the forecast, with negative impact on domestic demand and strains on public budgets and the banking sector. A stronger-than-expected deceleration of economic activity in the US and China would further dent growth in the EU. Finally, COVID-19 remains a risk factor. At the same time, private consumption could prove more resilient to increasing prices if households were to use more of their savings for consumption. Investments fostered by the RRF could generate a stronger impulse to activity through e.g. stronger cross-sector and cross-country spillovers. Finally, an accelerated reduction of fossil fuel dependency and green transition could reduce the negative impact of high energy prices faster than assumed.

1.2. GOVERNMENT BUDGET BALANCES

Fast recovery and positive revenue developments drove a significant reduction in public deficits in 2021 (Table I.1.1). In 2020, the sharp economic downturn and forceful fiscal policy response led to an unprecedented increase in headline deficit and debt ratios in the EU and euro area. In particular, the general government deficit in the euro area increased from a low of 0.7% of GDP in 2019 to historically high level of 7.1% in 2020. As the EU economy was recovering faster than previously expected, the deficit dropped to 5.1% of GDP in 2021, much more than had been

projected in the Commission autumn 2021 forecast and notwithstanding continued discretionary fiscal measures to shelter households, workers and firms from the impact of the COVID-19.

Table I.1.1: Breakdown of the general government budget balance (euro area, % of GDP)

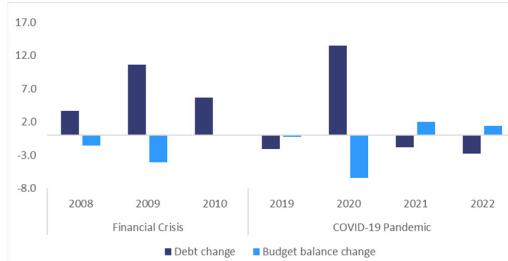
	2016	2017	2018	2019	2020	2021	2022	2023
Total revenue (1)	46.3	46.2	46.4	46.3	46.5	47.3	46.6	46.3
Total expenditure (2)	47.7	47.1	46.9	46.9	53.6	52.4	50.3	48.8
Actual balance (3) = (1) - (2)	-1.5	-0.9	-0.4	-0.7	-7.1	-5.1	-3.7	-2.5
Interest (4)	2.1	1.9	1.8	1.6	1.5	1.5	1.4	1.3
Primary balance (5) = (3) + (4)	0.6	1.0	1.4	1.0	-5.6	-3.6	-2.3	-1.1
One-offs (6)	0.1	-0.1	-0.2	-0.1	0.0	0.0	0.0	0.0
Cyclically adjusted balance (7)	-0.8	-1.1	-1.0	-1.4	-3.7	-4.0	-3.4	-2.6
Cyclically adj. prim. balance = (7) + (4)	1.3	0.8	0.9	0.2	-2.2	-2.5	-2.0	-1.2
Structural budget balance = (7) - (6)	-0.9	-1.0	-0.9	-1.2	-3.6	-4.0	-3.4	-2.6
Structural primary balance = (7) - (6) + (4)	1.2	1.0	1.0	0.4	-2.1	-2.5	-2.0	-1.3
Change in actual balance:								
- Cycle	0.5	0.5	-0.2	-6.4	2.0	1.4	1.2	
- Interest (reverse sign)	0.0	0.5	0.2	-4.1	2.3	0.8	0.5	
- One-offs	0.2	0.1	0.2	0.1	0.0	0.1	0.1	
- Structural primary balance	-0.3	0.0	-0.6	-2.5	-0.4	0.5	0.7	
Change in cycl. adj. primary balance	-0.4	0.0	-0.7	-2.4	-0.3	0.6	0.7	
Change in structural budget balance	-0.1	0.1	-0.4	-2.4	-0.3	0.6	0.8	

Note: Differences between totals and the sum of individual figures are due to rounding.

Source: Commission spring 2022 forecast.

The budget deficits of Member States are set to decline in 2022 and 2023 (Graph I.1.3). The aggregate budget deficit in the euro area is forecast to fall to 3.7% of GDP in 2022, and decrease to 2.5% in 2023. The unwinding of the COVID-19 related emergency support measures and the operation of the automatic stabilisers, as the economic recovery continues, are set to support the improvement in the budget balance. Those factors are set to override the costs of measures to mitigate the impact of high energy prices and to deal with the humanitarian crisis following the invasion of Ukraine by Russia. Finally, higher inflation is expected to affect the general government deficit mainly through a change in the expenditure-to-GDP ratio. The Commission 2022 spring forecast suggests an overall impact of higher inflation will be deficit-increasing over the forecast horizon.

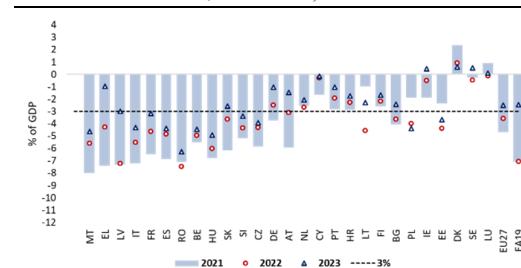
Graph I.1.3: Government debt and budget balance (euro area, annual change)



Source: Commission spring 2022 forecast.

In a number of Member States, the budgetary deficit is forecast to remain high in 2023, under a no policy change assumption (Graph I.1.4). In 2020, all Member States except Denmark and Sweden recorded deficits of more than 3% of GDP. The number of Member States with a deficit greater than 3% of GDP fell to 15 in 2021. It is projected to rise to 17 in 2022 before falling again to 11 in 2023, under a no policy change assumption. The 11 countries are Belgium, Czechia, Estonia, Spain, France, Italy, Hungary, Malta, Poland, Romania and Slovenia.

Graph I.1.4: General government balance (in Member States, 2021-2023, in % of GDP)



Source: Commission spring 2022 forecast.

The macroeconomic and budgetary projections in the forecast incorporate the implementation of the national Recovery and Resilience Plans. The forecast includes the measures incorporated in the Recovery and Resilience Plans as submitted to the Commission. The cash disbursement and expenditure profiles implicit in the forecast are consistent with the time profile of milestones and targets as specified in the inclusion of transfers from the EU in revenue projections and the time profiles of cash disbursements included in the forecast is based on the assumption of a timely completion of milestones and targets.

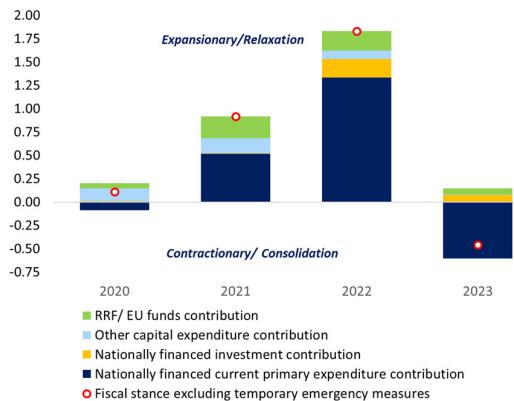
1.3. FISCAL STANCE OF THE EURO AREA

The fiscal stance indicator for 2020-2022 was adjusted to take into account the special circumstances brought about by the pandemic. The fiscal stance measures the short-term impulse to the economy from discretionary fiscal policy by looking at the annual increase in net expenditure relative to 10-year potential growth. Following the Council recommendations on the 2021 Stability Programmes, the net expenditure aggregate used to compute the overall fiscal stance was adjusted to

include expenditure financed by RRF grants and other EU funds and to exclude the temporary emergency measures related to the COVID-19 crisis. In addition to the contribution from EU-financed expenditure, this metric identifies the contributions to the overall fiscal stance from different nationally financed expenditure aggregates: i) investment; ii) other capital expenditure; and iii) current primary expenditure (net of discretionary revenue measures).

The euro-area fiscal stance was supportive in 2021 (Graph I.1.5). The fiscal stance, excluding temporary emergency measures but including support from the EU budget, is projected to remain expansionary between 2020 and 2022 for the euro area. After having been slightly expansionary at around $\frac{1}{4}\%$ of GDP in 2020, the fiscal expansion is projected to have been sizeable at $1\frac{1}{4}\%$ of GDP in 2021. The main expansionary contribution in 2021 came from nationally financed net primary current expenditure, followed by expenditure financed by RRF grants and other EU funds, while nationally financed investment increased broadly in line with medium-term potential growth, providing a contribution close to zero.

Graph I.1.5: Euro area: fiscal stance (2020-2023, % of GDP)



Note: The graph shows the discretionary fiscal impulse based on the expenditure benchmark methodology, which measures the growth of spending (net of discretionary measures) in excess to potential growth. In this graph, positive figures indicate an expansionary stance.
Source: Commission spring 2022 forecast.

Fiscal policy in the euro area is projected to remain supportive in 2022. In 2022, the fiscal stance is projected to be even more supportive than in 2021, around $1\frac{3}{4}\%$ of GDP. In 2022, the more supportive fiscal stance is driven by the increasing expansionary contribution of the net primary current expenditure component. This component is affected by new measures to help households and firms cope with the surge in energy prices (more than $\frac{1}{2}\%$ of GDP) and the humanitarian assistance to displaced persons from Ukraine (0.1% of GDP). Moreover, public investment spending financed by the national budgets is expected to grow more than medium-term potential growth and thus to provide an expansionary contribution. Expenditure financed by RRF grants and other EU funds are set to increase further, with an additional expansionary contribution in 2022.

The fiscal stance is expected to remain supportive in almost all Member States in 2022 (Graph I.1.6). According to the Commission 2022 spring forecast, 17 Member States are projected to provide a neutral or supportive fiscal stance, in some cases at high levels with an expansion of 2% of GDP or more. As indicated in the recommendations addressed to them in spring 2021, all the low/medium debt Member States except Slovakia are projected to pursue a supportive fiscal stance in 2022. A broadly neutral stance is projected for Cyprus. High debt Member States were recommended in spring 2021 to use the RRF to finance additional investment in support of the recovery, while pursuing a prudent fiscal policy. High debt Member States plan a supportive fiscal stance in 2022 (Belgium, Greece, Spain, France, Italy and Portugal). In the majority of countries, including those with high debt, this stance reflects higher nationally financed current spending or tax cuts.

Fiscal policy is set to normalise in 2023. A contractionary fiscal stance of around $\frac{1}{2}\%$ of GDP is forecast for 2023, mainly driven by the almost complete projected phasing out of measures to mitigate the impact of the high energy prices, while nationally financed investment and expenditure financed by the RRF and other EU funds are set to provide further support to a sustainable recovery.

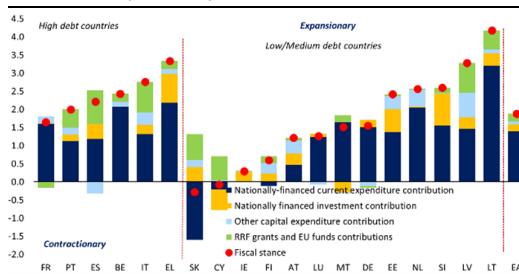
Table I.1.2: Breakdown of changes in the government debt ratio (in Member States, % of GDP)

	Government debt ratio							Change in debt ratio 2021-23	Change in the debt ratio in 2020-22 due to:		
	2017	2018	2019	2020	2021	2022	2023		Primary balance	Snowball effect	Stock-flow adjustment
	BE	102.0	99.8	97.7	112.8	108.2	107.5	107.6	-0.6	6.6	-6.5
DE	64.7	61.2	58.9	68.7	69.3	66.4	64.5	-4.8	2.5	-6.2	0.0
EE	9.1	8.2	8.6	19.0	18.1	20.9	23.5	5.4	7.9	-2.2	0.0
IE	67.8	63.1	57.2	58.4	56.0	50.3	45.5	-10.5	-1.4	-5.0	-1.2
EL	179.5	186.4	180.7	206.3	193.3	185.7	180.4	-12.8	0.7	-14.4	6.0
ES	98.6	100.5	98.3	120.0	118.4	115.1	113.7	-4.7	5.2	-10.0	1.0
FR	98.1	97.8	97.4	114.6	112.9	111.2	109.1	-3.8	4.9	-7.7	-0.7
IT	134.2	134.4	134.1	155.3	150.8	147.9	146.8	-4.0	3.1	-8.2	0.2
CY	92.9	98.4	91.1	115.0	103.6	93.9	88.8	-14.8	-2.4	-7.2	-2.6
LV	39.0	37.1	36.7	43.3	44.8	47.0	46.5	1.8	9.1	-5.3	-1.1
LT	39.1	33.7	35.9	46.6	44.3	42.7	43.1	-1.2	6.3	-4.4	-2.1
LU	21.8	20.8	22.3	24.8	24.4	24.7	25.1	0.8	-0.2	-2.5	3.4
MT	47.7	43.7	40.7	53.4	57.0	58.5	59.5	2.5	7.9	-6.1	-0.3
NL	56.9	52.4	48.5	54.3	52.1	51.4	50.9	-1.1	4.0	-3.8	0.0
AT	78.5	74.1	70.6	83.3	82.8	80.0	77.5	-5.3	2.6	-6.8	-0.2
PT	126.1	121.5	116.6	135.2	127.4	119.9	115.3	-12.2	-1.5	-8.6	1.8
SI	74.2	70.3	65.6	79.8	74.7	74.1	72.7	-2.0	5.5	-5.7	0.0
SK	51.6	49.6	48.1	59.7	63.1	61.7	58.3	-4.8	4.1	-7.2	-0.5
FI	61.2	59.8	59.6	69.0	65.8	65.9	66.6	0.8	2.9	-5.5	2.8
EA	89.6	87.8	85.7	99.2	97.4	94.7	92.7	-4.7	3.4	-7.2	0.2
BG	25.1	22.1	20.0	24.7	25.1	25.3	25.6	0.5	5.0	-2.7	-1.2
CZ	34.2	32.1	30.1	37.7	41.9	42.8	44.0	2.1	6.4	-4.0	0.4
DK	35.9	34.0	33.6	42.1	36.7	34.9	33.9	-2.8	-2.6	-2.1	2.2
HR	76.7	73.3	71.1	87.3	79.8	75.3	73.1	-6.7	1.4	-7.0	-1.4
HU	72.1	69.1	65.5	79.6	76.8	76.4	76.1	-0.7	5.2	-7.8	0.2
PL	50.6	48.8	45.6	57.1	53.8	50.8	49.8	-4.0	5.1	-6.8	-0.7
RO	35.1	34.7	35.3	47.2	48.8	50.9	52.6	3.7	10.6	-5.1	-0.6
SE	40.7	38.9	34.9	39.6	36.7	33.8	30.5	-6.1	-0.4	-2.6	-2.1
EU	83.1	81.3	79.1	91.7	89.7	87.1	85.2	-4.4	3.4	-7.0	0.1

Note: Differences between the sum and the total of individual figures are due to rounding.

Source: Commission spring 2022 forecast.

Graph I.1.6: Fiscal stance of the euro area Member States in 2022 (% of GDP)

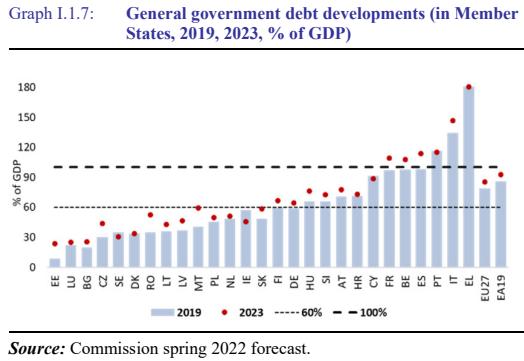


Note: Fiscal stance is calculated as the discretionary fiscal impulse based on the expenditure benchmark methodology with emergency measures excluded but including support from the EU budget. Positive figures indicate a supportive stance.

Source: Commission spring 2022 forecast.

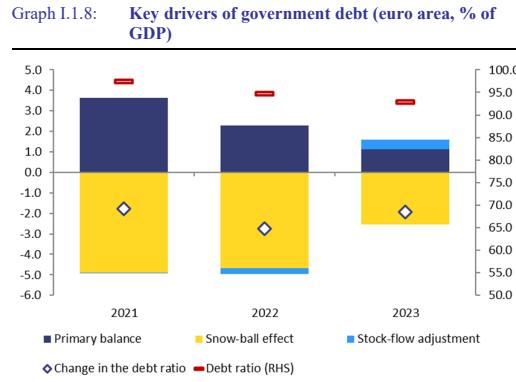
1.3. GENERAL GOVERNMENT DEBT

The debt-to-GDP ratio is set to decline but stay above pre-COVID-19 crisis level. (Table I.1.2). In 2021, the aggregate debt-to-GDP ratio of the EU decreased to around 90% from the historical peak of almost 92% in 2020. The aggregate debt-to-GDP ratio of the EU is forecast to continue falling to around 87% in 2022 and 85% in 2023 (95% and 93% in the euro area, respectively). The EU aggregate debt ratio in 2023 is set to remain above the pre-COVID-19 crisis level of 79% of GDP in 2019. (Graph I.1.7).



The key driver of the forecast decrease in the public debt ratio is expected to be favourable interest rate-growth differential (Graph I.1.8). The aggregate debt-to-GDP ratio of the EU is forecast to fall in 2022 and in 2023 thanks to a favourable interest rate-growth differential. In particular, the projected increase in the GDP deflator is set to have a sizeable debt-decreasing impact over the forecast horizon, while higher interest rates will affect the implicit cost of debt only in the longer term. At the same time, the projected primary deficit continues to weigh on debt developments, although significantly less than in 2020-2021.

Public debt ratios are set to decline but stay high in some euro-area Member States (Graph I.1.7). After having increased substantially in all Member States in 2020, debt ratios are projected to fall in a majority of Member States over the following three years. Still, in 2023, half of the Member States are set to record debt ratios greater than 60% of GDP, with the debt ratios of Belgium, Greece, Spain, France, Italy, and Portugal expected to remain above 100% of GDP.



1.4. COMPOSITION OF PUBLIC FINANCES

Expenditure developments are set to be the main factor behind the deficit reduction (Graph I.1.9, Table I.1.3). In 2022 and 2023, the decrease in the general government deficit ratio in the EU is expected to be driven by the change in the expenditure-to-GDP ratio, mainly as a result of the expected phasing out of the sizeable emergency measures taken in response to the COVID-19 crisis.³ More specifically, after the historically high level of 53% recorded in 2020, and a first fall by around 1½ pps. in 2021, the expenditure-to-GDP ratio is expected to continue declining in 2022 (by 2 pps.) and in 2023 (1½ pps.). The revenue-to-GDP ratio is also projected to decline in 2022 and 2023, by around 1¼ pps., reversing the increasing trend recorded in 2020 and 2021. The composition of economic growth is set to become less tax-rich, with consumption shifting towards services as COVID-19 restrictions are lifted. Expenditure and revenue projections incorporate the implementation of the national Recovery and Resilience Plans.

³ Higher inflation is set to affect both the denominator and the numerator. The denominator (GDP at current prices) is affected by the GDP deflator, which in turn is driven by developments in the cost of domestic production labour costs above productivity (i.e. ULCs) and profit margins. In 2022, The EU GDP deflator is projected to increase significantly compared to last year, though by much less than the HICP (4.4% vs 6.8%), as the latter is also affected by the increase in import prices (e.g. for fossil fuel and other commodities). In 2023, the GDP deflator and HICP are projected to increase at a similar pace in the EU (3.4% vs 3.2%).

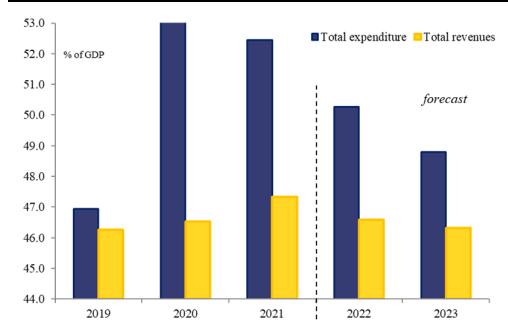
Table I.1.3: Government revenue and expenditure (in Member States, % of GDP)

	Revenue							Expenditure						
	2017	2018	2019	2020	2021	2022	2023	2017	2018	2019	2020	2021	2022	2023
BE	51.3	51.4	49.9	50.2	49.3	49.0	49.0	52.0	52.3	51.9	59.2	54.8	54.0	53.4
DE	45.5	46.2	46.5	46.5	47.8	46.3	45.9	44.2	44.3	45.0	50.8	51.5	48.8	46.9
EE	38.8	38.9	39.6	40.3	40.0	39.3	39.1	39.2	39.4	39.4	45.9	42.3	43.6	42.7
IE	25.9	25.5	24.7	22.2	23.0	22.4	21.6	26.2	25.3	24.2	27.3	24.9	23.0	21.2
EL	49.1	49.5	49.0	49.8	49.4	49.2	46.6	48.5	48.5	47.9	59.9	56.9	53.5	47.6
ES	38.2	39.2	39.3	41.5	43.7	43.6	42.6	41.3	41.8	42.3	51.8	50.6	48.4	47.0
FR	53.5	53.4	52.3	52.5	52.8	52.4	52.7	56.5	55.6	55.4	61.4	59.2	57.0	55.8
IT	46.3	46.2	46.9	47.4	48.3	48.5	48.7	48.8	48.4	48.5	57.0	55.5	54.0	53.0
CY	38.4	39.1	39.7	39.3	42.4	40.7	39.9	36.5	42.7	38.4	45.1	44.1	41.0	40.0
LV	37.9	38.5	37.6	38.8	37.6	36.7	36.4	38.7	39.4	38.2	43.3	44.9	44.0	39.4
LT	33.6	34.5	35.2	35.7	37.7	37.0	37.0	33.2	34.0	34.8	42.9	38.7	41.5	39.3
LU	42.6	45.1	45.2	43.7	43.2	42.6	42.4	41.3	42.1	42.9	47.2	42.3	42.7	42.3
MT	37.7	37.9	36.7	36.9	37.5	38.3	38.2	34.4	35.8	36.1	46.3	45.5	43.9	42.8
NL	43.7	43.7	43.7	43.9	43.8	42.5	42.6	42.4	42.2	42.0	47.6	46.3	45.2	44.6
AT	48.5	48.9	49.2	49.0	50.0	48.8	48.9	49.3	48.7	48.6	57.0	55.9	51.9	50.3
PT	42.4	42.9	42.6	43.5	45.3	44.2	44.1	45.4	43.2	42.5	49.3	48.1	46.1	45.1
SI	44.0	44.2	43.8	43.5	43.9	43.0	42.9	44.1	43.5	43.3	51.3	49.1	47.3	46.3
SK	38.6	38.8	39.4	39.9	40.7	40.5	40.7	39.6	39.8	40.7	45.3	46.8	44.2	43.3
FI	53.0	52.5	52.3	51.6	52.4	51.7	51.7	53.6	53.3	53.3	57.1	54.9	53.9	53.4
EA	46.2	46.4	46.3	46.5	47.3	46.6	46.3	47.1	46.9	46.9	53.6	52.4	50.3	48.8
BG	37.1	38.7	38.4	38.1	39.0	40.2	40.7	35.4	37.0	36.3	42.0	43.1	43.9	43.1
CZ	40.5	41.5	41.4	41.6	40.5	40.2	39.8	39.0	40.6	41.1	47.3	46.4	44.5	43.7
DK	52.3	51.3	53.6	53.3	53.3	49.2	47.7	50.5	50.5	49.5	53.4	51.0	48.3	47.1
HR	45.5	45.5	46.3	47.2	46.4	46.4	46.7	44.7	45.5	46.1	54.5	49.2	48.6	48.5
HU	44.3	44.0	43.9	43.4	41.1	41.3	41.4	46.7	46.1	46.0	51.2	47.9	47.3	46.4
PL	39.8	41.3	41.0	41.3	42.3	39.9	38.6	41.3	41.5	41.8	48.2	44.2	43.9	43.0
RO	30.8	32.0	31.9	32.7	32.8	33.6	33.3	33.5	34.8	36.2	42.0	39.9	41.1	39.6
SE	50.6	50.7	49.7	49.9	50.0	48.7	47.7	49.2	49.8	49.1	52.6	50.2	49.1	47.2
EU	45.9	46.1	46.0	46.2	46.9	46.0	44.4	45.9	46.1	46.0	46.2	46.9	46.0	45.7

Note: Differences between the sum and the total of individual figures are due to rounding.

Source: Commission spring 2022 forecast.

Graph I.1.9: Expenditure and revenue (euro area, in % of GDP)



Source: Commission spring 2022 forecast.

Rising public investment improves the expenditure composition. The EU aggregate public investment-to-GDP ratio is projected to increase from 3% of GDP in 2019 to 3.5% in 2023, as almost all Member States are expected to spend more on public investment than they did before the pandemic. Around a quarter of that increase is related to investment financed by the EU, especially the Recovery and Resilience Facility, with the aim to support a sustainable and inclusive recovery, the green and digital transitions and the resilience of the EU economy.

2. THE ECB'S MONETARY STRATEGY REVIEW IN VIEW OF THE POLICY MIX

This chapter presents the main findings of the ECB's monetary policy strategy review with a focus on the interaction between fiscal and monetary policy (the policy mix).

On 8 July 2021, the ECB unveiled the conclusions of its monetary policy strategy review. The main rationale for the review was that the euro-area economy had to cope with major challenges since the previous review in 2003, such as the effective lower bound to monetary policy rates, the declining trend growth as well as the digitalisation and climate change. The review covers all aspects of the ECB's monetary policy with the aim of re-assessing the quantitative formulation of price stability and the approaches and instruments through which price stability can be achieved. It also analyses how financial stability, employment and climate change can affect price stability. The ECB announced that it would conduct regular reviews of its monetary policy strategy in the future, with the next one expected to take place in 2025.

Key results of the monetary policy strategy

A key result of the ECB's monetary policy review is the adoption of a symmetric inflation target of 2% over the medium term. Under its new strategy, the ECB's Governing Council considers that price stability is best maintained by aiming for 2% inflation over the medium term, compared to the previous double-key formulation of 'below, but close to 2%'. The adoption of a symmetric target aims at addressing concerns that the previous double-key formulation of 'below, but close to 2%' might have led to possible ambiguity about the inflation aim and a perception of the aim being asymmetric. According to the new ECB monetary policy strategy, symmetry in the inflation target means that negative and positive deviations of inflation from the target are equally undesirable. The new strategy is considered to provide a clearer anchor for longer-term inflation expectations, which is essential for maintaining price stability. The review also revealed that the ECB remains committed to forceful and/or

persistent monetary policy measures when the economy is close to the effective lower bound on its policy rate. These measures should avoid that persistent negative deviations from the inflation target become entrenched leading to a disanchoring of inflation expectations. In such situations, the ECB will tolerate for a transitory period that inflation is moderately above target. Finally, the ECB confirmed that the change in the harmonised consumer price index (HICP) remained the appropriate price measure and recommended the inclusion of owner-occupied housing costs over time.

The ECB Governing Council agreed on an ambitious climate change action plan. The ECB will progressively expand its analytical capacity with regard to climate change. It will include climate change considerations in monetary operations in the areas of disclosure, risk assessment, collateral framework and corporate sector asset purchases. As part of its climate risk assessment initiatives, the ECB will start conducting climate stress tests of the Eurosystem balance sheet in 2022.

Finally, the ECB monetary review stresses that the fiscal and monetary policy mix can play an important role. The ECB's review confirms that unconventional monetary policy instruments (such as negative policy rates, forward guidance, asset purchases and longer-term refinancing operations) will remain part of the ECB's toolkit in situations close to the effective lower bound. Moreover, it recognises that fiscal policy can play an important stabilising role in such circumstances.

A closer look at fiscal and monetary interaction

The ECB staff analyses the interaction between monetary and fiscal policy thoroughly in the context of the review.⁽⁴⁾ The key conclusions are broadly in line with the consensus in academia. They also reflect previous public statements by the ECB, partly from the pre-COVID years, pointing to the importance of fiscal policy support in certain conditions to avoid an overburdening of monetary policy.⁽⁵⁾

Fiscal policy can be a useful complement to monetary policy

The rationale for the role of fiscal policy in the interaction with monetary policy has changed over time. The rationale prevailing at the creation of the monetary union was that monetary policy had to focus on combating high inflation. This had to be nuanced in the years following the financial crisis in an environment of persistently low inflation⁽⁶⁾ and a decline in the natural interest rate⁽⁷⁾. With policy rates close to their effective lower bound and unconventional monetary policy measures subject to possible negative side effects and diminishing returns, fiscal policy is today considered a useful complement to monetary policy to bring inflation back to target.

There are several reasons why fiscal and monetary policies can become strategic complements under certain conditions.

First, fiscal multipliers are typically larger when monetary policy is constrained by the effective lower bound mainly for two reasons.

- *The main reason is that interest rates' reaction to higher deficits is muted and the crowding out effects of fiscal policy on*

private investments and consumption are reduced. Supportive monetary policy lowers long-term rates both directly by affecting expectations of future policy rates and indirectly by lowering term premia. This allows for a larger fiscal policy expansion depending on how long rates are expected to remain low.

- *Moreover, non-conventional monetary policy can provide further space to fiscal policy with its indirect effect on the risk premia.* In a currency union, monetary policy can provide more fiscal space to Member States with high vulnerabilities related to high levels of government debt⁽⁸⁾. In such a context, fiscal multipliers become smaller when monetary accommodation is less effective so that the spreads on sovereigns increase in vulnerable Member States⁽⁹⁾.

Second, fiscal policy allows for a more targeted intervention in specific situations.

- *Fiscal policy instruments allowed for a targeted support during the COVID crisis.* Fiscal policy was well suited to directly deal with the health consequences of the pandemic, and to provide well-targeted support to households and firms operating in sectors most hit by the crisis. In addition, the loan guarantees by governments preserved the transmission mechanism of monetary policy by reducing uncertainty for banks and allowing them to continue transmitting monetary policy impulses to the real economy.
- *Fiscal policy can also support monetary by increasing the natural interest rate of the economy.* For example, the natural rate increases when government expenditures are tilted towards redistribution or tax progressivity is increased, because these policies shift resources from savers to borrowers, boosting aggregate demand and therefore interest rates in the long run.

⁽⁴⁾ ECB (2021): Monetary-fiscal policy interactions in the euro area, ECB Occasional Paper, 273.

⁽⁵⁾ See for instance the first intervention of Christine Lagarde in front of the European Parliament, her introductory statement on the occasion of the presentation of the ECB Annual Report 2018, available at [Debate about the Annual Report \(europa.eu\)](#).

⁽⁶⁾ This scenario is referred to as the “secular stagnation” scenario.

⁽⁷⁾ The ECB defines the natural interest rate as the interest rate that would prevail in the absence of nominal rigidities.

⁽⁸⁾ Such vulnerabilities are exacerbated by the home bias in banks assets and liabilities, the geographical concentration of their loans and the presence of low capital buffers and the loss of market access of sovereigns in certain countries.

⁽⁹⁾ This was the case for example during the recent sovereign debt crisis when a negative sovereign-bank loop emerged.

Similarly, a composition of government spending tilted towards investments can increase the productivity of the economy and the natural rate. By increasing the natural rate, fiscal policy can make a given monetary policy stance more stimulating.

Third, fiscal policy is particularly effective when the expectations of economic agents are rather backward looking. Monetary policy is effective when expectations are forward looking and in particular when they are rational⁽¹⁰⁾. However, expectations can turn more backward looking in situations in which uncertainty is higher than normal, so that economic agents do not have a clear assessment about future developments. In this condition, the impact of monetary policy on future inflation is reduced, so that fiscal policy can be a useful instrument to increase inflation.

However, complementarity comes not without risks ...

First, there is a risk of fiscal dominance. From the perspective of monetary policy, a prolonged loosening of monetary policy or the use of non-standard instruments like asset purchases together with fiscal expansion, can induce (or be perceived as) fiscal dominance. This can put central bank independence at risk despite the prohibition of monetary financing contained in the Treaty. In addition, the eventual transition to higher rates after a prolonged period of very accommodative monetary policy and build up of public debt calls for fiscal prudence and for fiscal plans anchored by prudent medium-term adjustment paths reflecting fiscal sustainability challenges.

Second, excessively loose fiscal policy can endanger fiscal sustainability in the medium term. An accommodative monetary policy, which allows for a larger fiscal response at the effective lower bound, may incentivise an excessively loose fiscal policy, in particular when the economy is not anymore at the effective lower bound. As a consequence, should the build-up in public debt be too large, risks for the future would increase in

particular if the loosening is too persistent and in particular for countries already vulnerable at the beginning of the crisis. High debt levels could imply higher sustainability risks once the central bank needs to raise interest rates. This has the implication that the market could require higher interests especially on vulnerable sovereigns⁽¹¹⁾.

Lessons for fiscal policy

The ECB paper suggests some elements that should be taken into consideration for fiscal policy action.

The ECB stresses that asymmetric debt levels across euro-area Member States could challenge the transmission of monetary policy. Asymmetric debt levels could lead to an excessive increase in spreads on sovereigns across the euro area in moments of high uncertainty. The ECB refers, for example, to an appropriate fiscal framework and to structural policies that favour debt reduction and support growth.

Counter-cyclical fiscal policy is key. Counter-cyclical fiscal policy allows supporting the economy when needed, while reducing risks from too high government debt. A specific euro-area aspect is related to the necessity of reducing of the trade-off between economic stabilisation and government debt sustainability present in vulnerable member states. Such vulnerabilities, on top of rising risks for the Member States, can impair the transmission of monetary policy.

⁽¹⁰⁾ Technically, agents have rational expectations when they know the correct model of the economy, comprising a good description of its uncertain aspects, and use such knowledge.

⁽¹¹⁾ The ECB staff shows indeed that the difference between the average interest paid on government debt and the growth of the economy ("r-g") is related to a country's fiscal position in terms of debt and deficit. This difference is very important as it drives the dynamics of the debt-to-GDP ratio, together with the primary deficit ratio.

Part II

Developments in fiscal surveillance

Please cite this as follows:

European Commission (2022), Developments in fiscal surveillance, Report on Public Finances in EMU 2021, Institutional Paper 181, 12 July, 19-58.

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KEY FINDINGS

This Part II provides an overview of the main developments related to the fiscal governance framework in 2021.

The fiscal surveillance cycle 2021 was shaped by the continued application of the general escape clause of the Pact

- In June 2021, the Commission issued a report under Article 126(3) of the Treaty on the Functioning of the EU for all Member States except Romania, which was under an excessive deficit procedure. The Commission concluded that, at that juncture, a decision on whether to place Member States under an excessive deficit procedure should not be taken. This was justified by the exceptional uncertainty created by the macroeconomic and fiscal impact of the COVID-19 outbreak, including for designing a credible multi-year path for fiscal policy.
- The Council adopted predominantly qualitative fiscal Recommendations for 2022, which were reflecting the persistent, exceptionally high degree of uncertainty.

The Commission engaged with all stakeholders to build a broad-based consensus on the way forward of the EU economic governance framework

- In September 2021, the Commission announced that it would provide orientations on possible changes to the economic governance framework with the objective of achieving a broad-based consensus on the way forward well in time for 2023. Therefore, the Commission relaunched the public debate on the review of the EU Economic Governance in October 2021.
- The Commission engaged with all stakeholders and the current state of play of the discussions points to a number of key issues, where further and more concrete work could pave the way for an emerging consensus for the future EU fiscal framework. In particular, (i) ensuring debt sustainability and promoting sustainable growth through investment and reforms are key to the success of the EU fiscal framework , (ii) more attention to the medium-term in the EU fiscal surveillance appears a promising avenue, (iii) it should be further discussed what insights insight can be drawn from the design, governance and operation of the Recovery and Resilience Facility and (iv) simplification, stronger national ownership and better enforcement remain key objectives.

The existing proposals to reform the EU fiscal rules outline different ways forward for the future evolution of the Pact

- The report provides an overview of some of the proposals to reform the EU fiscal rules that are part of the wider public debate on the review of the EU economic governance framework. These proposals focus on several key dimensions of the debate, notably on the need to simplify the framework, to ensure debt sustainability and macroeconomic stability, to incentivise investment and improve the quality of public finances, to strengthen enforcement.

Sound management practices are key for efficient public finances

- Better management practices can increase the efficiency of public investment. Studies show that in advanced economies about a fifth of public investment spending is estimated as lost to inefficiencies, half of which can be saved through better public investment practices throughout the investment cycle.
- Despite limited data availability, much can be learned from good practices and measure stakes to address challenges in the EU. Existing evidence points to room for improvement especially in terms of long-term planning and prioritisation, including medium-term planning, transparent implementation as well as monitoring and ex-post reviews.

1. IMPLEMENTATION OF FISCAL SURVEILLANCE IN 2021

This chapter summarises the main developments in the implementation of fiscal surveillance in the EU in 2021. The key developments are presented in chronological order following the fiscal surveillance cycle of 2021. First, the chapter presents key developments and procedural steps taken under the excessive deficit procedure (Section II.1.1.). It then summarises the 2021 country-specific recommendations on fiscal policy (Section II.1.3.). Finally, it presents the Commission's assessment of the euro area Member States' draft budgetary plans for 2022 (Section II.1.4.).

The general escape clause of the Stability and Growth Pact (SGP) has continued to be applied in 2021 and was expected to be deactivated as of 2023. The general escape clause was activated for the first time in March 2020. It has allowed Member States to adopt measures to minimise the economic and social impact of the COVID-19 pandemic and allowed them to coordinate their fiscal policies in a more flexible manner. As a result, while the escape clause does not suspend the procedures established by the SGP, it has had an important impact on fiscal policy and on fiscal surveillance in 2021. As announced in the Communication of 3 March 2021 (¹²), the Commission considered that the deactivation of the general escape clause of the Stability and Growth Pact should be conditional upon the state of the EU and euro area economy, recognising that it will take time for the economy to return to more normal conditions. Such a decision should be taken as an overall assessment of the state of the economy based on quantitative criteria, with the level of economic activity in the EU compared to pre-crisis levels being the key quantitative criterion. Based on the Commission spring 2021 forecast, the Commission considered that the continued application of the general escape clause in 2022 and its deactivation as of 2023 were met. According to the Commission autumn 2021 forecast, the EU economy was rebounding from the pandemic recession faster than expected. The EU and the euro area, which were in the third quarter 2021 just a notch below their pre-pandemic output levels (end-2019), were set to transition from recovery to expansion.

(¹²) European Commission (2021), Communication “One year since the outbreak of COVID-19: fiscal policy response”, COM (2021) 105 final, 3.3.2021.

1.1. EXCESSIVE DEFICIT PROCEDURE

This section focuses on the implementation of the excessive deficit procedure in 2021 as assessed in June 2021. Under this procedure, fiscal developments are monitored with a view to identifying gross policy errors. The Council recommends that Member States correct their excessive deficit and debt positions, which are measured against the reference values of 3% and 60% of GDP. Country-specific developments are summarised in Tables II.A.1, II.A.2, II.A.3 and II.A.4 in the Annex (¹³).

1.1.1. Euro area Member States

No euro area Member State fulfilled the deficit criterion in 2020. On 2 June 2021, the Commission issued a report under Article 126(3) TFEU which covered all euro area Member States (¹⁴). In that report, the Commission took into account the high uncertainty, the agreed fiscal policy response to the COVID-19 crisis and the Member States response to the Recommendations for 2021, which the Council had adopted on 8 June 2020 (¹⁵). The Commission reviewed compliance with the deficit criterion of the Treaty, as general government deficits exceeded the 3% of GDP Treaty reference value in 2020. The analysis, which took into account all relevant factors as appropriate, suggested that none of the euro area Member States fulfilled the *deficit criterion* as defined in the Treaty and in Regulation (EC) No 1467/1997. Moreover, the Commission reviewed the compliance with the *debt criterion* in 2020 as defined in the Treaty and in Regulation (EC) No 1467/1997. The analysis suggested that the debt criterion at the end of 2020 was not fulfilled by Belgium, Germany, Greece, Spain, France, Italy, Cyprus, Austria, Portugal, Slovenia and Finland.

(¹³) The Commission’s website details all country-specific developments pertaining to the excessive deficit procedure, https://ec.europa.eu/info/business-economy-euro/economic-and-fiscal-policy-coordination/eu-economic-governance-monitoring-prevention-correction/stability-and-growth-pact/corrective-arm-excessive-deficit-procedure/excessive-deficit-procedures-overview_en

(¹⁴) https://ec.europa.eu/info/sites/default/files/economy-finance/com-2021-529-1_en_act_part1_v5.pdf

(¹⁵) <https://www.consilium.europa.eu/en/press/press-releases/2020/07/20/european-semester-2020-country-specific-recommendations-adopted/>

The Commission considered that, at that juncture, a decision on whether to place Member States under the excessive deficit procedure should not be taken. The outbreak of COVID-19 had an extraordinary macroeconomic and fiscal impact, creating exceptional uncertainty, including for designing a credible path for fiscal policy. Taking into account the high uncertainty, the agreed fiscal policy response to the COVID-19 crisis and the Council Recommendations of 20 July 2020 (¹⁶), the Commission considered that at that juncture, a decision on whether to place Member States under the excessive deficit procedure should not be taken (¹⁷).

The Commission report took into account a variety of relevant factors. The report examined whether the planned deviations of the government deficits from the 3% of GDP reference value in 2020 were: (i) exceptional; (ii) close to the reference value; or (iii) temporary. The report also considered a variety of relevant factors, including the budgetary impact of the COVID-19 pandemic, medium-term macroeconomic outlook, the medium-term budgetary position (including investment), the medium-term debt position and any ‘other relevant factors.’ However, when assessing compliance with the deficit criterion, ‘other relevant factors’ could not be taken into account for Member States with a government debt-to-GDP ratio exceeding 60% and which did not meet the double condition of: (i) the deficit remaining close to the reference value; and (ii) the deficit’s excess over the reference value being expected to be temporary.

The report found that the deficit criterion was not fulfilled by Estonia, Ireland, Latvia, Lithuania, Luxembourg, Malta and the Netherlands, while their debt ratio was less than 60% of GDP. For these Member States, the general government deficit in 2020, based on data

validated by Eurostat, was *above and not close* to the Treaty reference value of 3% of GDP. For all these Member States, the excess over the deficit reference value of 3% of GDP in 2020 was exceptional, *i.e.* resulting from the impact of the pandemic. In the case of Ireland, Latvia, Luxembourg and the Netherlands, the excessive deficits were considered temporary, with the general government deficit projected to fall below 3% of GDP in 2022 (already in 2021 in the case of Luxembourg) based on the Commission spring 2021 forecast.

The report concluded that both the deficit and debt criteria were not fulfilled by Belgium, Germany, Greece, Spain, France, Italy, Cyprus, Austria, Portugal, Slovenia and Finland. For these Member States, in 2020, the general government deficit, based on data validated by Eurostat, was *above and not close* to 3% of GDP, while general government debt exceeded 60% of GDP. The excesses over the deficit reference value of 3% of GDP in 2020 were exceptional, *i.e.* resulting from the impact of the pandemic. In the case of Germany, Cyprus, Austria and Finland, the excessive deficits were considered temporary, with the general government deficit projected to fall below 3% of GDP in 2022 based on the Commission spring 2021 forecast. Meanwhile, the general government debt ratio increased in 2020 due to the sizeable contraction of nominal GDP and from the large amount of debt issued to finance the exceptionally large deficits. Data show that in 2020 Belgium, Greece, Spain, France, Italy, Cyprus, Austria, Portugal and Slovenia did not comply with the debt reduction benchmark (¹⁸). For Germany and Finland, which had recorded a debt ratio of below 60% of GDP at end-2019, the debt ratio was projected to remain above 60% of

(¹⁶) The Council recommended Member States to take all necessary measures, in line with the general escape clause of the Stability and Growth Pact, to effectively address the COVID-19 pandemic, sustain the economy and support the ensuing recovery. When economic conditions allow, Member States should pursue fiscal policies aimed at achieving prudent medium-term fiscal positions and ensuring debt sustainability, while enhancing investment. Cf. OJ C 282, 26.8.2020, 1–187.

(¹⁷) See 2022 European Semester: Spring Package Communication.
https://ec.europa.eu/info/system/files/2022_european_semester_spring_package_communication_en.pdf

(¹⁸) The debt reduction benchmark, for Member States with a debt in excess of 60% of GDP, is computed over a three-year horizon that can be forward-looking (t-1 to t+1), backward-looking (t-3 to t-1) and adjusted for the cycle. In the case of Spain and France, the relevant benchmark is the transition debt rule, applicable during the transition period of three years of the correction of the excessive deficit, for excessive deficit procedures that were ongoing in November 2011. The required minimum linear structural adjustment (MSLA) defines the remaining annual structural adjustment over the transition period, which would ensure that the Member States comply with the debt reduction benchmark at the end of those three years. If the change in the structural balance is above the required MSLA, then the Member State complies with the transitional debt rule.

GDP over the forecast horizon. They were therefore not considered to comply with the debt criterion either.

The report concluded that the deficit criterion in 2020 was not fulfilled by Slovakia, while the debt criterion was complied with. The general government deficit in 2020, based on data validated by Eurostat, was *above* and *not close* to 3% of GDP. The excess over the deficit in 2020 was exceptional. Regarding the debt-to-GDP ratio, Slovakia recorded a ratio of 60.6% of GDP at the end-2020. Since the debt-to-GDP ratio was projected to fall below the Treaty threshold reference value in 2021, Slovakia was considered to comply with the debt criterion.

1.1.2. Non-euro area Member States

Bulgaria, Denmark and Sweden fulfilled the deficit criterion as the excess over the reference value was considered *exceptional, temporary* and the deficit remained *close* to the reference value. The other non-euro area Member States did not comply with the criterion in 2020. (Section II.1.1.1.).

The general government deficit for **Bulgaria** and **Sweden** in 2020, increased to 3.4% and 3.1% of GDP respectively, which was *above* but *close* to the 3% of GDP Treaty reference value. The excess of the deficits over the reference value were therefore considered both exceptional and temporary.

Denmark's general government deficit, based on the Commission spring 2021 forecast, reached 1.1% of GDP and was projected at 2.1% of GDP in 2021. However, according to its 2021 Convergence Programme, Denmark planned a general government deficit of 3.3% of GDP in 2021, which was *above* but *close* to 3% of GDP. The excess deficit over the reference value was therefore considered both exceptional and temporary.

The general government deficit for **Czechia, Croatia and Hungary** in 2020 increased to 6.2%, 7.4% and 8.1% of GDP respectively, which was *above* the 3% of GDP Treaty reference value. The excess deficits over the reference value were exceptional, but neither temporary nor close to the reference value.

Poland's general government deficit in 2020 increased to 7% of GDP which was *above* but *not close* to the 3% of GDP Treaty reference value. The excess deficit over the reference value was therefore considered both exceptional and temporary.

In the course of 2021 Romania was the only Member State under an excessive deficit procedure. The excessive deficit procedure for Romania started in 2020 on the basis of a deterioration in the fiscal situation that predated the COVID-19 crisis. The economic and fiscal situation changed significantly after the Council Recommendation of 3 April 2020 established an adjustment path that targeted the correction of the excessive deficit in 2022⁽¹⁹⁾. On 2 June 2021, the Commission recommended an updated adjustment path for the correction of its excessive deficit. On 18 June 2021, the Council adopted a Recommendation under Article 126(7) TFEU for Romania to correct its excessive deficit by 2024 at the latest⁽²⁰⁾. Romania was recommended to reduce the general government deficit to 8.0% of GDP in 2021, 6.2% of GDP in 2022, 4.4% of GDP in 2023, and 2.9% of GDP in 2024 in line with the government's own targets. The revised adjustment path recommended by the Council, while still requiring substantial annual adjustments, implies a more gradual effort and strikes a good balance between fiscal consolidation and supporting the economic recovery. Based on the Commission spring 2021 forecast underpinning the Council Recommendation, this adjustment path was consistent with an annual structural adjustment and with a nominal growth rate of net primary government expenditure for these years. The Council established the deadline of 15 October 2021 for Romania to report in detail on action taken in response to the Council Recommendation. Romania submitted its report on 14 October 2021. Given the caretaker nature of the government, that report contained only the measures adopted with the aim of delivering compliance with the 2021 intermediate deficit target.

⁽¹⁹⁾ OJ C 116, 8.4.2020, p. 1. See also European Commission (2020), Communication “*Fiscal situation in Romania*”, COM (2020) 752 final, 18.11.2020.

⁽²⁰⁾ <https://www.consilium.europa.eu/en/press/press-releases/2021/06/18/excessive-deficit-procedure-counciladopts-recommendation-for-romania/>

The excessive deficit procedure for Romania was reassessed in autumn 2021. In its Communication to the Council of 24 November 2021 on the fiscal situation in Romania, the Commission indicated that the targets for 2022–2024 required a medium-term consolidation strategy and corresponding corrective measures⁽²¹⁾. Given the projected achievement of the recommended headline deficit target in 2021, the excessive deficit procedure was kept in abeyance. The Commission invited the Romanian government, when formed, to present a budget for 2022 and a medium-term fiscal strategy in line with the June 2021 Council recommendation as a matter of urgency. In spring 2022, the Commission re-examined compliance with the requirements set out in the Council Recommendation based on the Romanian budget and the medium-term fiscal strategy. Romania's general government deficit in 2021 and the fiscal effort in 2021 are in line with those recommended by the Council. Therefore, the procedure is kept in abeyance.

1.2. FISCAL RECOMMENDATIONS FOR 2022

The measures taken in response to the COVID-19 pandemic and the establishment of the Recovery and Resilience Facility in February 2021 were reflected in the 2021 Stability and Convergence Programmes. Member States agreed to include in the Stability and Convergence Programmes additional tables for the reporting on RRF grants/loans included in the budgetary/debt projections and on the discretionary measures and public guarantees provided in response to the pandemic.

In their 2021 Stability and Convergence Programmes, almost all Member States announced a continued supportive fiscal stance in 2021 and 2022. Member States were expected to continue to implement measures to minimise the economic and social impact of the COVID-19 crisis and to support the recovery. Automatic stabilisers and discretionary fiscal measures contributed to increased government spending and reduced revenue. The Commission spring 2021 forecast projected a further increase of the aggregate deficit in 2021 to 7.5% and 8.9% of

GDP in the EU and euro area, respectively. Fiscal support in 2021 was expected to be even stronger than suggested by the headline deficits numbers once considering the additional expenditure financed by the EU budget and NextGenerationEU, especially the Recovery and Resilience Facility. The public debt-to-GDP ratio was also projected to rise sharply due to a combination of higher deficits and lower GDP. In the euro area, the debt-to-GDP ratio was projected to increase in 2021 to 102% of GDP, while in the EU it would rise to 94% of GDP⁽²²⁾.

The fiscal Recommendations for 2022, which were adopted by the Council on 18 June 2021, were predominantly qualitative⁽²³⁾. This reflected the persistent, exceptionally high degree of uncertainty, including regarding the impact on growth potential of the crisis and the reforms and investments implemented with the support of the Recovery and Resilience Facility. In the Recommendations, a differentiation across Member States was made based on the level of public debt as well as the projected growth in nationally-financed current expenditure. The recommendations were based on an estimate of the fiscal stance in 2021 and 2022 measured by the change in primary expenditure (net of discretionary revenue measures), excluding crisis-related temporary emergency measures but including expenditure financed by grants under the Recovery and Resilience Facility and other EU funds, relative to medium-term potential growth. Going beyond the overall fiscal stance, in order to assess whether national fiscal policy was prudent and its composition conducive to a sustainable recovery consistent with the green and digital transitions, attention was also paid to the evolution of nationally-financed primary current expenditure and investment.

The Council called for the fiscal stance in 2022, stemming from national budgets and the Recovery and Resilience Facility, to remain supportive. In particular, Member States with low

⁽²²⁾ The 2021 Stability and Convergence Programmes: an Overview, with an Assessment of the Euro Area Fiscal Stance,
https://ec.europa.eu/info/sites/default/files/economy-finance/ip157_en.pdf

⁽²³⁾ <https://www.consilium.europa.eu/en/press/press-releases/2021/06/18/council-adopts-recommendations-on-the-updated-stability-and-convergence-programmes/>

debt were recommended to pursue a supportive fiscal stance, including the impulse provided by the Recovery and Resilience Facility. Member States with high debt were to use the Recovery and Resilience Facility to finance additional investment in support of the recovery while pursuing a prudent fiscal policy. All Member States were to preserve nationally-financed investment.

At the same time, the growth of nationally-financed current expenditure was to be kept under control, and be limited for Member States with high debt. This would allow fiscal measures to maximise support to the recovery without pre-empting future fiscal trajectories and creating a permanent burden on public finances.

For the period beyond 2022, fiscal policies should continue to take into account the strength of the recovery, the degree of economic uncertainty and fiscal sustainability considerations. When economic conditions allow, Member States should pursue a fiscal policy aimed at achieving prudent medium-term fiscal positions and ensuring fiscal sustainability in the medium term. At the same time, Member States should enhance investment to boost growth potential.

The fiscal recommendations for 2022 reaffirmed the importance of the quality of public finances in the design of fiscal policy. As health risks diminish, economic policy should shift from an emergency regime towards recovery-oriented objectives. The quality of the budgetary measures should ensure a sustainable and inclusive recovery. Member States should prioritise growth-enhancing investment, notably supporting the green and digital transition. A focus on fiscal structural reforms, including enhancing efficient spending and high-quality public finance resource management, is crucial.

1.3. DRAFT BUDGETARY PLANS

In November 2021, the Commission assessed the consistency of the 2022 Draft Budgetary Plans submitted by the euro area Member States, with the Recommendations adopted by

the Council on 18 June 2021.²⁴ France submitted an update of the Draft Budgetary Plan. In the case of the Netherlands, the Draft Budgetary Plan was submitted by the outgoing government and the authorities were invited to submit to the Commission and the Eurogroup an updated Plan as soon as a new government takes office. The Commission did not assess the Draft Budgetary Plan submitted by Portugal, as the budget on which Portugal's plan was based was rejected by its parliament in the meantime. The Commission also invited the Portuguese authorities to submit a new Draft Budgetary Plan as soon as a government presents to the Portuguese parliament a new draft State Budget for 2022 (²⁵).

According to the Draft Budgetary Plans, the aggregate euro area headline deficit was projected at 4.1% of GDP in 2022, down from 5.9% in 2021, while the debt-to-GDP ratio was forecast at around 96%, compared to around 100% in 2021. This was broadly in line with the Commission autumn 2021 forecast. Materialisation of negative risks to the forecast could aggravate economic and fiscal outcomes in 2022 compared to the estimates in the Draft Budgetary Plans. These risks include possible additional measures to counteract the economic and social impact of the abrupt increase in energy prices as well as due to contingent liabilities accumulated during the COVID-19 crisis.

The following is a summary of the Commission Opinions on the Draft Budgetary Plans:

High-debt Member States (Belgium, France, Greece, Italy and Spain)

- As recommended by the Council, all Member States use the RRF to finance additional investment in support of the recovery.
- As recommended by the Council, all Member States preserve nationally financed investment.
- Italy has been recommended by the Council to limit the growth of nationally financed current expenditure. This is not projected to be

²⁴https://ec.europa.eu/info/sites/default/files/economy-finance/draft_budgetary_plans_2022_overall_assessment.pdf

⁽²⁵⁾ After the rejection of the Portuguese budget, the Parliament was subsequently dissolved which meant that the government became a caretaker.

sufficiently ensured, as the growth of nationally financed primary current expenditure (net of new revenue measures) in 2022 is projected to provide a sizeable contribution to Italy's overall supportive fiscal stance. In order to contribute to the pursuit of a prudent fiscal policy, the Commission invites Italy to take the necessary measures within the national budgetary process to limit the growth of nationally financed current expenditure.

- For Belgium, France, Greece, Italy and Spain, given the level of their government debt and high sustainability challenges in the medium term before the outbreak of the COVID-19 pandemic, when taking supporting budgetary measures, it is important to preserve prudent fiscal policy in order to ensure sustainable public finances in the medium term.

Low/medium debt Member States (Austria, Cyprus, Estonia, Finland, Germany, Ireland, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Slovenia and Slovakia)

- As recommended by the Council, all Member States, with the exception of Slovakia and Malta, pursue a supportive fiscal stance, including the impulse provided by the RRF. Slovakia's restrictive fiscal stance occurs against the background of high output growth and emerging capacity constraints. Malta's neutral stance reflects mainly very high estimated potential growth, while public investment reaches a historically high level. This is broadly as recommended by the Council.
- All Member States plan to use the RRF to support their recovery, while the Netherlands has not yet submitted its Recovery and Resilience Plan.
- As recommended by the Council, all Member States preserve or broadly preserve nationally financed investment.
- Latvia and Lithuania have been recommended by the Council to control the growth of nationally financed current expenditure. This is not projected to be sufficiently ensured, as the growth of nationally financed primary current expenditure (net of new revenue measures) in 2022 is projected to provide a

sizeable contribution to their overall supportive fiscal stance.

The Commission invited high debt euro area Member States –Belgium, France, Greece, Italy and Spain– to preserve a prudent fiscal policy. Given the high level of government debt and sustainability challenges in the medium term in those Member States already before the outbreak of the COVID-19 pandemic, the Commission considered important to preserve prudent fiscal policy in order to ensure sustainable public finances in the medium term.

Taking into account the strength of their recovery, all euro area Member States were invited to regularly review the effectiveness and adequacy of their support measures. Member States were invited to stand ready to adapt their support measures as necessary to changing circumstances. Portugal submitted its Draft Budgetary Plan for 2022 on 14 April 2022 and Germany submitted an updated Draft Budgetary Plan for 2022 on 27 April 2022. On 19 May, the Commission adopted its opinions on the 2022 draft budgetary plans of Germany and Portugal. Germany's fiscal stance in 2022 is projected to be supportive. Germany plans to provide continued support to the recovery by making use of the RRF to finance additional investment. Germany also plans to preserve nationally financed investment. Portugal's fiscal stance in 2022 is projected to be supportive. Portugal plans to provide continued support to the recovery by making use of the RRF to finance additional investment. Portugal also plans to preserve nationally financed investment. Portugal is expected to sufficiently limit the growth of nationally financed current expenditure. Given the level of Portugal's government debt and high sustainability challenges in the medium term, the Commission invited Portugal to preserve prudent fiscal policy in order to ensure sustainable public finances in the medium term.

2. RELAUNCH OF THE REVIEW OF THE GOVERNANCE FRAMEWORK

The EU economy after COVID-19: implications for economic governance⁽²⁶⁾

On 19 October 2021, the European Commission adopted a Communication relaunching the public consultation on the EU's economic governance framework⁽²⁷⁾. This consultation had been put on hold in March 2020 in order to focus on the COVID-19 pandemic. The Commission Communication assessed the implications of the changed circumstances for economic governance following the COVID-19 crisis and set out additional questions for the public debate.

This chapter summarises the main points of the Commission 19 October 2021 Communication. With a view to providing some elements of context, Section II.2.1 briefly summarises the evolution of the Stability and Growth Pact ("the Pact") and the introduction of the Macroeconomic Imbalances Procedure (MIP). Section II.2.2 then highlights the main points of the Commission Communication on the relaunch of the public consultation on the economic governance review.

2.1. THE EVOLUTION OF THE ECONOMIC GOVERNANCE FRAMEWORK⁽²⁸⁾

The Pact should ensure the sustainability of public debt. This objective reflects the need to avoid the negative externalities that arise in a monetary union when debt becomes unsustainable in one or several Member States. The Pact thus aims to prevent, and where necessary correct, excessive deficits so as to keep public debt at sustainable levels. Without prejudice to the sustainability objective, the Pact also leaves room for fiscal-based macroeconomic

stabilisation⁽²⁹⁾. The EU fiscal framework should thus incentivise successful medium-term debt reduction strategies, focusing on fiscal consolidation, the quality and composition of public finances and promoting growth.

The Pact consists of corrective and preventive arms. The corrective arm aims to correct excessive deficits (also commonly referred to "gross policy errors") relating to breaches of the Treaty-defined deficit and debt thresholds, i.e. a deficit below 3% of GDP and a debt-to-GDP ratio of below 60% of GDP, unless the ratio is sufficiently diminishing towards that level at a satisfactory pace. Such breaches can trigger an excessive deficit procedure (EDP), giving Member States a deadline to correct the breach. The preventive arm aims to prevent excessive deficits, by ensuring that Member States build fiscal buffers during economic good times. This arm requires Member States to reach a country-specific medium-term budgetary objective (MTO), defined in structural terms (i.e. adjusted for the economic cycle), through an annual adjustment of 0.5% of GDP as a benchmark. Meeting the MTO gives Member States scope to use fiscal policy for the purpose of stabilisation in bad economic times.

The Pact has developed considerably since its creation, largely in response to weaknesses that became apparent during periods of crisis. Differences in national preferences on the appropriate pace of debt reduction has made reconciling the *sustainability* and *stabilisation* objectives of the Pact challenging. Successive reforms have sought to make the rules better adapted to the economic situation (*stabilisation*) and increase the focus on debt developments (*sustainability*)⁽³⁰⁾. In the preventive arm, the main aim has been to ensure an adequate fiscal effort in good economic times. A greater emphasis has been placed on expenditure developments, which are more directly under the control of governments than other fiscal indicators, such as the structural budget balance. A collective "escape

⁽²⁶⁾ This Chapter is a slightly-modified version of a VOX article written by Maarten Verhey (Director General, DG ECFIN) and Allen Monks (Economist, DG ECFIN). See: <https://voxeu.org/article/eu-economy-after-covid-19-implications-economic-governance>

⁽²⁷⁾ European Commission (2021), "The EU economy after COVID-19: implications for economic governance", COM (2021) 662 final of 19 October 2021.

⁽²⁸⁾ For a longer discussion, see European Commission (2020), "Economic governance review", SWD(2020) 210 final of 5 February 2020.

⁽²⁹⁾ Safe levels of public debt should in any case allow "automatic stabilisers" to operate without leading to fiscal or financial market stress.

⁽³⁰⁾ Many of the changes highlighted in this paragraph were made as part of the 2011 Six-Pack and 2013 Two-Pack reforms.

clause” was introduced, allowing Member States to deviate from required fiscal adjustments in case of “a severe economic downturn” in the EU or the euro area as a whole, and thus provide support to their economies. In the corrective arm, the debt reduction benchmark was introduced, making the Treaty’s debt criterion (of sufficiently diminishing towards the 60% of GDP threshold) operational. Sanction mechanisms were reinforced. Budgetary coordination in the euro area was also strengthened.

The Commission has made use of flexibility and discretion in the fiscal rules. In the context of a slow recovery from the financial and euro-area sovereign debt crises, the Commission placed an emphasis on making best use of the flexibility within the Pact⁽³¹⁾. Various clauses were introduced in the preventive arm to allow for temporary deviations from annual adjustment requirements, for example in order to support public investment. The required annual adjustment towards the MTO was modulated to better take account of cyclical conditions, thus allowing for lower fiscal adjustments in bad times and requiring higher adjustments in good times. The Commission used the discretion available within the framework to consider compliance with the preventive arm a key relevant factor when assessing compliance with the Treaty’s debt criterion. These and other innovations have made the framework more complex and less predictable.

In parallel to the evolution of the Pact, EU requirements for national fiscal frameworks have been introduced and strengthened. There has been a growing recognition of the importance of fiscal arrangements at the national level as a means of ensuring compliance with EU fiscal rules and strengthening national ownership of the rules. Member States agreed to a number of requirements for their fiscal frameworks with a view to improving their quality and effectiveness in support of fiscal discipline in the EU context. Most of those requirements took the form of EU law, while others were established in the so-called “Fiscal Compact” as part of the intergovernmental Treaty on Stability, Coordination and Governance in Economic and Monetary Union.

The MIP was established after the economic and financial crisis with the aim of supporting macro-financial stability. The 2008-2009 crisis was accompanied by a general reappraisal of risks in financial markets and acted as a trigger for sudden stops and reversals in current account financing and for the bursting of asset bubbles. Macro-financial and macro-structural aspects that drove the accumulation of both external (e.g., large current account imbalances) and internal imbalances (e.g., excess debt accumulation or the building up of housing bubbles) revealed themselves as key factors in triggering balance of payment crises and debt crises, which spilled over to other countries and in some cases required financial assistance to Member States. Therefore, the MIP was introduced with the aim to identify, prevent and address the emergence of potentially harmful macroeconomic imbalances that could adversely affect economic stability in a particular Member State, the euro area, or the Union as a whole. With a view to providing an integrated response to economic and social challenges, the MIP was integrated into the European Semester

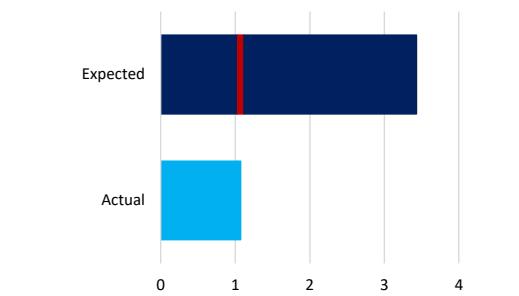
2.2. THE RELAUNCH OF THE PUBLIC DEBATE

An unprecedented crisis

The pandemic resulted in an unprecedented economic contraction in 2020, with EU real GDP falling by 6.1%, more than during the global financial crisis. The EU response to the crisis was fast, forceful and well-coordinated at all levels. EU Member States – backed by the EU SURE instrument (Graph II.2.1) – provided strong support to business and workers, notably through short-time work schemes, in addition to substantial liquidity support to firms.

⁽³¹⁾ European Commission (2015), ‘Making the best use of the flexibility within the existing rules of the Stability and Growth Pact’, COM (2015)12 of 13 January 2015.

Graph II.2.1: Increase in unemployment rate in SURE beneficiary Member States, 2020 (pps.)



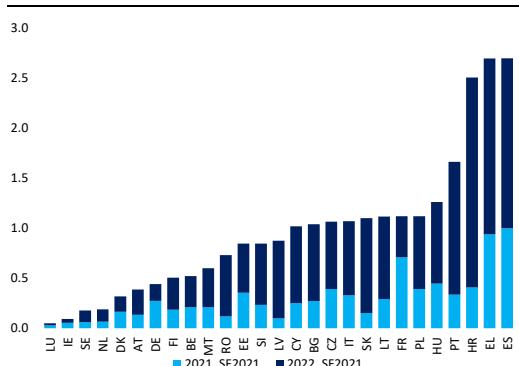
Note: The expected increase in the unemployment rate reflects the historical relationship between changes in that rate and (negative) GDP growth.

Source: European Commission calculations.

The European Central Bank complemented the fiscal response with a broad set of monetary policy measures. This joint and coordinated policy response was successful: the economic impact of the crisis on workers and firms has been far less severe than originally anticipated.

Decisive EU-level action also ensured the development, speedy procurement and coordinated distribution of COVID-19 vaccines. Looking forward, the newly created EU Recovery and Resilience Facility (RRF) will promote an investment-rich recovery and growth-enhancing reforms by providing EUR 338 billion in non-repayable support and up to EUR 386 billion in loans (in current prices) throughout the period to 2026. The impact was seen already in 2021 (Graph II.2.2).

Graph II.2.2: Expenditure financed by RRF grants, 2021 and 2022 (% of GDP)



Source: Commission spring 2021 forecast.

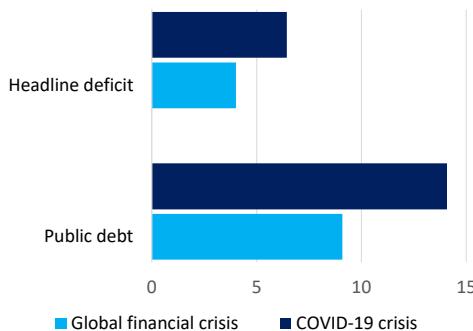
The recovery has taken hold but significant challenges remain

Thanks to strong policy support, accelerated vaccine rollout and, where possible, the gradual easing of pandemic-related restrictions, growth resumed forcefully in the EU in spring 2021. After the soft patch at the turn of 2021, the EU economy entered 2022 with the prospect of a vigorous expansion over this year and the next. However, the Russian invasion of Ukraine has dented global economic expectations. At the same time, inflation has substantially increased and is entailing a path of monetary policy normalisation. Long term interest rates have increased compared to their very low levels observed in the recent past. While the Russian invasion of Ukraine has heightened uncertainty, the economic outlook of the Commission 2022 spring forecast still points to continued economic expansion in 2022 and 2023, showing the resilience of the EU economy.

Despite the recovery from the pandemic, long-term structural challenges remain. Some of these pre-date the pandemic: the impacts of population ageing, weak productivity growth, and accelerating climate change. Rising income and wealth inequality, territorial disparities within and among Member States, and unequal access to education and skills were holding back economic growth and creating strain on the EU's social fabric. The pandemic has made many of these challenges more pressing and added others:

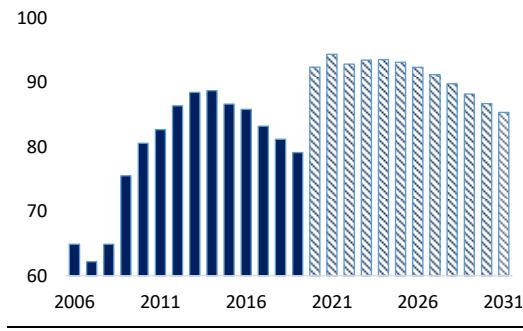
- Public finances have taken a considerable hit and fiscal divergence between Member States has increased.** Deficit and debt ratios have soared in all Member States (Graph II.2.3). High debt ratios are expected to persist, remaining above pre-pandemic levels over the next decade (Graph II.2.4). More recently, the increase in interest rates may entail governments' borrowing costs to rise over time.

Graph II.2.3: Public finance impact of the global financial and COVID-19 crises in the EU, 2009 and 2020 (y-o-y change, pps. of GDP)



Source: Commission spring 2021 forecast.

Graph II.2.4: Public debt in the EU, 2006-2031 (% of GDP)



Source: Commission spring 2021 forecast.

- **Investment needs are pressing.** The additional investment needed to achieve the EU's climate and digital goals amounts to EUR 650 billion per year over the next decade (public and private combined). Since the publication of the October 2021 Communication, further developments have taken place that have further exposed some vulnerabilities, in particular regarding fossil fuel dependency.

- **The COVID-19 crisis has aggravated a number of pre-existing vulnerabilities.** Internal imbalances related to high government and private debt have increased, driven by the recession and measures taken to address the COVID-19 crisis. Pre-pandemic dynamic house price trends persisted and mortgage debt continued to grow significantly in some countries. Current account deficits widened in countries dependent on tourism revenues and the correction of current account surpluses has stalled. Moving forward, new risks may emerge as a result of structural transformations accelerated by the COVID-19 crisis.

- **The challenge of boosting socio-economic resilience has become more apparent.** Less resilient Member States, territories and sectors found it harder to withstand and respond to the crisis. Differences in resilience across the EU have a bearing on social, economic and territorial cohesion, as well as convergence within the euro area and the effectiveness of the single monetary policy.

Addressing these challenges offers transformative opportunities but requires major investment and reforms. The October 2021 Communication relaunching the public consultation on the economic governance review highlighted the EUR 2 trillion firepower of the new Multi-annual Financial Framework and Next Generation EU, in particular the RRF, which will support the recovery while making Member States' economies and societies more resilient. Good policies are also needed to strengthen resilience: effective and well-designed active labour market policies and social protection systems; investment in education and skills; and sound public finances.

Lessons from the crisis must be drawn for the economic governance review

The EU governance framework should be tailored to the challenges the EU is facing, as set out above. The COVID-19 crisis has underlined the challenges facing the economic governance framework, making those identified in the Commission's February 2020 Communication even more relevant. The Commission's October 2021 Communication does not seek to offer a roadmap for reform of the governance framework nor pre-empt the outcome of the public debate.

... for the EU fiscal rules ...

A number of key elements can be identified regarding the EU fiscal rules:

- Reducing high and divergent public debt ratios in a sustainable, growth-friendly manner will be a key post-crisis challenge. When economic conditions allow, resuming a path of reducing public debt-to-GDP ratios will be essential for maintaining sound public finances and avoiding persistent fiscal divergences between Member States. At the same time, an overly-large upfront reduction in debt ratios would entail high social and economic costs and be counter-productive.
- The stabilisation role of coordinated discretionary fiscal policy has proved to be crucial in the COVID-19 crisis. The crisis has highlighted the positive role that counter-cyclical discretionary fiscal policy and European coordination can play in responding to large economic shocks and containing their social fallout. However, the ability to provide fiscal stimulus in bad times requires building fiscal buffers in good times. Reinforcing counter-cyclicality in the EU fiscal framework could strengthen the medium-term dimension of fiscal policy and thus the ability of national fiscal policy to respond to economic fluctuations.
- A growth-friendly composition of public finances should promote investment and support sustained, sustainable and inclusive growth. Reflection is needed on the appropriate role of the economic governance framework to incentivise national investment

and reforms. Promoting green, digital and resilience-enhancing public investment deserves special attention, given the long-term challenges facing our economy.

- Achieving the overarching goals of simplification, stronger national ownership and better enforcement remains highly relevant. This calls for simpler fiscal rules using observable indicators for measuring compliance. It also includes considering whether a clear focus on "gross policy errors", as set out in the Treaty, could contribute to a more effective implementation. A simpler framework would contribute to increased ownership, better communication, and lower political costs for enforcement and compliance.
- Strong national fiscal frameworks can contribute to an effective economic governance framework. A possible strengthening of their roles and alignment with best practices across Member States are worth considering. This could go hand-in-hand with a refocusing on gross policy errors in the enforcement of EU fiscal rules.

...and the Macroeconomic Imbalance Procedure (MIP)

Returning to a path of convergence between Member States is essential. Preventing and correcting macroeconomic imbalances enhances Member States' ability to respond to shocks and supports economic convergence. A well-functioning MIP can help identify the build-up of imbalances in a timely manner so that they can be addressed early on. The MIP can also support policy coordination, as experienced in the swift and aligned response of Member States to the COVID-19 crisis. Many Member States have reduced the severity of imbalances over time and significant policy action has been taken in the context of Member States' Recovery and Resilience Plans, but the persistence of imbalances in some cases warrants further reflection on how the implementation and design of the MIP could be improved. Multiple surveillance streams partially overlap but the links have not always been fully exploited. MIP surveillance may also have insufficiently taken account of interactions between emerging economic challenges, notably

related to climate change and other environmental pressures.

Lessons from the Recovery and Resilience Facility

Insights gained from the functioning of the RRF framework could also be relevant for the broader economic governance of the Union. This framework has involved constructive and intense policy dialogues between the Commission and Member States, leading to improved mutual understanding of challenges, while building trust and ownership. It is underpinned by a transparent assessment and monitoring framework. In the fiscal domain, where the objective of achieving prudent public debt levels remains fundamental, the trade-off between various objectives would need to be addressed at the planning stage, thus avoiding recurrent renegotiation of adjustment paths.

Relaunching the review

A wide-ranging and inclusive engagement with all stakeholders is necessary to build a broad-based consensus. The Commission relaunched its online survey in parallel to the adoption of the October 2021 Communication, inviting citizens, organisations and public authorities to submit their contributions by 31 December 2021. The nine questions guiding the public debate that were included in the Commission's February 2020 Communication have been complemented by two additional questions, while one question has been slightly reformulated, as follows:

- **New question:** In what respects can the design, governance and operation of the RRF provide useful insights in terms of economic governance through improved ownership, mutual trust, enforcement and interplay between the economic and fiscal dimensions?
- **New question:** Considering how the COVID-19 crisis has reshaped our economies, are there any other challenges that the economic governance framework should factor in beyond those identified so far?

- **Reformulated question:** In light of the wide-ranging impact of the COVID-19 crisis and the new temporary policy tools that have been launched in response to it, how can the framework –including the Stability and Growth Pact, the Macroeconomic Imbalances Procedure and, more broadly, the European Semester– best ensure an adequate and coordinated policy response at the EU and national levels?

3. FUTURE OF THE SGP - AN OVERVIEW OF REFORM PROPOSALS

This chapter provides a literature review of proposals to reform the EU fiscal rules. These proposals set out ideas for reforming the EU's Stability and Growth Pact (the Pact), i.e. the set of rules designed to ensure that Member States pursue sound public finances and coordinate their fiscal policies. The Pact is currently being discussed as part of the economic governance review⁽³²⁾. This chapter seeks to contribute to that review by summarising the main themes emerging from recent reform proposals.

The chapter focuses on a selection of the most comprehensive, recent, publicly-available proposals. The selected reform proposals come from diverse sources, including academic economists, policy institutions and public bodies. The chapter does not seek to present an exhaustive overview. Instead, it focuses on some recent, prominent and publicly-available proposals, mainly in English and thus aimed at a broad (and not just national) readership. The selection should not be seen as expressing the preferences of the European Commission for one or the other reform proposal.

The chapter is structured as follows. Section II.3.1. seeks to place the proposals in the context of the economic governance review, highlighting some key challenges currently facing the Pact, as discussed in Commission (2020a) and Commission (2021), and the outcome of Commission's online survey of stakeholders. Section II.3.2. discusses the proposals in a thematic way, thus seeking to find some common threads in this rich literature. Table II.3.1 presents short summaries of all of the proposals, highlighting the novel elements of each along two dimensions: the *design* of the Pact and its *implementation*. Section II.3.3. presents an overview of some reform proposals put forward by Member States. Section II.3.4 concludes.

3.1. THE PUBLIC CONSULTATION ON THE ECONOMIC GOVERNANCE REVIEW

The February 2020 Commission Communication on the economic governance review highlighted some well-recognised challenges with the Pact and its implementation⁽³³⁾. While the Pact has been successful in reducing deficits and putting debt ratios on a downward path, the preventive arm has been less effective than the corrective arm. The Pact has not ensured sufficient differentiation between Member States with markedly different fiscal positions, sustainability risks and other vulnerabilities, while debt dynamics have widely diverged across Member States with debt levels remaining high in a number of Member States. In the period preceding the COVID-19 crisis, Member States' fiscal policies were pro-cyclical and the ability to steer the euro area fiscal stance had been limited, in the absence of a central fiscal capacity with stabilisation features. The fiscal framework did not prevent a decline in the level of public investment during periods of fiscal consolidation, nor did it make public finances more growth-friendly. The rules have become increasingly complex, with a multiplicity of indicators and reliance on unobservable variables, giving rise to a lack of transparency and complexity that has hampered ownership and predictability. While the development of national fiscal frameworks and independent fiscal institutions has increased national ownership, the effectiveness of national frameworks differs across Member States.

As discussed in Section II.2, the COVID-19 crisis has underlined the challenges facing the Pact, making those identified in the Commission's February 2020 Communication even more relevant⁽³⁴⁾. A number of lessons can be drawn from the crisis. First, reducing high and divergent public debt ratios in a sustainable, growth-friendly manner will be a key post-crisis challenge. Second, the stabilisation role of coordinated discretionary fiscal policy has proved to be crucial during the crisis. Third, a growth-

⁽³²⁾ The public consultation on the economic governance review was relaunched by the Commission on 19 October 2021. It had originally been launched in February 2020 but was suspended shortly afterwards in order to focus on the COVID-19 pandemic.

⁽³³⁾ European Commission (2020), "Economic governance review", COM(2020) 55 final of 5 February 2020.

⁽³⁴⁾ European Commission (2021), 'The EU economy after COVID-19: implications for economic governance', COM(2021) 662 final of 19 October 2020.

friendly composition of public finances is needed to promote investment and support sustained, sustainable and inclusive growth. Fourth, achieving the overarching goals of simplification, stronger national ownership and better enforcement remains highly relevant. Fifth, strong national fiscal frameworks can contribute to an effective economic governance framework.

In March 2022, the Commission published a summary report on the replies to an online survey that gathered the views of stakeholders on the economic governance review⁽³⁵⁾. Stakeholders responded to eleven open questions on different aspects of EU economic governance. Many respondents expressed the view that fiscal policy should become more growth-friendly, more mindful of social issues, and that it should support the policy priorities for the green and digital transition. Most respondents acknowledged the need for the fiscal framework to support the resilience of EU economies to shocks and that debt sustainability should remain a central objective of the EU fiscal rules, while the adjustment path towards lower government debt should be realistic and gradual. Many respondents stressed the need to incentivise investment as a necessary feature of the economic governance framework. Green investment was identified as deserving special attention due to the global climate challenge, while a few respondents caution against giving preferential treatment to investment expenditure in fiscal surveillance. Participants also called for simplification, transparency and stronger national ownership. Many respondents viewed the Recovery and Resilience Facility as a good inspiration for the future governance framework in terms of fostering national ownership and promoting reforms through positive incentives. A majority of respondents also support the establishment of a central EU fiscal capacity, in particular for macroeconomic stabilisation. Several participants also favour strengthening national fiscal frameworks and support stronger compliance and enforcement of the surveillance framework.

⁽³⁵⁾ European Commission (2022), "Online public consultation on the review of the EU economic governance framework: summary of responses", SWD (2022) 104 final of 28 March 2022.

3.2. DETAILED REFORM PROPOSALS

Simplifying the EU fiscal rules while ensuring debt sustainability...

Many of the reform proposals reviewed in this chapter seek to simplify the Pact. There is a widespread view that post-financial-crisis reforms to the Pact and subsequent interpretative changes by the Commission have led to it becoming too complex (Section 3.1.). Many of the proposals thus seek to simplify the *design* of the rules and improve their *implementation*. Most focus on the topics of debt sustainability, macroeconomic stabilisation, and the quality of public finances (in particular the role of public investment).

Several contributions suggest to move towards a single operational indicator that is anchored on a medium-term debt target, as a means to simplify the rules and ensuring debt sustainability⁽³⁶⁾. That target (or the speed of adjustment towards it) could be country specific. While not all proposals explicitly set out a mechanism for setting the target, several papers argue for a commitment-based model (i.e. targets set by Member States themselves, subject to some form of EU endorsement) as necessary for ensuring national ownership⁽³⁷⁾. An alternative approach would be to determine the debt targets at the EU level according to an EU-level rule. ESM (2021) argues for the current 60% of GDP debt threshold to be increased to 100%.

Many proposals prefer an expenditure rule as the single operational indicator. Such a rule is seen as being superior to other approaches (e.g. a structural balance rule) as expenditure is to a greater degree under the control of governments and as it allows for macroeconomic stabilisation in a more automatic way⁽³⁸⁾. It is also less reliant on unobservable variables than structural balance rules, although a few proposals highlight that it still relies (explicitly or implicitly) on an estimate of potential growth⁽³⁹⁾. While some propose

⁽³⁶⁾ Bénassy-Quéré et al. (2018); Cottarelli (2018); Darvas and Anderson (2020); Darvas, Martin and Ragot (2018); ECON Committee (2021); EFB (2018); Eyrraud et al. (2018); Heinemann (2018); Kopits (2018); Martin, Pisani-Ferry and Ragot (2021); OECD (2018); Wyplosz (2019).

⁽³⁷⁾ European Parliament (2021); Kopits (2018); Martin, Pisani-Ferry and Ragot (2021); Wyplosz (2019).

⁽³⁸⁾ European Commission (2019).

⁽³⁹⁾ Gros and Jahn (2020); Wyplosz (2019).

basing an expenditure benchmark on trend output growth⁽⁴⁰⁾, this would still face the challenge of measurement challenges, including revisions over the fiscal surveillance cycle.

Some propose doing away entirely with numerical fiscal rules and moving to surveillance based on “fiscal standards”. This view, authoritatively expounded by Blanchard, Leandro and Zettelmeyer (2020), would seek to prevent unsustainable debt trajectories by focussing fiscal surveillance on qualitative prescriptions that leave room for judgement. Surveillance by the Commission would focus on a debt sustainability analysis, while violations of the standards would be adjudicated by an independent body, such as the European Court of Justice. A number of papers focused on the US situation, notably Furman and Summers (2020) and Orszag, Rubin and Stiglitz (2021), also go in the direction of eschewing numerical fiscal rules, on the grounds that they are counterproductive.

... and allowing for adequate macroeconomic stabilisation

Simplification could also be achieved by streamlining exceptions to the rules while still facilitating stabilisation. Many authors call for fewer flexibility exceptions to the main rules, for example by re-focussing existing clauses into one single escape clause to cope with tail events. There is some divergence in the literature on how such a clause would be triggered. Some argue for it to be based on independent analysis⁽⁴¹⁾, while others call for it to be an explicitly political decision⁽⁴²⁾.

Some call for the establishment of a central fiscal stabilisation capacity to ensure an appropriate euro area aggregate fiscal stance⁽⁴³⁾. According to those authors, the creation of such a capacity would also allow for greater risk sharing among Member States. Its use could be limited to times of crisis, thus leaving automatic stabilisers in national budgets as the first

line of defence against normal fluctuations in the business cycle. The design of conditionality could be used to strengthen the implementation of the Pact and improve fiscal discipline, e.g. by making compliance with the rules a condition for accessing the capacity.

Incentivising investment and improving the quality of public finances

Many authors call for a “golden rule” for net investment to improve the quality of public finances⁽⁴⁴⁾. Traditional public finance literature often refers to a ‘golden rule’ that allows for the financing of public investment through public debt. Advocates of such a rule argue that it is conducive for intergenerational fairness and economic growth. The prevailing focus on net investment reflects the understanding that an increase in debt should be matched by an increase in the capital stock⁽⁴⁵⁾. Specifically, as long as public investment increases the public and/or social capital stock that they will inherit, future generations will benefit from it and so it is justifiable that they should assume the burden of the debt related to such investment. The definition of expenditure that would be subject to a “golden rule” is an object of debate. This issue is underlined in a series of papers on *green* public investment published by the European Parliament, in light of the fact that there is no definition of such investment in the European system of national accounts (ESA 2010). An alternative solution calls for an independent evaluation of eligible investment projects (e.g. Blanchard, Leandro and Zettelmeyer, 2020).

Other contributions point to the limited effectiveness of a golden rule. As also discussed in Chapter 3 of Part III, there is limited empirical evidence on the impact of golden rule on investment. Some empirical work⁴⁶ shows that there is only weak evidence that golden rules support public investment and that investment is hampered by fiscal rules. Other empirical evidence suggests that fiscal rules do not impede public

⁽⁴⁰⁾ ESM (2021).

⁽⁴¹⁾ Darvas and Anderson (2020); Kamps and Leiner-Killinger (2019); EFB (2019b); European Parliament (2021).

⁽⁴²⁾ Bénassy-Quéré et al. (2018).

⁽⁴³⁾ Arnold et al (2018); Bénassy-Quéré et al. (2018); EFB (2019a); ESM (2021); Wyplosz (2019). See Busch and Matthes (2019) for a general discussion of the forms that a central stabilisation capacity could take.

⁽⁴⁴⁾ Blanchard, Leandro and Zettelmeyer (2020); Darvas and Anderson (2020); Darvas and Wolff (2021); EFB (2019a); European Parliament (2021); Gros and Jahn (2020).

⁽⁴⁵⁾ See Gros and Jahn (2020) for a discussion.

⁴⁶ ‘Government investment in the EU’ in Report on Public Finances in EMU 2017, Institutional Paper 069.

investment and can in fact protect it (Basdevant et al. 2020). Bacchicocchi et al. (2011) find that high public debt reduces public investment. Martin, Pisani-Ferry and Ragot (2021) propose that, instead of a golden rule, the quality of public finances be made endogenous to the estimate of potential growth and, therefore, the country-specific medium-term debt target. In other words, if a government shifts from unproductive to productive expenditure, it will be able to spend more for the same debt target.

An alternative proposal to a “golden rule” is to support public investment directly from the EU budget. EFB (2021) argues for a strengthening of investment expenditure in the EU budget as of 2027, when the Recovery and Resilience Facility will be phased out, through the establishment of “national envelopes”. These envelopes would finance green public investment and other eligible public expenditure, thus safeguarding against counterproductive spending cuts. In a similar vein, European Economic and Social Committee (2021) argues for the implementation of a “common strategic investment plan”.

Strengthening implementation and enforcement

Implementation and enforcement challenges tend to be overlooked, although some themes have emerged. Financial sanctions could be replaced with positive incentives (e.g. access to EU funds conditional on compliance with the Pact), strengthened market discipline or increased political costs of non-compliance⁽⁴⁷⁾. A ‘compensation account’ could ensure better medium-term compliance by allowing governments to offset deviations from their targets in one year with deviations in the opposite direction in another year⁽⁴⁸⁾. The papers do not make clear how staying within the limit of the account over time would be enforced.

While some argue for more automaticity in the application of the framework, others call for a bigger role for the Eurogroup or European Parliament. ECON Committee (2021) refers to

“the importance of ensuring a proper balance of responsibilities between the different institutions in the implementation of the EU economic governance framework”. Several papers suggest separating analytical assessments from political decision making, including a greater role for EFB-like bodies at EU level⁽⁴⁹⁾. In the same vein, EFB (2019b) suggests eliminating the reverse qualified majority voting (RQMV) procedure that currently applies to enforcement decisions, arguing that it has an inhibiting influence on the Commission in proposing those decisions.

Institutional constraints frequently ignored

Only a few proposals consider the institutional dimension of reforming the Pact, including legal and political constraints. For example, most papers do not consider whether a reform would require changes to the Treaty and/or secondary legislation, or a re-interpretation of existing legislation. There are some exceptions, such as Martin, Pisani-Ferry and Ragot (2021), who state that their proposal is compatible with the Treaties but would require revisions to secondary legislation and to TFEU’s Protocol 12, which is deemed necessary to do away with the current deficit and debt thresholds. ESM (2021) make a similar point in relation to its proposal, while Bénassy-Quéré et al. (2018) highlight that their proposed changes would require legislative amendments.

Although some proposals envisage an institutional role for national fiscal rules and institutions, only a few explicitly reconsider the relationship between EU and national fiscal surveillance. Wyplosz (2019) propose a full decentralisation of fiscal surveillance, while Martin, Pisani-Ferry and Ragot (2021) argue that national fiscal councils should have a key role in the setting of medium-term country-specific debt target. Heinemann (2018) and Network of EU IFIs (2021b) call for the integration of the Fiscal Compact and the SGP.

⁽⁴⁷⁾ Darvas, Martin and Ragot (2018); Kamps and Leiner-Killinger (2019); EFB (2019b); ESM (2021); Eyrard et al. (2018); Kopits (2018); OECD (2018); Reuter (2018).

⁽⁴⁸⁾ EFB (2018); ESM (2021); Martin, Pisani-Ferry and Ragot (2021); OECD (2018).

⁽⁴⁹⁾ Martin, Pisani-Ferry and Ragot (2021).

3.3. REFORM PROPOSALS FROM MEMBER STATES

Since the initial launch of the public consultation on the economic governance review, a number of Member States have put forward reform proposals for the fiscal rules. Many elements of these proposals go in a similar direction to some of the technical proposals listed in Table II.3.1. While some outline high-level principles, others are more detailed in nature. This section highlights three such proposals (⁵⁰).

A joint letter from the Ministers of Finance of eight EU Member States argued that fiscal sustainability combined with reforms that support economic growth must continue to form the basis of a common EU economic and fiscal policy framework (⁵¹). The letter argued that reducing excessive debt ratios has to remain a common goal of EU Member States. While arguing in favour of maintaining a rules-based fiscal framework, it stated that improvements should be made. In particular, simplifications and adaptations that favour consistent, transparent and better application as well as enforcement of the rules are worth discussing, but only if new proposals do not jeopardise the fiscal sustainability of Member States, the euro area or the Union as a whole.

In December 2021, Prime Minister Draghi and President Macron published a joint article calling for a debt reduction strategy based on curbing recurrent public spending through structural reforms (⁵²). The article was

accompanied by a technical note co-authored by four economists, including advisors to Prime Minister Draghi and President Macron (⁵³). The authors of this note proposed a revision to the EU fiscal rules based on a medium-term debt anchor with a speed of adjustment that depends on the share of spending devoted to public investment and designed to fight recessions. The operational indicator to meet the target would be a spending rule. Separately, the authors argue for a “debt assumption plan” to transfer a portion of national debts accumulated during the pandemic from the balance sheet of the European Central Bank to a European debt management agency. According to the authors, this two-pronged approach can contribute to a coherent European strategy to foster durable growth and sustainable public finances.

A joint paper from the Netherlands and Spain argued in favour of country-specific consolidation strategies that are realistic, gradual but ambitious, and compatible with economic growth and job creation (⁵⁴). Achieving those goals will require continued economic reforms, high quality public investments, and an improved composition of public finances to ensure that debt reduction is not just dependent on budgetary consolidation. The joint paper highlighted the sizeable investments needed to honour the EU’s commitments, in particular the twin transition. In the view of these two Member States, recent experience with the governance of the RRF had shown the potential to create a virtuous circle between national ownership and enforcement. The transformation of medium-term objectives into a simple expenditure rule would also contribute to make rules more comprehensible, easier to enforce and more countercyclical, especially if coupled with well-defined escape clauses. Strengthening national fiscal frameworks could also help to bring fiscal rules closer to citizens and thereby increase the reputational costs of non-compliance. More broadly, the joint paper called for the completion of the Banking Union and Capital Markets Union.

(⁵⁰) A large number of reform proposals, not exhaustively documented in this chapter, have also been published by national central banks and other national institutions. For example, in April 2022, the Banca d’Italia published an occasional paper proposing a new framework based on a medium-term debt target and a multi-annual headline deficit profile consistent with that target. This system would be complemented with a common fiscal capacity, access to which could be made conditional on compliance with the fiscal rules. See: Romanelli, Tommasino and Vadalà, “The future of European fiscal governance: a comprehensive approach”, Banca d’Italia Occasional Paper number 691, April 2022.

(⁵¹) The letter, which was issued at the margins of an informal meeting of economic and financial affairs in September 2021, was signed by the Ministers of Finance of Austria, Czech Republic, Denmark, Finland, Latvia, Netherlands, Slovakia and Sweden.

(⁵²) The article was published in the Financial Times on 23 December 2021.

(⁵³) Giavazzi, Guerrieri, Lorenzoni and Weymuller. “Revising the European Fiscal Framework”.

(⁵⁴) The joint paper was published as a submission to the Eurogroup in April 2022.

3.4. CONCLUSIONS

The proposals summarised above are part of the wider public debate on the review of the EU economic governance framework. These proposals focus on several key dimensions of the debate, notably on the need to simplify the framework, to ensure debt sustainability and macroeconomic stability, to incentivise investment and improve the quality of public finances, and to strengthen enforcement.

The European Commission will provide orientations on possible changes to the economic governance framework after the 2022 summer break and well in time for 2023. At the time of publication, the public debate on the economic governance review was ongoing. It was also expected that the general escape clause of the Pact would be deactivated as of 2024. In its Communication of 23 May 2022 (⁵⁵), the Commission announced that it will provide orientations on possible changes to the economic governance framework after the summer break and well in time for 2023.

⁽⁵⁵⁾ European Commission (2022), “2022 European Semester - Spring Package”, COM (2022) 600 final of 23 May 2022.

Table II.3.1: Selected Proposals to reform the SGP

Reference	Design	Implementation
Academic papers		
Bénassy-Quéré et al. (2018). " Reconciling risk sharing with market discipline: A constructive approach to euro area reform ". CEPR. (<i>Proposal from fourteen French-German economists for a comprehensive reform of the European monetary union: financial sector, fiscal and institutional architecture</i>)	<ul style="list-style-type: none"> Simplification via a two-pillar approach: (1) Debt anchor (either fixed, e.g. 60% of GDP, or depending on additional elements, e.g. pension liabilities); (2) Expenditure-based operational rule to achieve anchor. Counter-cyclical: Central fiscal capacity to respond to large economic shocks, with crisis lending provided by ESM and possible public debt restructuring as a last resort. 	<ul style="list-style-type: none"> Enforcement at both EU and national levels: Independent national fiscal council produces: <ul style="list-style-type: none"> Medium-term projections of nominal potential growth (inflation consistent with the ECB objective); and Debt reduction target (e.g. 5-years ahead) Euro area “independent fiscal watchdog” approves each Member States’ medium-term fiscal plan. Government can propose budget with spending above the annual expenditure ceiling (e.g. for investment), but excess spending must be financed by junior sovereign bonds. Escape clause: activation agreed by the Eurogroup, after consultation with the euro area “fiscal watchdog”. Legal basis of reform: Legislative changes needed to adopt proposed approach.
Blanchard, Leandro and Zettelmeyer (2020). " Redesigning the EU Fiscal Rules: From Rules to Standards ". CEPR/PIIE with support of Federal Finance Ministry, Germany.	<ul style="list-style-type: none"> System based on “fiscal standards”, i.e. moving away from numerical fiscal rules. Quality of public finances: Golden rule based on net public investment (without a cap). Counter-cyclical: Central fiscal capacity or Treaty obligation to conduct national fiscal policy in a way that delivers an appropriate aggregate fiscal-monetary policy stance. 	<ul style="list-style-type: none"> Enforcement: by European Court of Justice other independent body. A supra-national institution to oversee what expenditure qualifies as “public investment”
Darvas, Martin and Ragot (2018). " The economic case for an expenditure rule in Europe ". VoxEU.	<ul style="list-style-type: none"> Simplification: Single spending rule (net of interest payments and of unemployment spending, and after properly taking into account public investment) anchored on country-specific debt reduction target. Counter-cyclical: Include potential GDP growth in spending rule. Quality of public finances: Distribute the cost of public investment across assets’ service lives, thus spreading the impact on the budget balance. 	<ul style="list-style-type: none"> Enforcement: Avoid sanctions but put emphasis on positive incentives, market discipline and increased political costs.
Darvas and Wolff (2021). " A green fiscal pact: climate investment in times of budget consolidation ". Breugel.	<ul style="list-style-type: none"> Quality of public finances: <ul style="list-style-type: none"> Substantial green public investment difficult to achieve under the current EU fiscal rules; a general relaxation of the rules would not provide direct incentives to increase such investment. The authors recommend a “green golden rule”, excluding net green public investment from the deficit and debt aggregates used in the EU fiscal rules, as part of a “Green Fiscal Pact”. 	
Martin, Pisani-Ferry and Ragot (2021). " Pour une refonte du cadre budgétaire européen ". Note du Conseil d’Analyse Économique, n° 63, Avril 2021.	<ul style="list-style-type: none"> Simplification: <ul style="list-style-type: none"> Medium-term country-specific debt anchor set on the basis of a common debt sustainability analysis. 5-year primary expenditure rule, excluding interest payments, automatic stabilisers (thus ensuring counter-cyclical) and net of discretionary revenue measures. Counter-cyclical ensured by design of expenditure rule in normal times; application of a “modulation factor” to expenditure rules to engineer a supportive euro area fiscal stance during a severe economic downturn; RRF-style instrument to be used during severe crises. Quality of public finances: No golden rule but quality of public finances affects potential growth estimate in the debt sustainability analysis. 	<ul style="list-style-type: none"> Decentralisation: <ul style="list-style-type: none"> National fiscal council to vet government’s proposed debt anchor, on the basis of a common methodology for debt sustainability analysis (developed by the EFB); Council retains ultimate power to confirm or censure Member States’ debt targets; Commission monitors annual expenditure developments. Legal basis of reform: Proposal compatible with the treaties (according to the authors) b revision of Protocol 12 of TFEU and all secondary legislation needed.

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Table (continued)

Reference	Design	Implementation
Wyplosz (2019). “ Fiscal Rules for Europe ”. Bruegel / ifo DICE Report	<ul style="list-style-type: none"> Simplification: Long-term debt anchor with one operational rule (annual budget balance). Instead of numerical targets for debt, use of “<i>an eyeball test</i>” to ensure that current and future budget balances deliver a prudent level of debt. Counter-cyclicality: Introduction of a central fiscal capacity, access to which conditional on compliance with fiscal rules. 	<ul style="list-style-type: none"> Enforcement: Ensure time consistency by introducing and defining fiscal discipline in national constitutions. Decentralisation: Responsibility for fiscal discipline at national level via independent fiscal councils: <ul style="list-style-type: none"> National fiscal councils to compute the long-term evolution of debt, determine whether fiscal discipline is respected, and make the official budgetary projections. Preserve the European “common interest” by subjecting national rules, and their implementation, to a European certification process that respects national sovereignty regarding budgetary decisions.
International institutions		
Arnold et al. (2018). “ A Central Fiscal Stabilization Capacity for the Euro Area ”. IMF Staff Discussion Note 18/03.	<ul style="list-style-type: none"> Counter-cyclicality: A euro area central fiscal capacity would help smooth country-specific shocks and facilitate an appropriate policy mix in response to common shocks. <ul style="list-style-type: none"> Stabilisation fund financed by annual contributions in good economic times and make transfers in bad times; borrowing capacity for severe economic shocks. To ensure that access is non-discretionary, transfers to be triggered by automatically by cyclical indicator. Need to avoid permanent transfers (e.g. payment of a “usage premium” when economy has recovered and country-specific cap on transfers). 	<ul style="list-style-type: none"> Enforcement: Strict compliance with the fiscal rules necessary condition for accessing the stabilisation fund.
Eyraud et al. (2018). “ Second-Generation Fiscal Rules: Balancing Simplicity, Flexibility, and Enforceability ”. IMF Staff Discussion Paper.	<ul style="list-style-type: none"> Simplification: Medium-term debt anchor with at most two rules: <ul style="list-style-type: none"> Expenditure growth rule linked to debt dynamics; Secondary rule to protect public investment. Hierarchy between the rules: debt anchor should not be binding for the annual budget. Well-defined clauses to respond to tail events. Counter-cyclicality: Expenditure rule will allow automatic stabilisers to operate freely. 	<ul style="list-style-type: none"> Enforcement: Emphasis on reputation costs over financial sanctions. Decentralisation: Greater role for independent fiscal councils.
OECD (2018). “ Euro area ”. OECD Economic Surveys.	<ul style="list-style-type: none"> Simplification: Adopt an expenditure rule ensuring a sustainable debt-to-GDP ratio. 	<ul style="list-style-type: none"> Enforcement: Use rewards, not sanctions; issue GDP-linked bonds to strengthen market discipline; establish a “compensation account” to correct past deviations. Decentralisation: National fiscal councils to communicate the importance of counter-cyclical fiscal policy.
European institutions		
European Fiscal Board		
EFB (2018). Annual Report 2018 .	<ul style="list-style-type: none"> Simplification: <ul style="list-style-type: none"> Single anchor: medium-term debt ceiling at 60% of GDP. Single operational target: growth rate of primary expenditure, net of discretionary revenue measures. Escape clause: to be triggered parsimoniously based on independent economic judgement. Fiscal targets set for 3 years with adjustment only in the event of major deviations. Counter-cyclicality: improved by focus on expenditure. 	<ul style="list-style-type: none"> Enforcement: <ul style="list-style-type: none"> Strengthened system of sanctions with n discretion. “Compensation account” in preventive arm tracks deviations and triggers non-compliance when balance exceeds threshold. Clearer separation between analytical assessment and enforcement of rules. Legal basis of reform: Changes to secondary legislation (but not treaties) needed.

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Table (continued)

Reference	Design	Implementation
EFB (2019a). Annual Report 2019 .	<ul style="list-style-type: none"> • <u>Speed of debt adjustment</u>: could be made country-specific based on e.g. demographic factors and savings. • <u>Quality of public finances</u>: Protect public investment through a <i>golden rule</i>; low-debt Member States could commit to higher public investment. • <u>Counter-cyclicality</u>: central fiscal capacity (with appropriate conditionality) desirable for risk reduction and sharing. 	<ul style="list-style-type: none"> • <u>Enforcement</u>: Closer integration of fiscal and macroeconomic surveillance as step towards coordinated approach.
EFB (2019b). “ Assessment of EU fiscal rules with a focus on the six and two-pack legislation ”.	<ul style="list-style-type: none"> • <u>Country-specific debt targets</u> based on agreement between Member States and Commission, covering seven-year cycle, staggered against the EU Multiannual Financial Framework. 	<ul style="list-style-type: none"> • <u>Enforcement</u>: <ul style="list-style-type: none"> ◦ Access to central fiscal capacity conditional on compliance with fiscal rules (thus less emphasis on financial sanctions). ◦ DG ECFIN to play more independent role (defined in secondary legislation) in carrying out economic analysis and providing advice to College of Commissioners. ◦ Abolish application of RQMV to sanctions; permanent Eurogroup head (neither Minister nor Commissioner).
EFB (2020). Annual Report 2020 .	<ul style="list-style-type: none"> • <u>Speed of debt adjustment</u>: COVID-19-related increase in public debt highlights need for explicit country differentiation. • <u>Quality of public finances</u>: Public investment needs can justify deviations from expenditure rule. • <u>Counter-cyclicality</u>: RRF/ SURE can pave way for permanent central fiscal capacity. 	
EFB (2021). Annual Report 2021 .	<ul style="list-style-type: none"> • <u>Quality of public finances</u>: Strengthening of investment expenditure in the EU budget as of 2027 (when the RRF expires), with “national envelopes” for green public investment and other eligible public expenditure, in order to safeguard against counterproductive spending cuts. 	<ul style="list-style-type: none"> • <u>Enforcement</u>: Greater focus on fiscal imbalances in the Macroeconomic Imbalance Procedure to better integrate fiscal policy recommendations in the broader macroeconomic context.
European Parliament		
Cottarelli (2018). “ How could the SGF be simplified? ”. Paper prepared for the European Parliament’s ECON Committee.	<ul style="list-style-type: none"> • <u>Simplification</u>: Single spending rule (net of discretionary tax measures) anchored on debt. • <u>Counter-cyclicality</u>: include output gap in spending rule. • If these changes not possible, then simplify by: <ul style="list-style-type: none"> ◦ Reducing the number of flexibility clauses; ◦ Focusing the debt rule on a backward-looking criterion; ◦ Dropping either the MTO or the expenditure benchmark. 	
Cottarelli (2020). “ The role of fiscal rules in relation with the green economy ”. Paper prepared for the European Parliament’s ECON Committee.	<ul style="list-style-type: none"> • <u>Quality of public finances</u>: Three ways to accommodate green investment in the Pact: <ul style="list-style-type: none"> ◦ Overall <i>relaxation of deficit ceilings</i> with no specific differentiation between types of investment; ◦ <i>Specific flexibility</i> to allow green investment, up to a ceiling (preferred option); and ◦ Tightening of existing deficit ceilings but allowing them to be breached for green investment. • Flexibility could be introduced on a temporary basis to allow green capital stock to be built up. • Financing of green public investment in the EU could be done from a central budget, <i>à la NGEU</i>. 	<ul style="list-style-type: none"> • <u>Enforcement</u>: To avoid “green painting”, vetting of green investment could be made by group of independent technical experts, such as the Expert Group that prepared the EU’s taxonomy of sustainable investment.
Darvas and Anderson (2020). “ New life for an old framework: redesigning the European Union’s expenditure and golden fiscal rules ”. Bruegel paper prepared for European Parliament’s ECON Committee.	<ul style="list-style-type: none"> • <u>Simplification</u>: Multi-year expenditure rule anchored on a debt target. • <u>Quality of public finances</u>: Asymmetric golden rule that provides extra fiscal space for public investment only in a recession (public investment excluded from net investment rule in bad economic times). • <u>Escape clause</u>: Single clause triggered by Council, based on recommendation of Commission, taking into account opinions of the national fiscal council and EFB. 	<ul style="list-style-type: none"> • <u>Enforcement</u>: Council approves medium-term debt-reduction objective agreed by government, national fiscal council, EFB and Commission.

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Reference	Design	Implementation
ECON Committee (Rapporteur: Margarida Marques) (2021). “ Report on the review of the macroeconomic legislative framework ”. Adopted at plenary sitting of European Parliament of 7 July 2021.	<ul style="list-style-type: none"> Simplification: Reform proposal centred on three elements: <ul style="list-style-type: none"> <i>Single debt anchor</i> differentiated according to Member State’s debt level; <i>Single operational indicator</i> (expenditure rule) for countries exceeding a certain public debt threshold; <i>Single escape clause</i>. Quality of public finances: “clearly delineated” growth-enhancing expenditure excluded from the expenditure rule. 	<ul style="list-style-type: none"> Enforcement: <ul style="list-style-type: none"> Inspiration could be drawn from the governance structures of the RRF, in particular to improve national ownership Member States to ensure that national independent fiscal institutes “meet the conditions to fulfil their mandates and tasks”.
European Parliament (2021). “ Resolution on the review of the macroeconomic legislative framework for a better impact on Europe’s real economy and improved transparency of decision-making and democratic accountability ”, 8 July 2021.	<ul style="list-style-type: none"> Notes the three central elements of the EFB proposal: <ul style="list-style-type: none"> A <i>debt anchor</i>, with a “transparently set” country-specific adjustment path towards it; An expenditure rule as a <i>single indicator</i> when a country’s debt exceeds “a certain threshold”; and A single <i>escape clause</i>. Counter-cyclicality strengthened by reliance on expenditure rule and recourse to single escape clause. Quality of public finances: exclusion of “sustainable growth-enhancing expenditure” from expenditure rule; notes EFB’s support for a common fiscal capacity. 	<ul style="list-style-type: none"> Enforcement: <ul style="list-style-type: none"> Country-specific debt-reduction path to be discussed between Member States and the European Commission, EFB and IFI to be consulted “whenever appropriate”. Access to common fiscal capacity to create incentives for better compliance with the fiscal rules. Activation of escape clause recommended by independent body based on well-defined economic analysis. Decentralisation: Responsibilities to be assigned at the level “where decisions are taken or implemented”; role of European Parliament in scrutinising European executives.
Gros and Jahn (2020). “ Benefits and drawbacks of an “expenditure rule”, as well as of a “golden rule”, in the EU fiscal framework ”. Paper prepared for the European Parliament’s ECON Committee.	<ul style="list-style-type: none"> Expenditure rules also have their flaws: Like structural balance rules, affected by uncertainty on (medium-term) potential growth (in particular at the current juncture). Quality of public finances: Golden rules should be restricted to net investment; negative net investment to be deducted from allowed deficit. 	
Heinemann (2018). “ How could the SGP be simplified? ”. Paper prepared for the European Parliament’s ECON Committee.	<ul style="list-style-type: none"> Simplification: <ul style="list-style-type: none"> Merge preventive and corrective arms. Integrate fiscal compact in the Pact. Adopt one stock target (debt level or pace of reduction) and one flow variable (net expenditure growth). Downgrade role of the 3% deficit threshold. Quality of public finances: Sceptical about golden rules. 	<ul style="list-style-type: none"> Enforcement: <ul style="list-style-type: none"> Strengthen role of the EFB for independent analysis (e.g. to grant flexibility); Reinforce market discipline (in combination with financial stability measures).
Kopits (2018). “ How could the SGP be simplified? ”. Paper prepared for the European Parliament’s ECON Committee.	<ul style="list-style-type: none"> Simplification: three reform options: <ul style="list-style-type: none"> <i>Debt-stabilising (or reducing) primary surplus target</i> to replace existing targets, retaining expenditure benchmark and limiting discretionary judgement. <i>Single operational debt rule</i>, placing a limit on the discretionary deficit (derived from a debt reduction target), in nominal terms and set 3 years in advance. <i>Market-based approach</i>: full decentralisation of fiscal rules to Member States; unequivocal application of no-bailout provision. 	<ul style="list-style-type: none"> Enforcement: <ul style="list-style-type: none"> Initial distinction of responsibilities between the Commission and Council to be restored. Financial sanctions to be abolished. Member States could be obliged to issue junior bonds to cover shortfall in primary surplus target (first two options).
Pekanov and Schratzenstaller (2020). “ The role of fiscal rules in relation with the green economy ”. Paper prepared for the European Parliament’s ECON Committee.	<ul style="list-style-type: none"> Quality of public finances: three proposals for accommodating green public: <ul style="list-style-type: none"> Expanded investment clause; Green golden investment rule; Country-specific benchmarks for green public investment (as % of total government expenditure). A “<i>green taxonomy</i>” specifying areas of green public investment to provide basis for common approach. 	<ul style="list-style-type: none"> Enforcement: coordination of green public investment via: <ul style="list-style-type: none"> European Semester / CSRs (<i>top-down</i> approach); or Recovery and Resilience Plans (<i>bottom-up</i> approach).

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Reference	Design	Implementation
Reuter (2018). “ Benefits and drawbacks of an “expenditure rule”, as well as of a “golden rule”, in the EU fiscal framework ”. Paper prepared for the European Parliament’s ECON Committee.	<ul style="list-style-type: none"> Two avenues for reforming EU fiscal framework: <ul style="list-style-type: none"> <u>Expenditure rule</u> to reduce complexity and improve transparency; <u>Golden rule</u> to allow debt issuance to safeguard specific public expenditures; narrowly-defined categories involving cost-benefit analyses to prevent creative accounting; cap on deductible expenditures. 	<ul style="list-style-type: none"> Enforcement: <ul style="list-style-type: none"> Independent fiscal councils at the nation and European level to explain fiscal policy and rules. Instead of sanctions, increase national ownership of compliance and political costs of non-compliance.
Van den Noord (2020). “ The role of fiscal rules in relation with the green economy ”. Paper prepared for the European Parliament’s ECON Committee.	<ul style="list-style-type: none"> Quality of public finances: facilitating green investment: <ul style="list-style-type: none"> Permanent flexibility for green investment via a relaxation of the MTO (calculation to include <i>inter alia</i> green investment needs and green “growth dividend”). Level of green investment as a mitigating relevant factor in Article 126(3) assessments. 	<ul style="list-style-type: none"> Challenges to enforcement of proposal: <ul style="list-style-type: none"> Lack of coordination between governance systems under the SGP and EU climate policy, e.g. timelines for assessments. Lack of statistical definition of green public investment.
European Central Bank		
Kamps and Leiner-Killinger (2019). “ Taking Stock of the Functioning of the EU Fiscal Rules and Options for Reform ”. ECB Occasional Paper Series.	<ul style="list-style-type: none"> Simplification: reform of debt rule to: <ul style="list-style-type: none"> Introduce “<i>memory feature</i>” for past shortfalls; Define adjustment in nominal terms and lengthen time horizon (thus improving counter-cyclicality); Place greater focus on expenditure developments; Increase differentiation of MTOs in function of debt levels. 	<ul style="list-style-type: none"> Enforcement: <ul style="list-style-type: none"> Move from sanctions to rewards: e.g. compliance with fiscal rules as condition for accessing EU funds. Include more country-specific information in calculation of output gap (or give this task to independent national fiscal councils), thus improving ownership. Escape clause: analysis of conditions for activation delegated to independent fiscal body; greater emphasis on aggregate fiscal stance during these periods.
Hauptmeier and Kamps (2020). “ Debt rule design in theory and practice: the SGP’s debt benchmark revisited ”. ECB Working Paper Series, No 2379 / March 2020.	<ul style="list-style-type: none"> Counter-cyclicality via two reforms to the “debt rule”: <ul style="list-style-type: none"> Explicit accounting for persistent deviations of inflation from the ECB’s objective; and Reduction in the speed of adjustment. These two reforms would also strengthen the contribution of euro area fiscal policy to price stability. Quality of public finances: The proposed reforms would increase fiscal space, which could be used to finance public investment. Further space could be created by a symmetric treatment of the 60% of GDP debt threshold, i.e. obliging low-debt countries to converge to this threshold. 	<ul style="list-style-type: none"> Legal basis of reforms: Changes to second legislation (but not primary legislation) would be necessary.
Other institutions		
European Committee of the Regions (2021). “ Opinion of the European Committee of the Regions on the economic governance review ”. OJ C 37, 2.2.2021, p.28.	<ul style="list-style-type: none"> Simplification: Consider an expenditure rule based on trend economic growth and the level of debt. Quality of public finances: golden rule for net public investment, in particular for social and green investment. 	<ul style="list-style-type: none"> Enforcement: Include non-fiscal variables (e.g. investment needs) in assessments of compliance.
European Economic and Social Committee (2021). “ Opinion of the European Economic and Social Committee on the economic governance review ”. OJ C 429, 11.12.2020, p.227.	<ul style="list-style-type: none"> Simplification: Less reliance on unobservable variables – focus on net expenditure rule instead of structural balances, reference inflation rate to be linked to the ECB target. Quality of public finances: Apply a golden rule to investment (i.e. exclude net investment); adopt a “common strategic investment plan”. Counter-cyclicality: Implement a central fiscal capacity with stabilisation features. 	<ul style="list-style-type: none"> Enforcement: <ul style="list-style-type: none"> Less automaticity in the enforcement of fiscal rules – deviations to trigger a technical analysis taking on board all relevant economic policy objectives. Enhanced role of European Parliament / European Economic and Social Committee in decision-making.

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Table (continued)

<p>European Stability Mechanism (2021). “EU fiscal rules: reform considerations”. Discussion Paper 17.</p>	<ul style="list-style-type: none"> • Simplification: <ul style="list-style-type: none"> ◦ Two-pillar approach with a 3% of GDP deficit threshold and 100% of GDP debt threshold (increased from 60% of GDP). ◦ Convergence to 100% of GDP debt threshold at a pace of one twentieth a year, as per the current rules. ◦ Debt reduction anchored on a combination of primary balance and expenditure rules (based on real growth trends), over a “rolling” 3-year horizon. • Escape clause: Serious economic circumstances or an investment gap to justify deviations from the one twentieth annual pace of debt reduction. 	<ul style="list-style-type: none"> • Enforcement <ul style="list-style-type: none"> ◦ Breaching the 3% of GDP deficit threshold or primary balance target to trigger an excessive deficit procedure. ◦ In exceptional circumstance, recourse t “fiscal stabilisation instrument” to incentivise fiscal discipline. ◦ Fiscal bodies and statistical offices (EU and national) to ensure transparent reporting, quantification and classification of public finances. • Legal basis of reform: Change of debt threshold (in Protocol 12 to TFEU) would require unanimity in the European Council but not national ratification.
<p>Network of EU IFIs (2021a). “The public debt outlook in the EMU post COVID: A key challenge for the EU fiscal framework”. Contribution to the EFB Annual Conference, February 2021.</p>	<ul style="list-style-type: none"> • Simplification of SGP to follow the <i>debt anchor cum net expenditure target</i> approach (as per EFB). • Quality of public finances: Extension of investment clause to focus on net investment with a cap and clearly-delineated notion of investment. 	<ul style="list-style-type: none"> • Decentralisation of country-specific medium term paths of debt reduction to Member States.
<p>Network of EU IFIs (2021b). “EU Fiscal and Economic Governance Review”.</p>	<ul style="list-style-type: none"> • Simplification: <ul style="list-style-type: none"> ◦ Move to a multi-year approach based on (fewer) numerical fiscal rules, e.g. a debt-anchor approach or greater emphasis on expenditure developments in existing system. ◦ Single escape clause to strengthen political accountability. ◦ Public investment may warrant special treatment. 	<ul style="list-style-type: none"> • Enforcement: Data improvements would enhance enforcement of the fiscal rules, e.g improved output gap calculations; better treatment of one-off measures; production gross and net financing needs forecasts. • Decentralisation: Role of national IFIs to be enhanced: <ul style="list-style-type: none"> ◦ IFIs to produce assessments of national fiscal developments and sustainability; EU institution to take these into account when making enforcement decisions. ◦ Establishment of a “minimum national framework standard” for IFIs to ensure effective governance; would require a broadening of mandates in some cases. ◦ Legal basis of reform: need to reform Fiscal Compact to bring national rules line with future EU framework.
<p>Network of EU IFIs (2022). “Strengthening the role of EU national IFIs: Minimum standards and mandates”.</p>		<ul style="list-style-type: none"> • Enforcement: In order to facilitate a broader mandate for IFIs (see Network of EU IFIs, 2021b), minimum governance standards at EU level would be needed. IFIs should have <ul style="list-style-type: none"> ◦ Sufficient resources to carry out their mandates; ◦ Adequate safeguards to their independence; ◦ Good and timely access to information and ◦ The possibility to make public their assessments.

Source: European Commission.

4. PUBLIC FINANCE MANAGEMENT STRATEGIES – AN OVERVIEW

4.1. INTRODUCTION

The green and digital transitions are going to require substantial public and private investments. The additional annual investment needs in relation to the twin transitions are estimated at around EUR 650 billion annually up to 2030, reflecting the required deep transformational change of the EU economy⁽⁵⁶⁾. In Europe, the European Commission's strategies on a European Green Deal and A Europe Fit for the Digital Age provide action plans on how to achieve carbon neutrality by 2050 as well as for investments in digital infrastructure, digital skills and advanced technologies. NextGenerationEU provides an important element of these massive investments required for the twin transitions.

Better management practices can increase the efficiency of public investment, thereby improving its economic impact. In advanced economies, about a fifth of public investment spending is estimated as lost to inefficiencies, half of which can be saved through better public investment practices throughout the investment cycle⁽⁵⁷⁾.

The features of an efficient public investment management system are well-understood. The World Bank, the IMF and the OECD have put forward different assessment frameworks aimed at assessing the quality of public investment management (Rajaram et al. 2014, IMF 2018, OECD 2017). These frameworks underline the relevance of all stages of public investment (i.e. planning, allocation and implementation). They also suggest that the same rules and procedures should apply throughout the life cycle of investment irrespective of how it is delivered, be it via traditional public procurement, public private partnerships or state-owned enterprises, among others.

Member States have stepped up efforts to improve their public investment management. In the context of the Recovery and Resilience Facility, many Member States are reforming their public investment management systems. For example, Spain committed to undertaking a comprehensive reform of public investment management, while Croatia, Czechia and Slovakia targeted specific areas such as planning, appraisal or project selection. Some Member States sought to reform their system earlier through the IMF – Public Investment Management Assessment (PIMA) framework (IMF, 2018). Ireland and Estonia –as front-runners– already implemented many of the reforms identified through the exercise, while Slovakia, Poland and Greece carried out the assessment more recently. In rare cases, depending on mandate and resources, independent fiscal institutions may also be involved in the review of the public investment management system (e.g. Spain).

Against this background, this chapter aims to highlight some of the key concepts of public investment management and illustrate them with selected experiences across the EU. The key aspects of efficient management are based on good practice observed worldwide. Given the complexity of the topic, this chapter cannot encompass all relevant aspects. Rather, it focuses on a few key aspects for the EU systems of public investment management. It also discusses elements not usually covered elsewhere.

Overall, notwithstanding a relatively high quality of public investment management in the EU, room for improvement exists. An OECD survey from 2016 suggests that, for some of the 10 dimensions examined, good practices are common among all countries, such as the use of value for money mechanisms and consultation procedures⁽⁵⁸⁾. However, many other practices are less present and demand attention. Deficits can be identified, for example, with respect to long-term planning, prioritisation and coordination practices, as well as transparency and monitoring (OECD, 2017).

⁽⁵⁶⁾ EUR 392 billion for climate and energy investments (SWD(2021)621 final), EUR 130 billion for environmental investments. Overall, green investment needs thus sum up to EUR 520 billion. EUR 125 billion for digital investments (SWD(2020)98 final, table 1 and table 2).

⁽⁵⁷⁾ Baum et al. (2020).

⁽⁵⁸⁾ Data available from https://qdd.oecd.org/subject.aspx?Subject=GOV_INFRG. Only 16 EU Member States are covered

The chapter is organised as follows: Section II.4.2. provides the definition and scope of public investment; Section II.4.3. introduces the key features of public investment management; Section II.4.4. presents some evidence on the EU; Section II.4.5. concludes.

4.2. DEFINITION AND SCOPE OF PUBLIC INVESTMENT

Public investment is generally understood as broadly referring to fixed assets⁽⁵⁹⁾, which can be tangible or intangible. Specifically, in national accounts, public investment is measured as general government gross fixed capital formation and reflects the total value of general government acquisitions, less disposals, of fixed assets (tangible and intangible⁽⁶⁰⁾) during the accounting period, plus additions to the value of non-produced assets (e.g. land improvements). Box II.4.1 presents categories of capital expenditure according to ESA 2010. Importantly, ordinary maintenance and repairs to an asset are recurrent costs that are essential for the asset to deliver as intended and should therefore be classified as current expenditure to avoid them competing with other capital expenditure. This also underscores the importance of producing estimates of recurrent costs (maintenance and repair) associated to a project, alongside the capital costs.

Box II.4.1: Major categories of fixed assets in ESA 2010

- Dwellings, other buildings and structures;
- Machinery and equipment (such as ships, cars and computers);
- Intangible fixed assets, including intellectual property products, such as R&D, and computer software and databases;
- Weapons systems.

Source: European Commission (2013).

All capital expenditure with possible implications for the public sector should be included in the scope of public investment management. This includes expenditure by budgetary authorities at all

⁽⁵⁹⁾ According to ESA 2010, fixed assets are produced assets used in production for more than one year.

⁽⁶⁰⁾ Intangible fixed assets include results of R&D, computer software, and large databases to be used in production for more than one year. Public R&D (including the production of freely available R&D) include academic fundamental research, applied research and R&D grants and contracts to private sectors.

levels of government, but also state-owned enterprises' investment funded by capital transfers or subject to government guarantees, as well as capital expenditure by extra-budgetary funds. Moreover, public-private partnerships should fall within the scope of public investment management too because they use public financial resources (even if only over the longer term or on a contingent basis).

4.3. KEY FEATURES OF PUBLIC INVESTMENT MANAGEMENT

Despite some differences, the existing assessment frameworks highlight a number of common key practices throughout the investment life cycle. Key features of efficient public investment management include⁽⁶¹⁾:

- *Broad strategic planning*, including at the sectoral level, that is financially constrained and linked to the annual budgetary decision, as well as effectively coordinated across government layers and including consultation with stakeholders.
- *Stable medium-term budgetary frameworks*, as an effective way for linking planning to the annual budget decisions while protecting capital availability throughout the investment life cycle, by means of e.g. capital expenditure ceilings and carry-over arrangements.
- *Sound project appraisal and selection* based on standardised rules, including independent reviews of project appraisals to reduce the inherent “optimism bias” embedded in all major investment projects and central gatekeeping to ensure all selected projects follow the same methodology.
- *Sound implementation* through clear assignation of accountabilities and responsibilities roles, preparation of implementation plans prior to budget approval, effective procurement systems as well as clear rules and procedures for project adjustment

⁽⁶¹⁾ Adapted to the EU based on Kim et al. (2020), IMF (2018), OECD (2017), and Rajaram (2014), as discussed in Belu Manescu, forthcoming.

(including termination) to reflect changes in cost, scheduling or demand conditions.

- *Effective post-implementation* through ex-post reviews of project development and implementation (appraisal, outturn and management) that would feed back into the design of policy and development of similar projects, and through comprehensive and regularly updated asset registers as official recording of how the assets deliver over their lifetime.

4.4. EVIDENCE OF PRACTICES IN THE EU

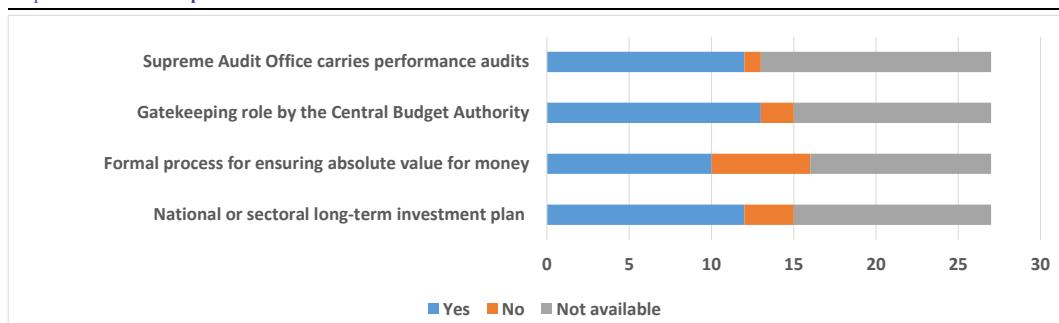
While no systematic data on public investment management is available for all Member States, some information is available for many countries. The 2016 OECD survey on infrastructure governance provides data on 16 Member States (OECD, 2017). For some of these Member States and Slovakia, complementary evidence can be found in the transport case studies (for Ireland, Slovakia, Poland, Latvia, Slovenia, and Spain) of Rajaram et al. (2014) and three IMF assessments (for Estonia, Ireland and Slovakia). In addition, Kim et al. (2020) describes good practices in selected EU Member States. This section reviews selected evidence from the EU as currently available from various sources, along the key features of public investment management identified above.

Planning

Many EU countries have in place a long-term strategic investment plan at either the national or sectoral level. According to OECD (2017), when national strategic plans are in place, they cover either the central government (e.g. Austria, Hungary, Spain) or include also sub-national government projects above a relevant size (Ireland, Italy, the Netherlands). In the absence of comprehensive national plans, plans for transport sector (Belgium, Czechia, Germany, Sweden) or multi-sectoral plans are in place (e.g. Estonia and France). Public consultation is usually embedded within the long-term strategic plans, usually in the form of a stakeholders hearing (see Graph II.4.1 and OECD, 2017). There are some examples for sound planning:

- **Ireland offers a good example of a successful national planning process to guide the identification and prioritisation of projects.** One of its most distinctive features is an integrated approach to planning, where the national development plans include more detailed investment strategies at the sectoral level, framed within an indicative capital spending envelope agreed with the Department of Finance. Sector strategies are fully costed and are closely integrated and consistent with medium-term budgets (Rajaram et al., 2014).
- **Czechia has created a National Investment Plan that came into effect in 2019.** A distinctive feature of the plan is that it combines a bottom-up approach of collecting projects at the sub-national level, which are

Graph II.4.1: Selected practices across the EU



Note: All capital expenditure with possible implications for the public sector should be included in the scope of public investment management. This includes expenditure by budgetary authorities at all levels of government, but also state-owned enterprises' investment funded by capital transfers or subject to government guarantees, as well as capital expenditure by extra-budgetary funds. Moreover, public-private partnerships should fall within the scope of public investment management too because they use public financial resources (even if only over the longer term or on a contingent basis).
Source: Own calculations based on OECD (2017) survey data for 16 Member States (Austria, Belgium, Czechia, Denmark, Estonia, Spain, Finland, France, Germany, Hungary, Ireland, Italy, Luxembourg, the Netherlands, Slovenia, Sweden).

then prioritised by the government within a fiscal constraint. The National Investment Plan will be further developed and consultation will take place between local and regional authorities and stakeholders (OECD, 2019).

Coordination mechanisms for integrated planning or exchange of information are reported to exist in many EU countries. Ireland, Poland, the Netherlands, Austria, Sweden, Portugal, Luxembourg, for example, have some form of intergovernmental cooperation aimed at promoting exchanges of information at the regional level, which offers a basis for policy coordination at the regional level (OECD, 2019).

Medium-term budgeting

Capital-specific expenditure ceilings are not common among EU Member States. Sweden, Finland, the Netherlands and Denmark put emphasis on aggregate ceilings at the central level and possibly other levels of government (Sherwood 2015). By contrast, in Cyprus, Greece, France and Ireland, medium-term expenditure ceilings are set also at ministerial level. With a few exceptions (e.g. Sweden, Finland, Denmark, the Netherlands), medium-term budgetary frameworks are not binding for the annual budgetary process, and a new trajectory for the main fiscal variables can be generated every year with little or no constraint (Sherwood, 2015).

Some Member States allow for carry-over arrangements for capital spending. Ireland allows carry-over of up to 10 percent of the allocated capital (Kim et al., 2020). Similarly, Estonia sets a limit of 3% of the total expenditure with the exception of investment projects (and co-financing of projects) partly funded by the EU, for which all unused amounts can be transferred to the following year (Sherwood, 2015). By contrast, Austria applies no limit to the amount of unspent capital spending appropriations (Sherwood, 2015). According to the Austrian MTBF, the ceilings set for the chapters of the central government expenditure can be notionally increased by the size of the reserves accumulated previously under the respective chapter.

Budgetary funds offer an alternative to medium-term planning. The Netherlands uses budgetary funds to manage long-term investments

in strategic sectors. For example, the Multi-Year Plan for Infrastructure, Spatial Planning, and Transport (MIRT) is an integrated programme for the preparation and decision-making process of infrastructure projects. The MIRT contains both investment plans that are designed for up to 14 years ahead, as well as a common set of rules and procedures for project development and implementation.

Good integration of capital and recurrent expenditure planning and budgeting can protect the asset's planned operating life. In Spain, the annual budget documentation includes some information about recurrent costs called “investment for rail and road” and “public service obligations for RENFE” (the Operating company), but this information is limited to the next budget year. Beyond the budget year, the annual budget includes an annex with indicative projections of costs for all investment projects.

Appraisal and selection

Not all EU countries have a legal requirement for project appraisal, while independent reviews exist in a handful of EU countries. In France, Germany, Italy and the Netherlands, appraisals are required for all projects, while in Hungary and Ireland these are required only for projects above a certain threshold (OECD, 2017). Cost-benefit analysis appears to be the most popular method used to assess value-for-money. Different types of independent reviews and with different binding force are found in France, Ireland and the Netherlands (⁶²).

Although selection should be largely a technical decision, achieving the right balance between technical and political inputs is nevertheless important. Almost all Member States participating in the OECD 2016 survey, reported

(⁶²) In France, the General Commission for Investment organises a second opinion on appraisals of major projects (above EUR 20 million) that critically examines the methodological approach, the calculation of parameters used in the appraisal, and appraisal findings. It then prepares an opinion for the prime minister, which also goes to the minister proposing the project and to parliament. In Ireland, the review by the Central Expenditure Evaluation Unit is purely advisory for the minister proposing the project. In the Netherlands, independent review findings need to be taken into account in making the final decision, but there is no requirement for these findings to determine the final decision.

that the Central Budgetary Authority has a formal gate-keeping role in approving infrastructure projects. In most of these cases, if a project does not meet the affordability or the value for money criterion it cannot proceed. At the same time, strong political backing, more often than the cost-benefit analysis, is reported to determine which projects are approved for funding.

Project implementation

Ireland appears to have good implementation practices in place. There is a strong focus on managing the total project costs over the lifetime of each project, clear roles and responsibilities are in place for project implementation, while accounting systems record total and annual project costs (Rajaram et al., 2014). Moreover, there are regular reports on financial and non-financial progress and close monitoring by (a) a line ministry responsible for subordinate implementing agencies and/or (b) the central fiscal authority. Sound procurement systems are consistently implemented using advanced techniques for allocating risks between government and contractors (although problems still arise). Regarding project adjustment, specific mechanisms are in place to trigger a review of a project's continued justification if there are material changes to project costs, schedule, or expected benefits.

Post-Implementation

The use of asset registers is limited throughout the EU, while performance audits of major capital projects are carried out regularly. According to OECD (2017), Finland and Spain have in place a central, systematic and formal collection of information on financial and non-financial performance of infrastructure projects, which allows the use of evidence-based tools for regulatory decisions (e.g. the decision on the modality of infrastructure delivery). More generally, however, asset registers of non-financial assets remain still very limited throughout the EU (European Commission, 2018). By contrast, performance audits of infrastructure assets are generally conducted by the Supreme Audit Institution, mostly on a case-by-case basis (OECD, 2017).

Ireland carries out ex-post reviews of major projects. All large capital projects (above EUR 20 million) and at least 5% of other capital projects have to be subjected to a post-project review to see if the predicted benefits of the project were realised (Kim et al., 2020). The review focuses on both project outcome and appraisal and management procedures and takes place at pre-determined intervals. As with all parts of the Public Spending Code, any significant lesson leads to changes in the Sponsoring Agency practices and even in the Code itself.

Overall, notwithstanding a relatively high quality of public investment management in the EU, room for improvement exists. The OECD 2016 survey suggests that good practices are common among all countries for some of the 10 dimensions examined, such as the use of value for money mechanisms and consultation procedure. However, many other practices are less present and demand attention. Deficits can be identified, for example, with respect to long-term planning, prioritisation and coordination practices, as well as transparency and monitoring (OECD, 2017).

4.5. CONCLUSIONS

Against the anticipated ramp-up in public investment due to the twin green and digital transitions, many Member States are improving the quality of their management practices. In the EU, around EUR 650 billion are estimated to be required annually up to 2030. Therefore, improving the quality and not only the quantity of public investment is a key issue of concern. Improving the efficiency of public investment is high on many Member States' agenda, for instance through commitments in the Recovery and Resilience Plans.

Public investment management encompasses a large range of items and activities. While often associated to physical assets only (in which case it would typically be called "infrastructure"), public investment also includes intangible assets such as R&D, software and large databases. Estimates of both capital and, importantly, also recurrent costs over the entire lifecycle of an asset need to be made available at the start of the project. Finally, public investment management rules and procedures should cover all capital expenditure

and outstanding liabilities with impact on the public sector, including capital transfers to and contingent liabilities of state-owned enterprises as well as public-private partnerships.

Given patchy evidence in the EU, overall conclusions on the quality of public investment management are rather tentative. Good practices appear to exist with respect to project appraisal (the use of value for money mechanisms) and consultation procedures, while deficits have been encountered with respect to long-term planning, prioritisation and coordination practices, as well as transparency and monitoring. At the same time, information is currently unavailable for most EU Member States on several dimensions. These include (a) the link between strategic investment guidance and the annual budget, (b) the medium-term budgetary framework features (such as capital ceilings) that would protect capital availability over the entire investment project lifetime or (c) the extent to which legal provisions for project adjustment rules or ex-post reviews are in place.

More analysis on key policy questions would be warranted. Existing sources only cover selected EU Member States and dimensions of public investment management. Moreover, where available, the information is sometimes incomplete or insufficient at the level required for genuine change or reform. More data on key concepts of public investment management, especially in terms of good practices, with better country coverage carries great potential to uncover current practices and learn from each other.

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ANNEX

Table II.A.1 : Overview EDP steps - Euro area Member States

Steps in EDP procedure															Member State										
Treaty Art.	IE	FR	ES	LV	MT	LT	BE	DE	IT	NL	AT	PT	SI	SK	CY	HU	MT								
Starting phase																									
Commission adopts EDP-report = start of the procedure	126(3)	18.02.2009	18.02.2009	18.02.2009	13.05.2009	13.05.2009	07.10.2009	07.10.2009	07.10.2009	07.10.2009	07.10.2009	07.10.2009	07.10.2009	07.10.2009	07.10.2009	12.05.2010	12.05.2010	21.05.2013							
Economic and Financial Committee adopts opinion	126(4)	27.02.2009	27.02.2009	27.02.2009	29.05.2009	29.05.2009	27.10.2009	27.10.2009	27.10.2009	27.10.2009	27.10.2009	27.10.2009	27.10.2009	27.10.2009	27.10.2009	27.05.2010	27.05.2010	21.06.2013							
Commission adopts:																									
opinion on existence of excessive deficit	126(5)																								
recommendation for Council decision on existence of excessive deficit	126(6)	24.03.2009	24.03.2009	24.03.2009	02.07.2009	24.06.2009	24.06.2009	11.11.2009	11.11.2009	11.11.2009	11.11.2009	11.11.2009	11.11.2009	11.11.2009	11.11.2009	15.06.2010	15.06.2010	29.05.2013							
recommendation for Council recommendation to end its situation	126(7)																								
Council adopts:																									
decision on existence of excessive deficit	126(8)	27.04.2009	27.04.2009	27.04.2009	07.07.2009	07.07.2009	07.07.2009	02.12.2009	02.12.2009	02.12.2009	02.12.2009	02.12.2009	02.12.2009	02.12.2009	02.12.2009	13.07.2010	13.07.2010	21.06.2013							
recommendation to end this situation	126(9)																								
Follow-up																									
Commission adopts communication on action taken																									
Commission adopts recommendation for NEW Council recommendation to end situation of excessive deficit	126(7)	11.11.2009	11.11.2009	11.11.2009	27.01.2010	27.01.2010	27.01.2010	27.01.2010	27.01.2010	27.01.2010	27.01.2010	27.01.2010	27.01.2010	27.01.2010	27.01.2010	27.01.2011	27.01.2011	15.11.2013							
Council adopts recommendation for NEW Council recommendation to end situation of excessive deficit	126(7)	02.12.2009	02.12.2009	02.12.2009	16.02.2010	16.02.2010	16.02.2010	16.02.2010	16.02.2010	16.02.2010	16.02.2010	16.02.2010	16.02.2010	16.02.2010	16.02.2010	05.10.2012	05.10.2012								
rew. deadline for correction of excessive deficit																									
Commission adopts communication on action taken																									
Commission adopts recommendation for Council decision establishing inadequate action	126(8)	15.06.2010	15.06.2010	15.06.2010	06.01.2011	21.09.2010	11.01.2012	20.05.2013	20.05.2013	20.05.2013	20.05.2013	20.05.2013	20.05.2013	20.05.2013	20.05.2013	11.01.2012	11.01.2012								
Council adopts decision establishing inadequate action	126(8)																								
Commission adopts recommendation for Council decision to give notice	126(9)																								
Council adopts decision to give notice	126(9)																								
Commission adopts recommendation for NEW Council recommendation to end situation of excessive deficit	126(7)	03.12.2010	29.05.2013	06.07.2012	07.12.2010	21.06.2013	10.07.2012	07.12.2010	21.06.2013	10.07.2012	20.05.2013	20.05.2013	20.05.2013	20.05.2013	20.05.2013	07.05.2013	07.05.2013								
Council adopts recommendation for NEW Council recommendation to end situation of excessive deficit	126(7)																								
rew. deadline for correction of excessive deficit																									
Commission adopts communication on action taken																									
Commission adopts recommendation for NEW Council recommendation to end situation of excessive deficit	126(7)	24.08.2011	15.11.2013	14.11.2012	27.02.2015	29.05.2013	10.03.2013	10.03.2013	21.06.2013	10.07.2012	15.11.2013	15.11.2013	15.11.2013	15.11.2013	15.11.2013	06.09.2013	06.09.2013								
Council adopts recommendation for NEW Council recommendation to end situation of excessive deficit	126(7)																								
rew. deadline for correction of excessive deficit																									
Commission adopts recommendation for Council decision establishing inadequate action	126(8)																								
Council adopts decision establishing inadequate action	126(8)																								
Commission adopts recommendation for Council implementing decision imposing a fine for failure to take effective action	126(8)																								
Commission adopts recommendation for Council decision to give notice	126(9)	01.07.2015	15.11.2013	07.07.2016													07.07.2016								
Council adopts decision to give notice	126(9)																								
rew. deadline for correction of excessive deficit																									
Commission adopts recommendation for Council implementing decision imposing a fine for failure to take effective action	126(8)																								
Commission adopts communication on action taken																									
Commission adopts proposal for Council opinion on Economic Partnership Programme																									
Abrogation																									
Commission adopts recommendation for Council decision abrogating existence of excessive deficit	126(12)	17.06.2016	22.06.2018	14.06.2019	29.05.2013	14.11.2012	29.05.2013	30.05.2012	29.05.2013	02.06.2014	02.06.2014	22.05.2017	18.05.2016	02.06.2014	18.05.2016	18.05.2015	29.05.2015	12.07.2016	12.07.2016	12.07.2016	12.07.2016	12.07.2016	12.07.2016	12.07.2016	
Council adopts decision abrogating existence of excessive deficit	126(12)																								

Note.* In line with Regulation (EU) No 472/2013 on the strengthening of economic and budgetary surveillance of Member States in the euro area experiencing or threatened with serious difficulties with respect to their financial stability (Two-pack) the assessment of effective action is carried out in the context of the programme surveillance.

Source: Commission services.

Table II.A.2: Overview EDP steps - Non-euro area Member States

Steps in EDP procedure	Treaty Art.	Member State							UK
		HU	PL	RO	CZ	BG	DK	HR	
Starting phase									
Commission adopts EDP-report = start of the procedure	126(3)	12.05.2004	13.05.2009	13.05.2009	07.10.2009	12.05.2010	12.05.2010	15.11.2013	11.06.2008
Economic and Financial Committee adopts opinion	126(4)	24.05.2004	29.05.2009	29.05.2009	27.10.2009	27.05.2010	27.05.2010	29.11.2013	25.06.2008
Commission adopts:									
opinion on existence of excessive deficit	126(5)								
recommendation for Council decision on existence of excessive deficit	126(6)	24.06.2004	24.06.2009	24.06.2009	11.11.2009	06.07.2010	15.06.2010	10.12.2013	02.07.2008
recommendation for Council recommendation to end this situation	126(7)								
Council adopts:									
decision on existence of excessive deficit	126(6)	05.07.2004	07.07.2009	07.07.2009	02.12.2009	13.07.2010	13.07.2010	21.01.2014	08.07.2008
recommendation to end this situation	126(7)								
<i>deadline for correction of excessive deficit</i>									
		2008	2012	2011	2013	2011	2013	2016	<i>fin. year 2009/10</i>
Follow-up									
Commission adopts communication on action taken			03.02.2010						
Commission adopts recommendations for Council decision establishing inadequate action	126(8)	22.12.2004			15.06.2010	27.01.2011	27.01.2011	02.06.2014	24.03.2009
Council adopts decision establishing inadequate action	126(8)	18.01.2005							27.04.2009
Commission adopts recommendation for NEW Council recommendation to end excessive deficit situation	126(7)	16.02.2005		08.02.2010					24.03.2009
Council adopts NEW recommendation to end excessive deficit situation	126(7)	08.03.2005		16.02.2010					27.04.2009
<i>new deadline for correction of excessive deficit</i>		2008	2012						<i>fin. year 2013/14</i>
Commission adopts communication on action taken		13.07.2005	11.01.2012	21.09.2010					
Commission adopts recommendations for Council decision establishing inadequate action	126(8)	20.10.2005							
Council adopts decision establishing inadequate action	126(8)	08.11.2005							11.11.2009
Commission adopts recommendation for NEW Council recommendation to end excessive deficit situation	126(7)	26.09.2006							02.12.2009
Council adopts NEW recommendation to end excessive deficit situation	126(7)	10.10.2006							<i>fin. year 2014/15</i>
<i>new deadline for correction of excessive deficit</i>		2009							
Commission adopts communication on action taken		13.06.2007							06.07.2010
Commission adopts recommendations for Council decision establishing inadequate action	126(8)								12.05.2015
Council adopts decision establishing inadequate action	126(8)								19.06.2015
Commission adopts recommendation for NEW Council recommendation to end excessive deficit situation	126(7)	24.06.2009	29.05.2013						12.05.2015
Council adopts NEW recommendation to end excessive deficit situation	126(7)	07.07.2009	21.06.2013						19.06.2015
<i>new deadline for correction of excessive deficit</i>		2011	2014						<i>fin. year 2016/17</i>
Commission adopts communication on action taken		27.01.2010							16.11.2015
Commission adopts recommendations for Council decision establishing inadequate action	126(8)	11.01.2012	15.11.2013						
Council adopts decision establishing inadequate action	126(8)	24.01.2012	10.12.2013						
Commission adopts recommendation for NEW Council recommendation to end excessive deficit situation	126(7)	06.03.2012	15.11.2013						
Council adopts NEW recommendation to end excessive deficit situation	126(7)	13.03.2012	10.12.2013						
<i>new deadline for correction of excessive deficit</i>		2012	2015						
Commission adopts communication on action taken		30.05.2012	02.06.2014						
Abrogation									
Commission adopts recommendation for Council decision abrogating existence of excessive deficit	126(12)	29.05.2013	12.05.2015	29.05.2013	02.06.2014	30.05.2012	02.06.2014	22.05.2017	22.11.2017
Council adopts decision abrogating existence of excessive deficit	126(12)	21.06.2013	19.06.2015	21.06.2013	20.06.2014	22.06.2012	20.06.2014	16.06.2017	04.12.2017
Starting phase									
Commission adopts EDP-report = start of the procedure	126(3)				14.02.2020				
Economic and Financial Committee adopts opinion	126(4)				24.02.2020				
Commission adopts:									
opinion on existence of excessive deficit	126(5)								
recommendation for Council decision on existence of excessive deficit	126(6)				04.03.2020				
recommendation for Council recommendation to end this situation	126(7)								
Council adopts:									
decision on existence of excessive deficit	126(6)				03.04.2020				
recommendation to end this situation	126(7)				2022				
<i>deadline for correction of excessive deficit</i>									
Follow-up									
Commission adopts communication on fiscal situation in Romania				18.11.2020					
Commission adopts recommendation for Council recommendation to end this situation	126(7)			02.06.2021					
Council adopts recommendation to end the excessive deficit situation	126(7)			18.06.2021					

Source: Commission services.

Table II.A.3: Overview EDP steps - Greece

Steps in EDP procedure	Treaty Art.	Greece
Starting phase		
Commission adopts EDP-report = start of the procedure	126(3)	18.02.2009
Economic and Financial Committee adopts opinion	126(4)	27.02.2009
Commission adopts:		
opinion on existence of excessive deficit	126(5)	
recommendation for Council decision on existence of excessive deficit	126(6)	24.03.2009
recommendation for Council recommendation to end this situation	126(7)	
Council adopts:		
decision on existence of excessive deficit	126(6)	27.04.2009
recommendation to end this situation	126(7)	
<i>deadline for correction of excessive deficit</i>		2010
Follow-up		
Commission adopts recommendations for Council decision establishing inadequate action	126(8)	11.11.2009
Council adopts decision establishing inadequate action	126(8)	02.12.2009
<i>Commission adopts Council recommendation for decision to give notice</i>	126(9)	03.02.2010
Council decision to give notice	126(9)	16.02.2010
<i>new deadline for correction of the excessive deficit</i>		2012
Commission adopts communication on action taken		09.03.2010
Council adopts conclusions thereon		16.03.2010
Commission adopts recommendation for NEW Council decision to give notice	126(9)	04.05.2010
Council decision to give notice	126(9)	10.05.2010
<i>new deadline for correction of the excessive deficit</i>		2014
Follow-up - 1st review		
Commission adopts communication on action taken		19.08.2010
Commission adopts recommendation for Council decision amending the Council decision to give notice	126(9)	19.08.2010
Council decision amending the Council decision to give notice	126(9)	07.09.2010
Follow-up - 2nd review		
Commission adopts communication on action taken		09.12.2010
Commission adopts recommendation for Council decision amending the Council decision to give notice	126(9)	09.12.2010
Council decision amending the Council decision to give notice	126(9)	20.12.2010
Follow-up - 3rd review		
Commission adopts communication on action taken		24.02.2011
Commission adopts recommendation for Council decision amending the Council decision to give notice	126(9)	24.02.2011
Council decision amending the Council decision to give notice	126(9)	07.03.2011
Follow-up - 4th review		
Commission adopts communication on action taken		01.07.2011
Commission adopts recommendation for Council decision amending the Council decision to give notice	126(9)	05.07.2011
Council decision amending the Council decision to give notice	126(9)	12.07.2011
Follow-up - 5th review		
Commission adopts communication on action taken		26.10.2011
Commission adopts recommendation for Council decision amending the Council decision to give notice	126(9)	26.10.2011
Council decision amending the Council decision to give notice	126(9)	08.11.2011
Follow-up - Second Adjustment Programme		
Commission adopts communication on action taken		09.03.2012
Commission adopts recommendation for Council decision amending the Council decision to give notice	126(9)	09.03.2012
Council decision amending the Council decision to give notice	126(9)	13.03.2012
Follow-up - Second Adjustment Programme		
Commission adopts communication on action taken		30.11.2012
Commission adopts recommendation for Council decision amending the Council decision to give notice	126(9)	30.11.2012
Council decision amending the Council decision to give notice	126(9)	04.12.2012
<i>new deadline for correction of the excessive deficit</i>		2016
Follow-up - Third Adjustment Programme		
Council adopts decision to give notice	126(9)	20.08.2015
Abrogation		
Commission adopts recommendation for Council decision abrogating existence of excessive deficit	126(12)	12.07.2017
Council adopts decision abrogating existence of excessive deficit	126(12)	25.09.2017

Source: Commission services.

Table II.A.4: Overview SDP steps - Romania and Hungary

Steps in SDP procedure	Treaty Art.	Romania	Romania (cont.)	Romania (cont.)	Hungary	Hungary (cont.)
Starting phase						
Commission adopts:						
recommendation with a view to giving warning on the existence of a significant observed deviation	121(4)	22.05.2017	23.05.2018	05.06.2019	23.05.2018	05.06.2019
recommendation for Council recommendation with a view to correcting the significant observed deviation	121(4)	22.05.2017	23.05.2018	05.06.2019	23.05.2018	05.06.2019
Council adopts recommendation with a view to correcting the significant observed deviation	121(4)	16.06.2017	22.06.2018	14.06.2019	22.06.2018	14.06.2019
<i>deadline for report on action taken</i>		15.10.2017	15.10.2018	15.10.2019	15.10.2018	15.10.2019
Follow-up						
Commission adopts:						
recommendation for Council decision on no effective action	121(4)	22.11.2017	21.11.2018	20.11.2019	21.11.2018	20.11.2019
recommendation for Council recommendation with a view to correcting the significant observed deviation	121(4)	22.11.2017	21.11.2018	20.11.2019	21.11.2018	20.11.2019
Council adopts:						
decision on no effective action	121(4)	05.12.2017	04.12.2018	05.12.2019	04.12.2018	05.12.2019
recommendation with a view to correcting the significant observed deviation	121(4)	05.12.2017	04.12.2018	05.12.2019	04.12.2018	05.12.2019
<i>new deadline for report on action taken</i>		15.04.2018	15.04.2019	15.04.2020	15.04.2019	15.04.2020
Commission adopts:						
recommendation for Council decision on no effective action	121(4)	23.05.2018	05.06.2019	<i>Superseded by the Excessive Deficit Procedure</i>	05.06.2019	<i>Council decision on effective action taken*</i>
decision on no effective action	121(4)	22.06.2018	14.06.2019		14.06.2019	

Note: * This conclusion was reached by the Council on 20 July 2020 as part of the Council Recommendation on the 2020 National Reform Programme of Hungary and delivering a Council opinion on the 2020 Convergence Programme of Hungary. The conclusion was based on the Commission's overall assessment and took into account the activation of the general escape clause for 2020, which allowed for a temporary departure from the adjustment path towards the medium-term budgetary objective.

Source: Commission services.

Part III

Do negative interest rate-growth differentials
and fiscal rules matter for the quality of public
finances? New evidence

Please cite this as follows:

European Commission (2022), Do negative interest rate-growth differentials and fiscal rules matter for the quality of public finances? New evidence, Report on Public Finances in EMU 2021, Institutional Paper 181, 12 July, 59-86.

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KEY FINDINGS

Part III sets out new evidence on the impact of negative interest rate-growth differentials and fiscal rules on the quality of public finances in the EU. The analysis covers the period 2001-2019 and therefore does not cover the recent interest rate developments.

Negative interest rate-growth differentials, broad-based in the EU, but with a high degree of variation across Member States

- Over recent decades, the difference between the implicit interest rate paid on public debt and the nominal economic growth rate tended to narrow and finally turned negative in most advanced economies, including the EU. The decrease in nominal interest rates accounts for this trend.
- Over the past two decades, Member States experienced negative interest rate-growth differentials about half the time. However, the frequency and persistence of negative differential episodes has differed widely across Member States.

New evidence finds that favourable interest rate-growth differentials had a very limited impact on the quality of public finances

- Favourable interest rate-growth differentials could help fostering the quality of public finances through two main channels. First, they provide a source of cheaper funding, which increases the expected net present value of an investment opportunity (“profitability channel”). Second, they reduce the costs of higher deficits (“fiscal space channel”). At the same time, low or negative differentials could lead to a deterioration of public sector efficiency, and to smaller fiscal efforts that partly offset debt reduction during negative interest rate growth episodes but more work is needed to ascertain this interpretation.
- Overall, the empirical analysis points to a very limited impact of favourable interest rate-growth differentials on several measures of the quality of public finances in EU Member States in the past two decades. Member States with lower public indebtedness appear to have improved the composition of their public finance thanks to the increased fiscal space allowed by lower debt servicing.

Fresh evidence also shows that that fiscal rules seem to have had neither an encouraging nor a discouraging direct impact on public investment

- Findings from panel regressions show that the concern that fiscal rules are a key reason behind the low public investment is not supported by econometric evidence. Instead, the evidence shows that fiscal rules appear not to have neither hampered nor supported public investment in the past.
- In addition, panel regressions show no clear evidence that golden rules have supported public investment in the past.
- Overall, the findings imply that a careful design of fiscal rules is key.

1. INTRODUCTION

Improving the composition of public spending could lift the EU's economic growth in the aftermath of the COVID-19 crisis. The provision of public goods and services in the most efficient way can boost long-term economic growth and lift productivity⁽⁶³⁾. In the EU, the scope for strengthening fiscal policy growth-friendliness is large, as public expenditure amounts to about 50% of GDP and is increasing over time due to population aging. The need for shifting towards expenditure that is more productive has become more pressing in the aftermath of the COVID-19 crisis. The reasons are twofold. First, the COVID-19 crisis has left Member State with much higher public debt levels. Second, the crisis has exacerbated existing divergence between Member States. Countries with high debt and lower-than-average economic growth before the pandemic have suffered deeper falls in economic activity and higher increases in debt than other Member States.

High-quality public spending will also be needed to support the green and digital transitions. These transitions are estimated to require additional private and public spending of about 3½% of UE GDP per year over the next decade. The green transition is estimated to account for about 80% of these needs, with nearly 60% for the climate and energy policy. This effort will require a mix of public investment, financial incentives to alleviate transition costs, and increased research and development (R&D) spending to boost innovation in energy-intensive sectors. Investment in digital infrastructure and education will also be required to help firms and workers achieve the digital transition.

Favourable interest rate-growth differentials could help through two main channels. The differential between the long-term interest rate on government debt and the growth rate of nominal GDP has fallen since 2011 in most advanced economies, and turned negative on average in the EU. These low differentials translate into the lowest growth-adjusted public debt servicing since 2001 (the so-called “snowball effect”) despite record-high levels of public debt (Graph III.1.1) (64). These developments may

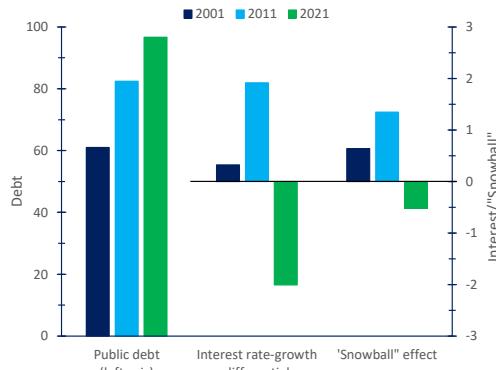
⁽⁶³⁾ Afonso et al. (2005), Cepparulo and Mourre (2020), Tanzi and Zee (1997).

⁽⁶⁴⁾ Debt accumulates according to the following equation:

$$\Delta d_t \approx d_{t-1} \times (r_t - g_t) - pb_t - sfa_t,$$
 where d_t is the

incentivise Member States to alter the quality of public spending through two main channels:

Graph III.1.1: EU average interest rate-growth differential (%), and public debt and "snowball" effect (% GDP)



Note: The interest rate-growth differential is the difference between the long-term interest rate on public debt, and potential nominal growth. The “snowball” effect is the sum of the automatic effect of the implicit interest rate on debt and of potential nominal growth on the growth of public debt. Figures are the GDP-weighted average of Member States. The sample only covers countries since EU membership.

Source: Commission spring 2021 forecast.

- **“Profitability” channel:** The flow of return to public investments in productive capacity is likely to grow in tandem with aggregate income, while favourable long-term interest rates provide a source of cheap funding. In other words, the expected net present value of an investment opportunity increases with when the interest rate-growth differential decreases⁽⁶⁵⁾. Therefore, falling differentials increase both the range of profitable investment opportunities, as well as the return on already profitable opportunities.

public debt-to-GDP ratio, pb_t is the primary balance and sfa_t are stock-flow adjustments. The first term of the accumulation is the so-called “snowball” effect, which is the product of the existing stock of debt d_{t-1} and the interest rate-growth differential.

⁽⁶⁵⁾ Under these assumptions, the net present value NPV of an investment opportunity of cost I is given by

$$NPV = \sum_{t=0} D(1+g)^t - I \approx \frac{D}{r-g} - I,$$

where $D(1+g)^t$ is the flow of return to investment, g is the growth rate of nominal GDP and r is the long-term interest rate on public debt. This opportunity is profitable ($NPV > 0$) if its internal rate of return (D/I) is higher than the interest-rate growth differential ($r - g$). With negative differentials, the net present value is always positive, as long as the internal rate of return is positive.

- **“Fiscal space” channel:** Low or negative interest rate-growth differential reduce the size of the snowball effect. This alleviates governments’ constraints on funding new deficits and rolled-over debt, especially when debt is high. Associated with low level of interest rates, these low or negative differentials would also limit the risks of public investment crowding out private investment and limit both the fiscal and welfare cost of public debt⁽⁶⁶⁾. Evidence from the Report on Public Finance in EMU 2020 show that Member States have used some of this additional fiscal space by relaxing their fiscal stance during times of low or negative differentials⁽⁶⁷⁾. Other empirical research suggests that high-quality spending is more easily adjustable and may react more to funding constraints⁽⁶⁸⁾.

At the same time, low or negative differentials could lead to a deterioration of public sector efficiency, with debt misleadingly perceived as a “free lunch”. Negative interest rate-growth differential may feed the spurious perception that public debt becomes always sustainable regardless of its level and what is financing for and may thus lead governments to fund low-return investments instead of high-quality projects. Governments could also use the savings from lower growth-adjusted interest expenditure to finance current unproductive spending, or could relax their efforts to improve the efficiency of public spending in many dimensions, letting costs increase without corresponding increases in performance⁽⁶⁹⁾.

In addition, there is a debate on how fiscal rules can affect high-quality public investment. While the Pact is in principle neutral –not prescriptive– regarding the composition of public revenue and expenditure, it currently includes clauses for investment and structural reforms. These provisions are limited in scope and have been used only infrequently⁽⁷⁰⁾. Some argue to add new and

⁽⁶⁶⁾ Blanchard (2019).

⁽⁶⁷⁾ European Commission (2021), Report on Public Finances in EMU 2020.

⁽⁶⁸⁾ Many Member States had very low or negative net investments levels in the aftermath of the sovereign debt crisis (Baldacci et al., 2013).

⁽⁶⁹⁾ Mauro and Zhou, (2020).

⁽⁷⁰⁾ For example, the investment clause focused on the specific situation of a deep downturn and has only been used twice, while the structural reform clause has been applied five

more general provisions to protect sustainable and high-quality public investment, in particular in challenging fiscal and economic conditions or low interest rate environment⁽⁷¹⁾.

Against this background, the key objectives of this part are twofold:

- **First, Chapter III.2. assesses if and under which conditions Member States have improved the quality of their public finances in times of low interest rate-growth differentials.** We first assess if Member States increased the share of productive spending in response to the fall of interest-rate growth differentials. We then provide evidence on the main channels behind Member States’ responses. We finally turn to analysing the effect of differentials on the efficiency of public spending. To the best of our knowledge, no study has investigated whether the composition and efficiency of public spending is affected by the interest rate-growth differential. The analysis covers the period 2001-2019 and therefore does not cover the recent interest rate developments.
- **Second, Chapter III.3. investigates if fiscal rules have had an impact on public investment in the past.** It explores the impact of fiscal rules on public investment with a panel regression approach for EU Member States and the UK between 2004 and 2016. It addresses two questions. First, have fiscal rules hampered public investment, also when controlling for the available fiscal space and the quality of fiscal rules? Second, have golden rules supported public investment?

times but with limited success in promoting reforms. For further info, see Commission Communication of 23 May 2018 on “the review of the flexibility under the Stability and Growth Pact”, COM(2018) 335 and Commission Communication of 5 February 2020, “Economic governance review: Report on the application of Regulations (EU) No 1173/2011, 1174/2011, 1175/2011, 1176/2011, 1177/2011, 472/2013 and 473/2013 and on the suitability of Council Directive 2011/85/EU”, COM(2020) 55.

⁽⁷¹⁾ Blanchard, O. (2019), “Public Debt and Low Interest Rates”, American Economic Review, 109(4), 1197-1229.

2. NEGATIVE INTEREST RATE-GROWTH DIFFERENTIALS AND QUALITY OF PUBLIC FINANCE

The key objective of this chapter is to assess the impact of the negative interest-rate growth differentials on the quality of public finances and it is structured as follows. Section III.2.1. presents some stylised facts about the changing composition of public spending in Member States over the past two decades. Section III.2.2. presents the empirical strategy, before Section III.2.3. describes the main findings.

2.1. EVOLUTION OF THE QUALITY OF PUBLIC EXPENDITURE

We measure the quality of public finances in several ways. Since there is no commonly agreed definition for the quality of public finances, we use two different approaches. In the first approach, we focus on changes in the composition of spending. An increase in growth-friendly expenditure is considered to improve the quality of public finance, with growth-friendly expenditure defined as i) *spending on investments* according to the economic classification of expenditure, or ii) *spending on specific functional categories* according to the functional classification (COFOG, see below)⁽⁷²⁾. In the second approach, we focus on changes in the *efficiency of public spending*. An increase in efficiency is measured by higher performance of a given level of spending, assessed against various policy targets.

Composition of public finance: which growth-friendly expenditure?

Growth-friendly expenditure helps build economic capacity and helps address the challenges posed by the green and digital transitions⁽⁷³⁾. We include in our measure of growth-friendly expenditure the following items:

- *Public gross fixed formation of fixed capital* (economic classification): this item corresponds to investments in either tangible or intangible capital, and contributes to increase the national capital stock.
- *All primary spending on research and education*: this item includes teacher and public researcher's wages as well as investment, administrative costs and subsidies, which together contribute to increase labour productivity.
- *All primary spending on infrastructure and environmental protection*: these items include the cost involved in the administration of transport, communication, and digital infrastructure, as well as in waste management, pollution abatement and the protection of biodiversity, which together help address the challenges posed by the green and digital transitions.

The increase in growth-friendly expenditure: first descriptive results

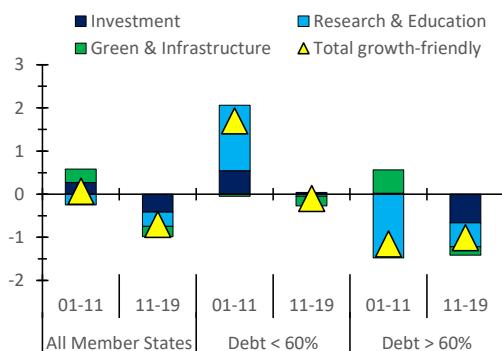
- Member States have on average not yet used the opportunity of negative interest-growth differential to improve the composition of public expenditure (Graph III.2.1). We find that despite a substantial fall of the differential of more than 2 pps. on average between 2011 and 2019, the share of growth-friendly expenditure in primary expenditure has decreased by 0.7 pps. The decline in growth-friendly spending was broad-based: public investment has fallen by 0.4 pps., spending on research and education has fallen by 0.3 pps., and spending on infrastructure and environmental protection has fallen by 0.25 pps.⁽⁷⁴⁾. This is to be compared with the previous decade, when Member States maintained the share of growth-friendly expenditure constant despite an substantial increase in the differential.

⁽⁷²⁾ There is no absolute consensus in the academic literature when it comes to identifying the types of public expenditure most conducive of growth. For details, see Reinhart and Rogoff (2009); Afonso and Jalles (2011), Nirola and Sahu (2019) and Butkiewicz and Yanikkaya (2011).

⁽⁷³⁾ Health-related expenditure are also considered growth-friendly by some studies, but their dynamics over the past decades differs substantially from that of other items. In what follows, we analyse them separately.

⁽⁷⁴⁾ The three items do not exactly add up to total growth-friendly expenditure because of some overlap in scope: spending on research, education, infrastructure, and environmental protection include investments.

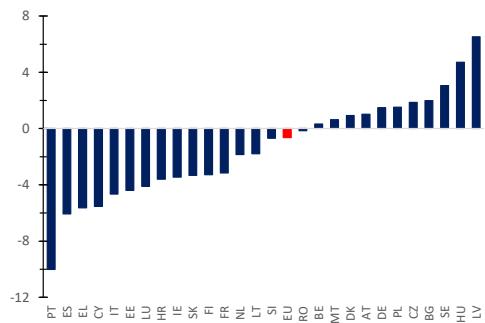
Graph III.2.1: Change in the share of growth-friendly expenditure, by groups and periods (% primary expenditure)



Note: Investment: Total general government gross fixed capital formation.
 Research & education: primary expenditure in R&D and education functions.
 Green & Infrastructure: primary expenditure in environmental protection, transport, and communication functions.
 "Debt <60%" Member States are Member States with public debt lower than 60% of GDP in 2019.
 Figures are expressed in percentage of total primary expenditure. Country group averages are GDP-weighted.

Source: Eurostat, government expenditure by function - COFOG.

Graph III.2.2: Change in the share of growth friendly expenditure, by Member State (2001-2019, % primary expenditure)



Note: Investment: Total general government gross fixed capital formation.
 Research & education: primary expenditure in R&D and education functions.
 Green & Infrastructure: primary expenditure in environmental protection, transport, and communication functions.
 "Debt <60%" Member States are Member States with public debt lower than 60% of GDP in 2019.
 Figures are expressed in percentage of total primary expenditure. Country group averages are GDP-weighted.

Source: Eurostat, government expenditure by function - COFOG.

Substantial differences exist across Member States. The share of growth-friendly expenditure has decreased by as much as 10 pps. in Portugal, and increased by 6.5 pps. in Latvia (Graph III.2.2). On average, Member States with debt below 60% in 2019 had increased the share of growth-friendly expenditure between 2001 and 2011 and kept it broadly stable since then. By contrast, since 2001, the cumulative decrease in growth-friendly expenditure in Member States with debt above 60% amounts to more than 2 pps. of primary expenditure, or close to 1 pp. of GDP (Graph III.2.1).

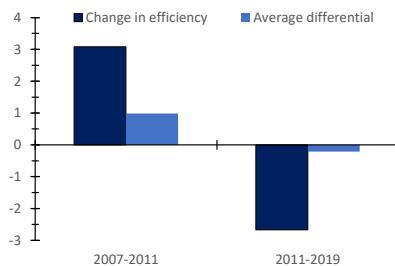
Public sector efficiency: building a new indicator

Beyond public finance composition, we also run a first investigation on how interest rate-growth differentials affect public sector efficiency, measured by a composite indicator. The literature on the efficiency of public spending has traditionally focused on a limited number of spending items. Some authors have also tried to measure the aggregate performance of public spending (among others Afonso et al., 2005; 2010; Angelopoulos et al., 2008; Baciu and Botezat, 2014; Christl, 2020; Afonso et al., 2021). Researchers have used three main methods to measure the efficiency: composite indicators, parametric (stochastic frontiers) and non-parametric approaches (Full disposal hull, DEA, Malmquist index). We find that the composite approach yields similar results to those obtained by parametric approaches (Angelopoulos et al., 2008) and non-parametric ones (Afonso et al., 2005 for a full disposal hull approach; Afonso et al., 2010 and Baciu and Botezat, 2014, for a DEA approach).

We measure the efficiency of public spending (PSE) in Member States for the period 2007-2019 by a composite indicator based on an input-output approach (Box III.2.1).

Conceptually, the efficiency indicator corresponds to the performance (output) by unit of resource, that is, expenditure (input). This indicator has increased between 2001 and 2011, a period characterised by a positive interest rate-growth differential. However, after 2011, most countries experienced a deterioration in the indicator of efficiency, despite the fall in interest rate-growth differentials (Graph III.2.3).

Graph III.2.3: Change in public sector efficiency and average interest rate-growth differential in the EU (2007-2019)



Note: The differential is the difference between the long-term interest rate on public debt, and potential nominal growth. See Box III.2.1 for details on the calculation of public sector efficiency. EU average is GDP-weighted.

Source: Commission spring 2021 forecast and author's calculations.

2.2. EMPIRICAL STRATEGY

We use a panel data approach to analyse the relationship between the quality of public spending and interest rate-growth differentials. The key objective is to assess if and under which conditions Member States have adjusted the composition and efficiency of primary expenditure when differentials fall. For this purpose, we use dynamic panel regressions for a sample of 28 EU Member States over the period 2001–2019 (including the UK).

Methodological considerations

We analyse the impact of interest rate-growth differentials on the quality of primary expenditure along three dimensions:

1. *Share of public investment.* Real-time public investment plans, measured by one-year-ahead forecasts of public gross fixed capital formation, according to Commission autumn forecasts;

2. *Composition of growth-friendly expenditure.* Growth-friendly expenditure, measured by primary spending on education, research and development, transport and communication infrastructure, and environmental protection;
3. *Efficiency of public spending.*

Box III.2.1: Public sector efficiency as a composite indicator

Following the academic literature and in particular Alfonso et al. (2005), we measure the efficiency of public spending (PSE) in Member States for the period 2007-2019 by a composite indicator, extending the analysis in terms of time and government functions coverage. This box presents the methodology behind the construction of the composite indicator.

In this approach, government efficiency is equal to governments' performance along a set of measurable indicators (e.g. corruption perception index, educational attainment, life expectancy). Efficiency corresponds to an input-output logic and is calculated for each function of government as the ratio of the performance (output, denoted PSP) to the expenditure to achieve it (input, denoted PE).

Following Christl et al. (2020), we consider 11 policy functions, covering 8 areas of the functional classification of public spending⁽¹⁾ as well as the three Musgravian functions (distribution, stabilisation, economic performance). The individual efficiency scores are added up across the 11 policy functions to give rise to an overall efficiency score. Formally, for each country i , the overall efficiency score (PSE_{it}) at time t is expressed as the sum of the ratios between the government performance in the j public policy areas considered (PSP_{ijt}) and public expenditure (PE_{ijt}) in the corresponding area:

$$PSE_{it} = \sum_{j=1}^J \frac{PSP_{ijt}}{PE_{ijt}} \quad (1)$$

Because the performance for each spending function (PSP) is potentially multi-dimensional, we assess it on the basis of several sub-indicators, as appeared in literature (Table 1). To ensure consistency across indicators and comparability over time, for the computation of the public sector performance (PSP), we apply three corrections to the original sub-indicators. First, we invert sub-indicators for which high figures mean poor performance (e.g. infant mortality). Second, we normalise all sub-indicators to fit the average and standard deviation⁽²⁾ at the beginning of the period (2007), to obtain meaningful time-series. Third, the performance for each function is calculated as a simple average of the resulting sub-indicators (assuming equal weighing across indicators).

Table 1: Public sector efficiency: output components

Spending Functions	Performance sub-indicator	Data source
General public services	Public sector corruption (inverted)	Quality of Government database
	Corruption perception index (CPI)	Transparency International
	Public sector corruption exchanges (inverted)	Quality of Government database
	Burden of government regulation	Global Competitiveness Index
	Independence of the judiciary Index	Quality of Government database
	Shadow economy (inverted)	Medina and Schneider (2019)
	Bureaucratic quality	International Country Risk Guide
	Law and order	International Country Risk Guide
	Public services (quality) Index (inverted)	Quality of Government database
	Absolute legal institutional quality Index	Quality of Government database
	Government effectiveness	Quality of Government database
	Property rights	Global Competitiveness Index

(1) General government, education, health, economic affairs, public order and safety, environment, social protection and defence.

(2) European Commission (2008). According to the LIME methodology the standardised values are multiplied by 10 and performance is classified into 5 classes: very good, good, average, poor and very poor as follows. Values beyond 30 and -30 are considered outliers.

(Continued on the next page)

Box (continued)

	Regulatory quality index	Quality of Government database
<i>Education</i>	Quality of math and science	Global Competitiveness Index
	Educational quality indicator	Global Competitiveness Index
	Secondary school enrollment	World development Indicators
	Labour force with primary education % of total labour force	Quality of Government database
	Quality of primary education Index	Global Competitiveness Index
	Quality of the educational system Index	Global Competitiveness Index
	Young people not in education or employment: aged 20-24 % of age group (inverted)	OECD
	Pupil-teacher ratio in primary, secondary and tertiary education (Average) (inverted)	World development Indicators
	Early school leavers (inverted)	Eurostat
	Educational attainment	Eurostat
<i>Health</i>	PISA score Average across all fields	OECD
	Mortality rate, infant (per 1,000 live births) (inverted)	World development Indicators
	Healthy life years at birth: males Years	Eurostat
	Healthy life years at birth: females Years	Eurostat
	CVD, cancer,diabetes or CRD Survival Rate (inverted)	World development Indicators
<i>Economic affairs</i>	Life expectancy	World development Indicators
	Fixed broadband subscriptions (per 100 people)	World development Indicators
	Fixed telephone subscriptions (per 100 people)	World development Indicators
	Individuals using internet (% of population)	World development Indicators
	Logistic performance	Global Competitiveness Index
	Mobile cellular subscriptions (per 100 people)	World development Indicators
	Length of motorways (km)	Eurostat
	Length of roads (km)	Eurostat
	Length rail lines (km)	Eurostat
	Quality of overall infrastructure	Global Competitiveness Index
<i>Public order and safety</i>	Crime, violence or vandalism in the area	
	Cases per population (inverted)	Eurostat
	Organized crime Index	Global Competitiveness Index
	Total persons convicted	United Nations Office on Drugs and Crime
<i>Environment</i>	Reliability of police services	Global Competitiveness Index
	Air quality Index	
	Environmental health Index	Environmental performance index
<i>Social protection</i>	Environmental Performance Index	
	Pension Generosity Index	Quality of Government database
	Poverty gap (inverted)	Quality of Government database
	Poverty rate 50% in % of population (inverted)	Quality of Government database
<i>Defence</i>	Armed forces personnel	Quality of Government database
<i>Distribution</i>	Gini coefficient (inverted)	World development Indicators
<i>Stabilization</i>	Standard deviation inflation (inverted)	
	Coefficient of Variation of Growth (inverted)	
	General government debt	AMECO
	Political stability	Quality of Government database
<i>Economic performance</i>	Unemployment (inverted)	
	GDP real growth	
	GDP per capita	
	General government debt	AMECO
	General government net lending	

(Continued on the next page)

Box (continued)

Note: Public spending by function from Eurostat and AMECO. Greyed sub-indicators were not included in the analysis of Christl et al. (2020) but come from Cepparulo and Mourre (2020) and other literature on the topic.

Source: Author's elaboration.

For the computation of the public sector efficiency, we apply two further adjustments. In particular for education and health, which are the sectors most affected by the degree of private intervention, following Adam (2011), outputs are multiplied by the proportion of public to total spending in both sectors to address the heterogeneity of the education and health systems in the EU. Finally, the efficiency indicator computed according to the equation 1 is normalised with the min-max over all countries and years, in order to bring all values in the range [0,1]. Table 2 reports spending functions used as input of the efficiency indicator.

Table 2: **Public sector efficiency: inputs (% of GDP)**

Functions	Variables	Source
General public services	General public services expenditure	Eurostat
Education	Education expenditure	Eurostat
Health	Health expenditure	Eurostat
Economic affairs	Gross fixed capital formation	AMECO
Public order and safety	Public order and safety expenditure	Eurostat
Environment	Environment protection expenditure	Eurostat
Social protection	Social protection expenditure	Eurostat
Defence	Defence expenditure	Eurostat
Distribution	Social transfers	AMECO
Stabilization	Total expenditure	AMECO
Economic performance	Total expenditure	AMECO

Source: Author's elaboration.

Box III.2.2: Empirical framework

This box describes the empirical approach used to estimate the impact of interest expenditure on the quality of public finances.

We use three proxies to measure the quality of public finances, namely:

- (i) Public investment, in percentage of primary expenditure;
- (ii) Growth-friendly expenditure, in percentage of primary expenditure;
- (iii) Public sector efficiency, as captured by a composite indicator (Box III.2.1).

We adapt a standard fiscal reaction function approach to the analysis of the effect of interest rate-growth differentials on the quality of public finances, distinguishing two possible channels.

In the “profitability” approach, the level of the interest rate-growth differential is expected to have a positive impact on productive spending, regardless of the level of public debt. We estimate the following equation:

$$\text{quality}_{i,t} = \alpha \text{quality}_{i,t-1} + \rho(r_{it-1} - g_{it-1}) + \gamma \text{cycle}_{i,t} + \theta_t + \phi_i + \epsilon_{i,t}, \quad (1)$$

where $\text{quality}_{i,t}$ denotes one of our three proxies of the quality of public finances, described above. The term $(r_{it-1} - g_{it-1})$ is the difference between the nominal 10-year interest rate on public debt and the growth of nominal GDP in country i in year $t-1$. The economic cycle is measured by the change of the gap between actual and potential GDP (output gap). The specification includes year θ_t and country fixed effects ϕ_i to capture systematic differences across countries and years, while $\epsilon_{i,t}$ represents an error term which is assumed to be uncorrelated with the differential and control variables ⁽¹⁾.

In the “fiscal space” approach, the interest rate-growth differential affects spending only through debt servicing expressed as % of GDP, which in turn is proportional to the existing stock of public debt. In this approach, we estimate the following equation:

$$\text{quality}_{i,t} = \alpha \text{quality}_{i,t-1} + \rho \underbrace{(r_{i,t}^a - g_{i,t})d_{i,t-1}}_{\text{snowball effect}} + \gamma \text{cycle}_{i,t} + \theta_t + \phi_i + \epsilon_{i,t}, \quad (2)$$

Where $r_{i,t}^a$ is the implicit interest rate on public debt, equal to the ratio of interest expenditure to lagged public debt-to-GDP, and $d_{i,t-1}$ is the ratio of public debt to GDP at the beginning of the previous year. The implicit rate on public debt is an average of past interest rates at different maturities, including the benchmark long-run rate used in equation (1). It tends to adjust only slowly to new interest rate conditions, depending on the maturity structure of public debt. In this specification, the differential has been replaced by interest expenditure adjusted for the effect of nominal growth (the so-called “snowball effect”).

Since the expected quality of public finance can influence the level of the output gap or the level of interest expenditure, we use an instrumental variable (IV) estimator in which we instrument the variation of the output gap and the level of interest expenditure by their levels in past periods and past forecast errors ⁽²⁾. We compute robust standard errors to deal with heteroscedasticity, serial correlation and cross-sectional dependence.

⁽¹⁾ Ageing could also impact both the differential and the quality of public finance. The effect of ageing on quality is ambiguous (see Jäger and Schmidt, 2016). Moreover our model already controls for country-specific trends in the determinants of quality through the inclusion of the lagged independent variable, as well as common shocks through the inclusion of year fixed effects. Country-specific shocks to ageing are too small to have an influence on our results.

⁽²⁾ See Checherita-Westphal and Žďárek (2017) for a discussion, in the context of fiscal reaction function estimation, of the relative merits of FE estimators and Difference or System GMM estimators that alleviate the small-T bias arising from a short time dimension. The 2SLS approach is more appropriate for estimates of long-term effects.

2.3. MAIN FINDINGS

Our evidence shows that the quality of public finance is persistent and slightly correlated with the business cycle (Tables III.2.1 and III.2.2). The composition of expenditure tends to react slowly to changes in the economic environment, as shown by the large and significant coefficient associated with the lagged shares of expenditure. There are also somewhat “pro-cyclical”, as shown by a positive coefficient on the output gap variation: when the economic situation improves, the shares of public investment and growth-friendly expenditure increase (with a possible positive impact on growth in the medium term).

Table III.2.1: Effect of interest rate-growth differential on public investment (Member States and UK, 2001-2019)

	Dependent variable: share of public investment					
	"Profitability" channel: effect of growth-adjusted long-term interest rate			"Fiscal space" channel: effect of growth-adjusted interest expenditure		
	All Member States	Debt<60%	Debt>60%	All Member States	Debt<60%	Debt>60%
Lagged dependent variable	0.668*** (0.062)	0.651*** (0.079)	0.698*** (0.110)	0.633*** (0.067)	0.624*** (0.081)	0.687*** (0.120)
Lagged interest rate- growth differential	-0.064** (0.026)	-0.067** (0.034)	-0.055 (0.042)	-0.137** (0.053)	-0.305*** (0.084)	-0.080 (0.077)
Election dummy	0.003 (0.002)	0.002 (0.003)	0.004 (0.003)	0.002 (0.002)	0.001 (0.003)	0.004* (0.003)
Output gap change	0.382 (0.239)	0.373 (0.249)	0.142 (0.443)	0.205 (0.222)	0.342 (0.285)	0.007 (0.392)
Observations	457	255	202	464	262	202
R-squared	0.451	0.381	0.541	0.459	0.396	0.535
Country fixed effect	Yes	Yes	Yes	Yes	Yes	Yes
Time fixed effect	Yes	Yes	Yes	Yes	Yes	Yes
Hansen J	1.482	0.510	0.081	0.389	0.015	0.036
Hansen J p-value	0.223	0.475	0.776	0.533	0.901	0.849
Kleibergen-Paap LM	28.350	23.410	10.870	22.540	13.200	14.630
Kleibergen-Paap F	18.900	17.370	8.938	18.200	9.658	16.660
Cragg-Donald F	39.610	27.700	15.960	65.360	26.580	42.260

Note: Public investment is government gross fixed capital formation in percentage of total primary expenditure. Results are obtained using 2SLS estimates. The regression model is based on data for 27 Member States and the UK for 2001-2019. We exclude COVID-19 crisis years. "Debt <60%" Member States are Member States with public debt lower than 60% of GDP in 2019. The long-term interest rate benchmark on public debt is missing for Estonia after 2011. The Hansen J test's null hypothesis is that the instruments are exogenous (a low statistic associated with a high p-value is desirable). The Kleibergen-Paap LM, the Kleibergen-Paap F and the Cragg-Donald F test' null hypothesis is that the instruments are weak (a high statistic is desirable). These three tests have different strengths and weaknesses which is why we include them all for completeness.

Source: Commission autumn 2000-2019 forecast vintages.

When interest rate-growth differentials fall, Member States increase investment only slightly and the share of growth-friendly expenditure even to a lesser extent (Tables III.2.1 and III.2.2, for “all Member States” specifications). A fall either in the growth-adjusted long-term interest rate (“profitability” channel) or in growth-adjusted interest expenditure (“fiscal space” channel) appears to lead to an increase in

the shares of investment and growth-friendly expenditure in the short run, as shown by the negative coefficient associated with the lagged independent variable in most specifications. However, this effect is small: a 1 pp. decrease in the differential leads to a 0.06 pp. increase in the share of public investment according to the “profitability” model, and a 0.14 pp. increase according to the “fiscal space” model. The effect on growth-friendly expenditure is even lower or not significant.

Table III.2.2: Effect of interest rate-growth differential on growth-friendly expenditure (Member States and UK, 2001-2019)

	Dependent variable: share of growth-friendly expenditure					
	"Profitability" channel: effect of growth-adjusted long-term interest rate			"Fiscal space" channel: effect of growth-adjusted interest expenditure		
	All Member States	Debt<60%	Debt>60%	All Member States	Debt<60%	Debt>60%
Lagged dependent variable	0.583*** (0.052)	0.553*** (0.075)	0.588*** (0.083)	0.565*** (0.050)	0.525*** (0.077)	0.575*** (0.079)
Lagged interest rate- growth differential	-0.053** (0.023)	-0.051* (0.027)	-0.043 (0.040)	-0.049 (0.052)	-0.152** (0.077)	0.001 (0.059)
Election dummy	0.000 (0.002)	0.000 (0.003)	0.000 (0.003)	0.000 (0.002)	0.000 (0.003)	0.001 (0.002)
Output gap change	0.455** (0.173)	0.204 (0.206)	0.683** (0.340)	0.163 (0.145)	0.026 (0.247)	0.267 (0.185)
Observations	452	253	199	459	260	199
R-squared	0.310	0.348	0.261	0.339	0.348	0.344
Country fixed effect	Yes	Yes	Yes	Yes	Yes	Yes
Time fixed effect	Yes	Yes	Yes	Yes	Yes	Yes
Hansen J	0.202	0.374	0.715	0.447	1.232	0.522
Hansen J p-value	0.653	0.541	0.398	0.504	0.267	0.470
Kleibergen-Paap LM	33.190	23.290	12.970	25.330	14.630	19.800
Kleibergen-Paap F	23.580	17.170	11.980	21.830	10.570	26.920
Cragg-Donald F	45.840	26.490	18.940	74.800	25.850	54.550

Note: Growth-friendly public expenditure are expenditure in research, education, infrastructure, and environmental production, in percentage of total primary expenditure. Results are obtained using 2SLS estimates. The regression model is based on data for 27 Member States and the UK for 2001-2019. We exclude COVID-19 crisis years. "Debt <60%" Member States are Member States with public debt lower than 60% of GDP in 2019. The long-term interest rate benchmark on public debt is missing for Estonia after 2011. The Hansen J test's null hypothesis is that the instruments are exogenous (a low statistic associated with a high p-value is desirable). The Kleibergen-Paap LM, the Kleibergen-Paap F and the Cragg-Donald F test' null hypothesis is that the instruments are weak (a high statistic is desirable). These three tests have different strengths and weaknesses which is why we include them all for completeness.

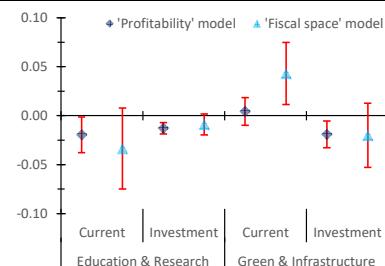
Source: Commission autumn 2000-2019 forecast vintages and Eurostat data on public expenditure by COFOG.

In cases of a fall in the interest-growth differential, Member States with debt lower than 60% of GDP improved the composition of expenditure more than Member States with debt higher than 60% of GDP (Tables III.2.1 and III.2.2, “Debt<60%” and “Debt>60%” specifications). The negative coefficient on the lagged interest rate-growth differential is significant in all four specifications for Member States with debt lower than 60% of GDP, but not in Member States with debt higher than 60% of GDP. According to the “fiscal space” model, the effect of lower growth-adjusted interest expenditure on the composition of expenditure is also considerably larger in Member States with debt below 60% than in Member States with debt above 60%⁽⁷⁵⁾.

While both channels matter, governments tend to react more to increased fiscal space than to increased profitability. The “fiscal space” effect appears better at predicting the composition of public finance than the “profitability” effect, as shown by higher R-squared coefficients for the “fiscal space” model in both specifications and for all groups of countries, and by higher significance levels for Member States with debt below 60%.

The current and capital components of growth-friendly expenditure have been affected similarly by a change in interest-growth differentials (Graph III.2.4). The effect of interest rate-growth differentials on the shares of current and capital spending on education, research, environmental protection and infrastructure is negative or not significant in both the profitability model and the fiscal space model (except for current spending on environmental protection in the fiscal space model). This suggests that the apparent stability of the total share of growth-friendly expenditure does not mask a reallocation of spending between categories.

Graph III.2.4: Effect of interest rate-growth differential on sub-categories of growth-friendly expenditure (Member States and UK, 2001-2019)



Note: Expenditure are expressed in percentage of total primary expenditure. Results are obtained using 2SLS estimates. The regression model is based on data for 27 Member States and the UK for 2001-2019. We exclude COVID-19 crisis years.

Source: Commission autumn 2000-2019 forecast vintages and Eurostat data on public expenditure by COFOG.

The measure of public sector efficiency tends to deteriorate after a fall in interest rate-growth differentials (Table III.2.3). This is consistent with the fact that the overall efficiency of public spending has decreased during the period 2011-19 despite a fall in interest rate-growth differential. This is shown by the positive coefficients associated with the lagged independent variable, although this coefficient is not significant in the fiscal space channel. To the extent that improving efficiency is not about spending more but spending better, it is not surprising that more fiscal space has no effect on the efficiency of public spending. In the profitability channel, the negative effect of interest rate-growth differentials on efficiency is not significant in the group of Member States with debt below 60%. This may be explained by a ‘complacency’ effect, but more work is needed to ascertain this interpretation. In previous research, we have shown evidence that smaller fiscal efforts partly offset debt reduction during negative interest rate growth episodes, in particular in highly indebted Member States. Overall, this may suggest more generally that low differentials may bring about a perception by public sector entities of a relaxed budgetary constraint, affecting public management⁽⁷⁶⁾.

⁽⁷⁵⁾ This means that Member States with higher debt have used the increased fiscal space to increase non-growth-friendly expenditure.

⁽⁷⁶⁾ European Commission (2021).

Table III.2.3: Effect of interest rate-growth differential on growth-friendly expenditure (Core Member States and UK, 2007-2019)

Dependent variable: public sector efficiency						
	"Profitability" channel: effect of growth-adjusted long-term interest rate			"Fiscal space" channel: effect of growth-adjusted interest expenditure		
	All Member States	Debt<60%	Debt>60%	All Member States	Debt<60%	Debt>60%
Lagged dependent variable	0.508*** (0.156)	0.499*** (0.186)	0.676*** (0.157)	0.517*** (0.159)	0.491** (0.189)	0.641*** (0.177)
Lagged interest rate- growth differential	0.223** (0.112)	0.640 (0.619)	0.154* (0.080)	0.184 (0.134)	0.563 (0.339)	0.021 (0.087)
Election dummy	0.006 (0.009)	0.011 (0.022)	0.001 (0.007)	0.008 (0.010)	0.009 (0.024)	-0.003 (0.009)
Output gap change	0.797 (0.552)	-1.323 (4.077)	0.567* (0.338)	0.282 (1.044)	-3.175 (4.205)	0.950 (0.669)
Observations	168	84	84	168	84	84
R-squared	0.204	0.162	0.360	0.226	0.065	0.278
Country fixed effect	Yes	Yes	Yes	Yes	Yes	Yes
Time fixed effect	Yes	Yes	Yes	Yes	Yes	Yes
Hansen J	0.097	1.026	2.707	0.353	1.106	3.179
Hansen J p-value	0.756	0.311	0.100	0.553	0.293	0.075
Kleibergen-Paap LM	12.630	2.789	14.060	11.300	3.411	9.502
Kleibergen-Paap F	22.850	1.089	19.120	7.840	1.370	4.721
Cragg-Donald F	42.560	1.274	34.360	15.110	1.894	7.780

Note: Public sector efficiency is computed according to the methodology described in Box III.2.1. Results are obtained using 2SLS estimates. The regression model is based on data for the 14 Member States that joined the EU before 2000, and the UK, for 2007-2019. We exclude COVID-19 crisis years. "Debt <60%" Member States are Member States with public debt lower than 60% of GDP in 2019. The long-term interest rate benchmark on public debt is missing for Estonia after 2011. The Hansen J test's null hypothesis is that the instruments are exogenous (a low statistic associated with a high p-value is desirable). The Kleibergen-Paap LM, the Kleibergen-Paap F and the Cragg-Donald F test's null hypothesis is that the instruments are weak (a high statistic is desirable). These three tests have different strengths and weaknesses which is why we include them all for completeness.

Source: Commission autumn 2006-2019 forecast vintages and author's calculations (Box III.2.1).

3. NEW EVIDENCE ON THE IMPACT OF FISCAL RULES ON PUBLIC INVESTMENT

This Chapter provides new evidence on the impact of fiscal rules on public investment. It addresses the following two questions:

1. Have fiscal rules hampered public investment, also when controlling for the available fiscal space and the quality of fiscal rules?
2. Have golden rules supported public investment?

It is structured as follows. Section III.3.1. gives a short overview on the debate of the impact of fiscal rules on public investment. Section III.3.2. describes the empirical panel regression approach used, before Section III.3.3. presents the main findings.

3.1. THE DEBATE ON THE IMPACT OF FISCAL RULES ON PUBLIC INVESTMENT

There has been a lively debate on the impact of fiscal rules on public investment.

From a *theoretical* point of view, the relationship between fiscal rules and public investment is ambiguous. Some argue that fiscal rules have a negative impact on public investment, since they could (i) distort the relationship between investment and current expenditure⁽⁷⁷⁾ and thereby favour projects with higher short-term vs. long-term returns⁽⁷⁸⁾ or (ii) lead to asset decumulation, e.g. due to inefficient (and excessive) privatisation⁽⁷⁹⁾. Others argue that fiscal rules have a positive impact on public investment, since they may (i) mitigate the deficit bias and create fiscal space for sustainable

⁽⁷⁷⁾ Buiter, W. (1984), Measuring aspects of fiscal and financial policy, NBER Working Paper 1332.

⁽⁷⁸⁾ Based on this line of reasoning, voters seem to be rather insensitive to cuts in public investment in times of fiscal pressure, given its limited visibility and more diffuse character (Buiter, W. (1984), Measuring aspects of fiscal and financial policy, NBER Working Paper 1332.; Blanchard, O. and F. Giavazzi, 2004): Improving the SGP through a proper accounting of public investment, CEPR Discussion Paper, 4220, February).

⁽⁷⁹⁾ Easterly, W. (1999), When is fiscal adjustment an illusion? World Bank Policy Research Working Paper 2109.

investment in the long run⁽⁸⁰⁾ or (ii) reduce the overspending bias in ideological and less productive investment⁽⁸¹⁾.

Empirically, the current fiscal rules appear to have had neither an encouraging nor a discouraging direct impact on public investment. Evidence from the early years of EMU finds no meaningful effects of EU fiscal rules on public investment⁽⁸²⁾. However, the short sample period makes an assessment challenging. The few available studies show that Member States tend to have been constrained in their investment decisions by high indebtedness and market pressure rather than by the EU fiscal rules⁽⁸³⁾.

3.2. EMPIRICAL INVESTIGATION

We explore the impact of fiscal rules on public investment with a panel regression approach for EU Member States and the UK between 2004 and 2016. We measure public investment as the gross-fixed capital formation of the public sector in percent of potential GDP. We also try to distinguish between high- and low-quality public investment. We follow Kappeler and Välijä (2008) and distinguish between public investment spent on infrastructure and public investment spent on redistribution (see Box III.3.1). We check the impact of three types of fiscal rules, namely EU fiscal rules, national fiscal rules and golden

⁽⁸⁰⁾ Turrini, A. (2004): Public investment and the EU fiscal framework, European Economy. Economic Papers, 2002, May.

⁽⁸¹⁾ Beetsma, R. and van der Ploeg, F. (2007): The political economy of public investment, CEPR Discussion Paper DP6090, February.

⁽⁸²⁾ Gali, J. and Perotti, R. (2003), Fiscal policy and monetary integration in Europe, Economic Policy 18, 533-572; Turrini, A. (2004): Public investment and the EU fiscal framework, European Economy. Economic Papers, 2002, May; Pérez, E. and T. Välijä (2005): Fiscal rules and public investment, Economic and Financial Report, 2005/02; Heinemann, F. (2006): Factor mobility, government debt and the decline in public investment, IEEP, 3, 11-26. Mehrotra, A. and T. Välijä (2006): Public investment in Europe: Evolution and determinants in perspective, Fiscal Studies, 27(4), 443-471.

⁽⁸³⁾ Bacchicocchi, E., E. Borghi and A. Missale (2011), Public investment under fiscal constraints, Fiscal Studies, 32(1), 11-42. Heinemann, F. (2006): Factor mobility, government debt and the decline in public investment, IEEP, 3, 11-26.

rules.⁽⁸⁴⁾ The empirical framework controls for a large set of variables in line with the literature to avoid an omitted variable bias. More details on the regression approach are explained in Box III.3.1.

⁸⁴ We used the IMF fiscal rules database to identify countries with golden rules. According to this database, 9 Member States have or had at least for some years fiscal rule(s), which “exclude public investment or other priority items from ceiling”, namely Bulgaria, Croatia, Denmark, Finland, Germany, Luxembourg, Netherlands, Spain and United Kingdom,

Box III.3.1: Impact of fiscal rules on public investment – estimation strategy

This box presents the panel regression approach used to assess the impact of fiscal rules on public investment. The analysis concentrates on up to 27 EU Member States and the UK, using annual data from 1995 to 2017.

Key variables

The dependent variable is public investment. We measure public investment as the gross-fixed capital formation of the public sector in percent of potential GDP. To get an idea on the quality of public investment, we follow Kappeler and Välijä (2008) and distinguish between public investment spent on infrastructure (considered as a proxy for high-quality investment) and public investment spent on redistribution (considered as a proxy for low-quality investment).

The key independent variable refers to the fiscal rule variable, but we also control for a large set of variables in line with the literature to avoid an omitted variable bias. The following variables are included in the specification (the expected sign of the impact on public investment is shown in brackets):

- *Fiscal rules* (?): EU and national fiscal rules as well as golden rules
- Fiscal factors
 - *Persistence of public investment* (+)⁽¹⁾: lagged public investment
 - *Fiscal pressure* (-)⁽²⁾: gross debt of the general government
- Macroeconomic factors
 - *Economic cycle and wealth*⁽³⁾: output gap (-), real GDP per capita (+)
 - *Great Recession* (-): dummy = 1 for the years 2009 to 2012
 - *Financial conditions* (-)⁽⁴⁾: real long-term interest rate
- *Demographic factors* (-)⁽⁵⁾: share of persons above 65 years in the total population
- *Political economy factors*: left governments (+), election year (+)

Main specifications

1. Have fiscal rules hampered public investment in the past?

We assess the impact of fiscal rules on public investment with the following dynamic panel regression model:

$$inv_{i,t} = \beta_1 inv_{i,t-1} + \beta_2 fr_{i,t} + \beta_3 X_{i,t} + \theta_i + \gamma_t + u_{i,t} \quad (i)$$

where public investment (*inv*) is measured as the gross fixed capital formation of the public sector in per cent of potential GDP. The specification includes the lagged public investment variable on the right hand side of equation (i) to take into account the persistence of public investment. In terms of fiscal rules (*fr*), we assess the impact of both EU fiscal rules (Member States under an excessive deficit procedure) and the existence of *national* fiscal rules following DG ECFIN's database. A negative and significant coefficient of β_2 would imply that fiscal rules had an adverse impact on public investment. *X* represents a vector of key

⁽¹⁾ Heinemann (2006).

⁽²⁾ Turrini (2004).

⁽³⁾ Mehrotra and Välijä (2006). We additionally test TFP growth as a determinant for similar results. It however raises some multi-collinearity issues.

⁽⁴⁾ Mehrotra and Välijä (2006).

⁽⁵⁾ Jäger and Schmidt (2016).

(Continued on the next page)

Box (continued)

control variables derived from the literature (see above). Finally, the specification includes year- (9) and country-fixed effects (θ), while ε represents an error term.

To assess if the impact of fiscal rules on public investment depends on the available fiscal space, we estimate the following panel interaction model:

$$inv_{i,t} = \beta_1 inv_{i,t-1} + \beta_2 fr_{i,t} + \beta_3 fspace_{i,t} + \beta_4 fspace_{i,t} \cdot fr_{i,t} + \beta_5 X_{i,t} + \theta_i + \gamma_t + u_{i,t} \quad (\text{ii})$$

where fiscal space is measured as the difference between the public debt-to-GDP ratio and the 60% GDP reference value, as defined in the Protocol on the EDP annexed to the TFEU. In this specification, the marginal impact of fiscal rules depends on the available size of fiscal space as follows:

$$\frac{\partial inv}{\partial fr} = \beta_2 + \beta_4 fspace$$

Finally, we assess the *indirect* impact of the design of national fiscal rules on public investment via the public debt channel. Public debt may have a stronger adverse impact on public investment if the design of national fiscal rules is weak. As a consequence, the following interaction specification is estimated:

$$inv_{i,t} = \beta_1 inv_{i,t-1} + \beta_2 fr_{i,t} + \beta_3 debt_{i,t} + \beta_4 debt_{i,t} \cdot fr_{i,t} + \beta_5 X_{i,t} + \theta_i + \gamma_t + u_{i,t} \quad (\text{iii})$$

In this case, the marginal impact of public debt on public investment depends on the design of fiscal rules:

$$\frac{\partial inv}{\partial debt} = \beta_2 + \beta_4 fr$$

2. Have golden rules promoted public investment in the past?

To assess the impact of golden rules on public investment, we augment specification (i) as follows:

$$inv_{i,t} = \beta_1 inv_{i,t-1} + \beta_2 fr_{i,t} + \beta_3 gr_{i,t} + \beta_4 X_{i,t} + \theta_i + \gamma_t + u_{i,t} \quad (\text{iv})$$

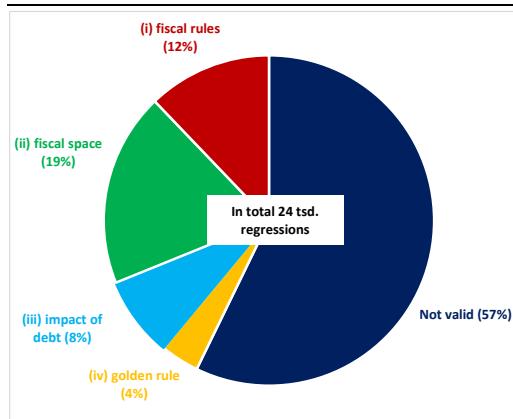
where the existence of a golden rule (*gr*) is measured with a dummy variable which is equal to one if a golden rule exists at the general government level and zero otherwise. If a golden rule had supported public investment in the past, the coefficient β₃ would be positive and significant.

Estimation approach

We use two estimation approaches: (1) Fixed effects using heteroskedasticity-robust Huber-White standard errors; (2) First-difference and system-GMM estimators following Blundell and Bond (1998), controlling for endogeneity of the lagged dependent variable, public debt and the real GDP per capita. Due to the small sample size, the set of internal instrumental variables is restricted to up to two lags and the matrix of instruments is “collapsed” to limit instrument proliferation. The standard errors are corrected following Windmeijer (2005). AR(1,2) and Hansen tests confirm the validity of the system GMM specifications.

Our findings are based on 24 000 regressions. The very large number of estimated regressions shows that the results are sensitive to the choice of specification and estimation technique (Graph III.3.1). As a consequence, we follow a cautious approach and largely present the findings in a “non-standard” way as the percentage share of significant and non-significant regressions.

Graph III.3.1: Overview of number of specifications by question



Note: The numbering refers to the four questions raised.

Source: Commission services.

3.3. KEY FINDINGS

The standard drivers of public investment

Our findings from panel regressions point to a broad range of explanations for low public investment (Table III.3.1). The key drivers of public investment can be summarised as follows: (i) Member States’ public investment decisions appear to show a high degree of persistence and be constrained by fiscal pressure, in particular high public debt⁽⁸⁵⁾; (ii) Adverse macroeconomic conditions⁽⁸⁶⁾ and especially the global financial crisis⁽⁸⁷⁾ appear to hamper have hampered public investment; (iii) The impact of demographic changes appears not to be clear cut. On the one

⁽⁸⁵⁾ Bacchicocchi, E., E. Borghi and A. Missale (2011), Public investment under fiscal constraints, *Fiscal Studies*, 32(1), 11-42; Vuchelen, J. and S. Caeckelbergh (2010), Explaining public investment in Western Europe, *Applied Economics*, 42(14), 1783-1796.

⁽⁸⁶⁾ Mehrotra, A. and T. Välijä (2006): Public investment in Europe: Evolution and determinants in perspective, *Fiscal Studies*, 27(4), 443-471.

⁽⁸⁷⁾ European Commission (2017), Report on Public Finances in EMU.

hand, a larger proportion of elderly people can depress public investment, since elderly people appear to discount future payoffs more heavily than younger people⁽⁸⁸⁾. On the other hand, rising longevity could heighten the demand for long-lasting public goods, since more people live long enough to take advantage of the investments made⁽⁸⁹⁾ and investment is required to transform current savings for retirement into future (higher) consumption; and (iv) We could not find a significant impact from political economy factors, such as election year or partisanship of governments.

Table III.3.1: Key drivers of public investment (evidence from panel regressions)

Fiscal factors	
Investment (t-1)	+++
Public debt (t-1)	--
EDP (t)	(-)
Macro-/demographic factors	
Real GDP growth (t)	++
Real GDP per capita (t-1)	(+)
Dummy Great Recession (2008-09)	-
Population growth (t)	(+/-)
Political economy factors	
Election year (t)	(+)
Share govt.left-wing (t-1)	(+/-)

Note: The table summarises the main findings of a large set of panel baseline regressions, which exclude any fiscal rule variable. +/- stands for a positive/negative impact; +++/-: significant at 1% level, +/-- significant at 5% level, +/- significant at 10% level, (+)(-) not significant. [FYI: Could be easily converted in a typical regression table with size of coefficients and p-values]

Source: Commission Services

Have fiscal rules hampered public investment?

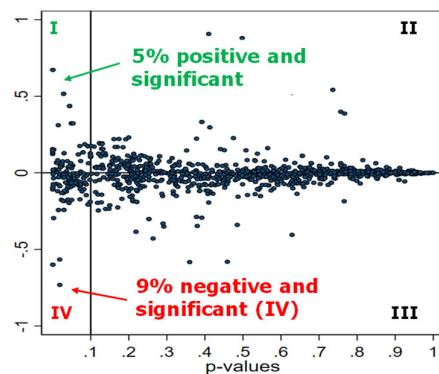
We find no strong statistical evidence that fiscal rules have hampered or promoted public investment. In terms of EU fiscal rules, our results suggest that placing Member States in EDP had no statistically-significant negative impact on public investment (Table III.3.1). Similarly, *national* fiscal rules appear to have no statistically significant adverse impact on public investment: The overwhelming part of the estimated specifications (86%) points to no statistically significant impact of national fiscal rules on public investment (Graph III.3.2). A much smaller share

⁽⁸⁸⁾ Jäger, P. and T. Schmidt (2016), The political economy of public investment when population is aging: A panel cointegration analysis, *European Journal of Political Economy*, 43, issue C, 145-158.

⁽⁸⁹⁾ Gonzalez-Eiras, M. and D. Niepelt (2012), Ageing, government budgets, retirement, and growth, *European Economic Review*, 56, 97-115.

of the total regressions shows a statistically significantly negative (9%) or even a statistically significantly positive impact (5%) of national fiscal rules on public investment.

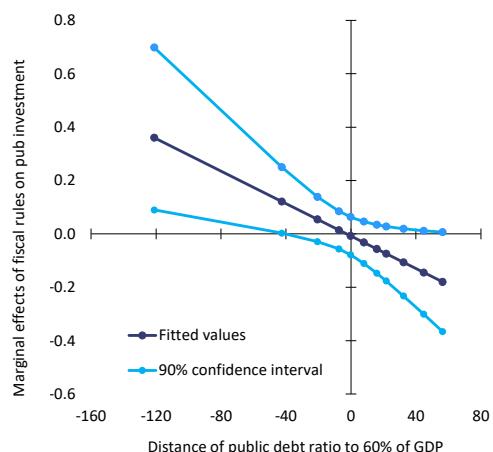
Graph III.3.2: Impact of national fiscal rules on public investment (estimated coefficients and significance levels of an impact of national fiscal rules on public investment)



Note: The graph shows the p-values of the estimated coefficients of the impact of national fiscal rules on public investment (see equation i of Box III.3.1). Evidence points to a positive and statistically significant (quadrant I), positive/negative but not statistically significant (quadrant II/III) and negative and statistically significant (quadrant IV) effect. It is derived from almost 2900 valid panel specifications, consisting of different types of national fiscal rules and estimation techniques (FE, FD-GMM, SYS-GMM). Only valid GMM specifications are shown.
Source: Commission services

The impact of fiscal rules on public investment does not depend on the available fiscal space. We measure the available fiscal space as the difference of the debt-to-GDP ratio to the 60% GDP reference value. The evidence shows that the existence of national fiscal rules appears to play no role for the investment decisions of Member States with fiscal space. For Member States without fiscal space, the existence of national fiscal rules appear to have even a slight positive impact on public investment (Graph III.3.3). This is likely to be explained by a positive impact of fiscal rules on fiscal sustainability, as a favourable condition for investment, as further explained below.

Graph III.3.3: Marginal impact of fiscal rules on public investment for Member States with/without fiscal space

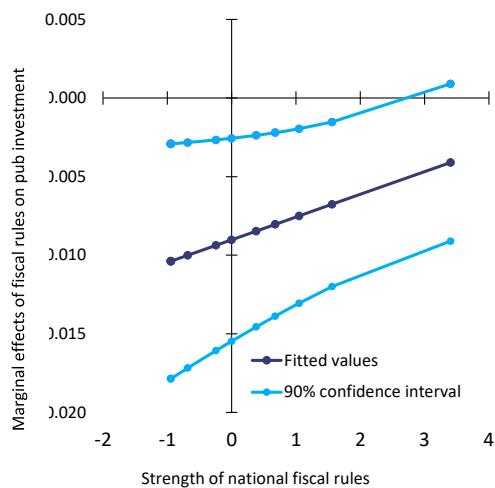


Note: The graph shows evidence from a panel interaction model as described in Box III.3.1 (equation iii). Fiscal space refers to the numerical difference of a Member State's public debt-to-GDP ratio to the reference value of 60% of GDP, i.e. negative/positive values correspond to Members without/with "fiscal space". The strength of national fiscal rules is measured with DG ECFIN's composite fiscal rules strength indicator.

Source: Commission services.

Well-designed national fiscal rules appear to create fiscal space and therefore mitigate the negative impact of public debt on public investment. Our findings show that the negative impact of public debt on public investment becomes smaller, the stronger the design of national fiscal rules as measured by DG ECFIN's composite fiscal rules strength indicator (Graph III.3.4). This means that the negative impact of public debt on public investment is particularly strong for Member States with a weak design of national fiscal rules, while it is no longer significant for Member States with a very strong design of fiscal rules.

Graph III.3.4: Impact of public debt on investment by strength of national fiscal rules



Note: The graph shows evidence from a panel interaction model as described in Box III.3.1 (equation iv). Strength of national fiscal rules is measured with DG ECFIN's composite fiscal rules indicator. The positive relationship implies that the impact of public debt on public investment becomes weaker the better designed the national fiscal rules.

Source: Commission services.

Have golden rules supported public investment?

We find no strong statistical evidence that golden rules in general have supported public investment in the past. We augmented our regression model with a dummy variable for the existence of a golden rule. The variable is equal to one if a golden rule exists at the general government level and zero otherwise. The findings show that the impact of a golden rule on public investment is not statistically significant (Table III.3.2).

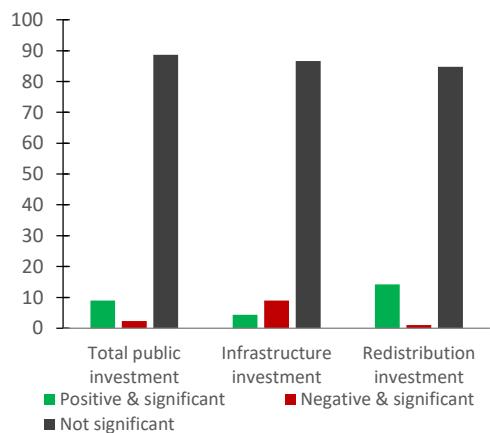
Table III.3.2: Impact of golden rules on public investment (evidence from panel regressions)

	FE	FE	FGMM
Public investment (t-1)	0.715*** (15.28)	0.715*** (15.28)	0.722*** (3.928)
Public debt (t-1)	-0.0831** (-2.403)	-0.0831** (-2.403)	-0.155*** (-3.069)
Real GDP per capita USD (t-1)	0.239* (1.933)	0.239* (1.933)	0.0213 (-0.686)
Real GDP growth (t-1)	0.656 (1.392)	0.656 (1.392)	0.175* (1.880)
Great Recession dummy (2009-11)	-0.0600** (-2.225)	-0.0600** (-2.225)	-0.0194* (-1.817)
Pop. share > 65 (t-1)	-0.132 (-0.665)	-0.132 (-0.665)	0.0759 (0.971)
Election year (t)	0.0726* (1.906)	0.0726* (1.906)	0.049 (1.155)
In govt left (t)	0.0317 (0.648)	0.0317 (0.648)	0.0448 (1.072)
Golden rule dummy (t)	0.0431 (1.276)	0.0106 (0.470)	
Observations	620	620	594
# countries	28	28	28
R-squared	0.647	0.646	
Wald time dummies (p-value)	0.000	0.000	0.090
AR(1) (p-value)			0.030
AR(2) (p-value)			0.428
Hansen (p-value)			0.650
# instruments			26

Source: Commission services.

Robustness tests confirm that there is no strong statistical evidence on the impact of golden rules on public investment. Only around 10% of the total estimated specifications point to a positive and significant impact of golden rules on public investment. Around 5% of the regressions suggest a negative and significant impact and almost 80% turned out to be insignificant. Overall, the positive and significant impact of golden rules on public investment appears to be higher in terms of public investment spent for redistribution (12%) compared with public investment spent for infrastructure (4%) (Graph III.3.5).

Graph III.3.5: Impact of the existence of a golden rule on public investment (percentage share of (non-) significant regression results by type of public investment)



Note: The graph summarises the estimated impact of the existence of a golden rule on public investment as derived from the panel model described in Box III.3.1 (equation ii). The existence of a golden rule refers to the general government level and it is measured with the IMF's fiscal rules database.

Source: Commission services.

4. CONCLUSIONS

Our analysis shows a very limited impact of more favourable interest rate-growth differentials on several measures of the quality of public finance in EU Member States in the past two decades. The absence of impact appears robust over the many econometric specifications examined. We analyse the relationship between the quality of public expenditure and differentials using different proxies for the quality of public finances and different models. In particular, we do not find positive effects on the efficiency of public spending, or on the composition of expenditure in Member States with high debt.

However, Member States with debt below 60% may have improved the composition of their public finance only thanks to increased fiscal space allowed by lower debt servicing. We find a small positive effect on the composition of expenditure in Member States with debt below 60% in 2019. This effect seems to be explained by the fiscal space generated by lower debt servicing, not by the improvement in the profitability of long-term investments. This result could be in part attributed to efforts to meet balance requirement that include debt servicing, such as the requirement of the SGP (the required fiscal trajectory toward MTO expressed in structural balance and including debt servicing) or national fiscal frameworks. Lower debt-servicing means then more space to spend and in particular in growth-friendly spending (with an unchanged fiscal requirement).

Our analysis also shows that the concern that fiscal rules are a key reason behind the low public investment is not supported by econometric evidence. This evidence from panel regressions shows that fiscal rules appear to have not hampered public investment in the past. The findings imply that a careful design of fiscal rules is key.

Empirically, the panel regression shows no clear evidence that golden rules supported public investment in the past. The empirical evidence shows that golden rules seem to have had not statistically significant impact on public investment in the past. The finding is supported by a large number of robustness tests but is based on a dataset from 9 Member States only that have or had at least for some years a golden rule. Further empirical work is needed.

The Recovery and Resilience Facility will help promote public investment and growth-friendly spending in the favourable context of negative interest rate-growth differentials. In sharp contrast to the years following the global financial crisis, higher public investment will support the post-pandemic recovery. Moreover, by favouring more profitable public spending, and by protecting Member States' fiscal space, the RRF will help improve the composition and efficiency of public expenditure. Indeed, RRF grants are designed to fund high-quality investment projects and enable productivity-enhancing reforms, without giving rise to higher national deficit and debt ratios. This will help Member States increase productive spending and achieve higher performance along most efficiency targets, compared to previous years.

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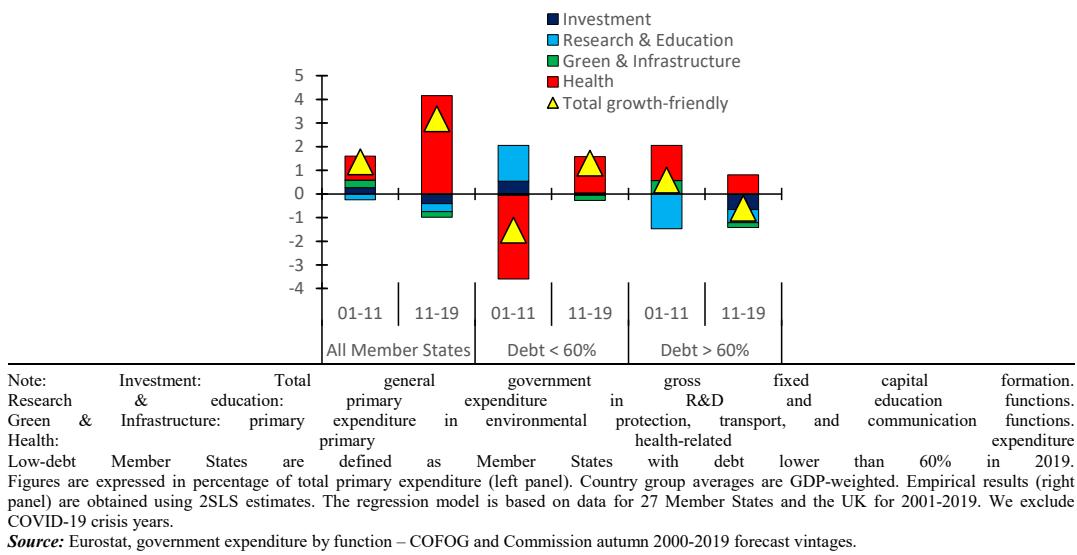
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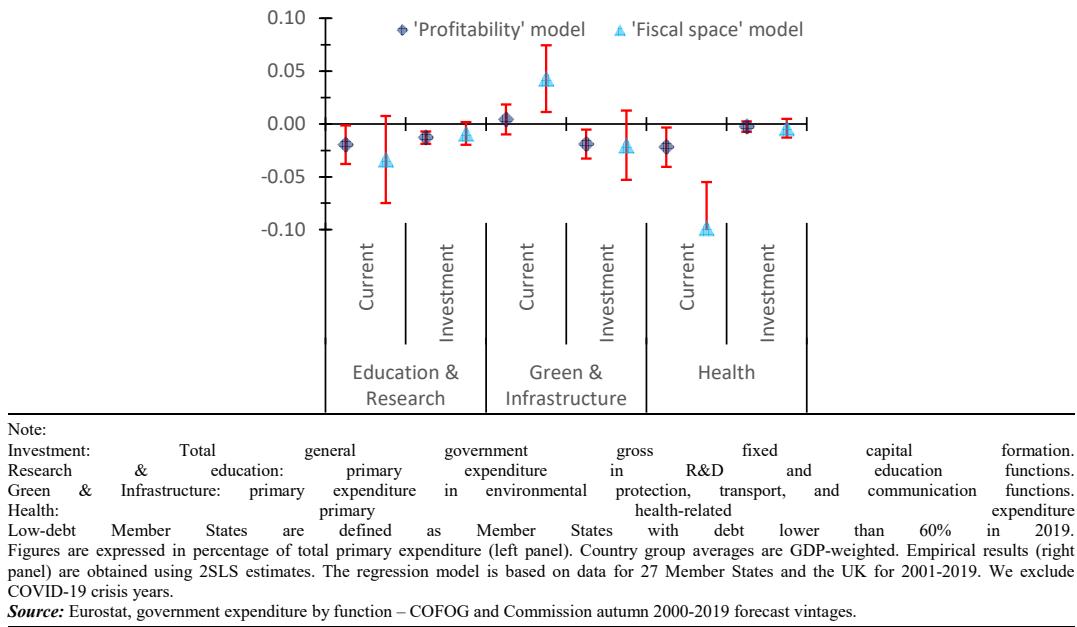
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ANNEX

Graph III.A.1: Change in the share of growth-friendly expenditure, by groups and periods (% primary expenditure)



Graph III.A.2: Effect of interest rate-growth differential on categories of growth-friendly expenditure (Member States and UK, 2001-2019)



Part IV

Do national fiscal rules support numerical compliance with EU fiscal rules?

Please cite this as follows:

European Commission (2022), Do national fiscal rules support numerical compliance with EU fiscal rules?, Report on Public Finances in EMU 2021, Institutional Paper 181, 12 July, 87-103.

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KEY FINDINGS

This part investigates if compliance with the national fiscal rules have supported numerical compliance with EU fiscal rules. It is based on a novel dataset of numerical compliance with EU and national fiscal rules, focusing on Member States over the period 1999 to 2019.

Stylised facts show that compliance with fiscal rules is higher at EU than at national level as well as for Member States with well-designed fiscal rules and in case of lower public-debt ratios.

- On average, numerical compliance across types of rules appears slightly higher at EU level (around 60%) than at national level (55%), with substantial differences across countries and per type of rules.
- Compliance with fiscal rules appears to be higher in countries with well-designed national fiscal rules, as captured by the European Commission Fiscal Rule Strength Index, and in case of lower public debt.

Findings from panel regressions show that national and EU fiscal rules seem to reinforce each other when they are complied with and when rules are well designed.

- Panel estimations suggest that having a national fiscal rule *per se* has no implications on compliance with EU fiscal rules.
- However, compliance with national rules that are well-designed seems to support compliance with EU fiscal rules.
- Against the usual caveats on panel regressions, the results suggest that efforts to improve the design of national rules and their monitoring and enforcement should be continued.

1. INTRODUCTION

At present, public finances of Member States are shaped by numerical fiscal rules at both EU and national levels. At EU level (⁽¹⁾), there are four types of fiscal rules, namely the structural balance rule, the expenditure benchmark, the 3% headline deficit rule and the debt reduction benchmark. At national level, Member States have adopted similar types of rules, with different designs and specifications. Some national rules fully mirror those at EU level, others depart in few aspects or are quite different. The rules at national level also cover different layers of government and different budget items (⁽⁹⁰⁾).

The EU law calls for the adoption of national fiscal rules that support compliance with EU rules. Council Directive 2011/85 (⁽⁹¹⁾) requires Member States to adopt national fiscal rules that “effectively promote compliance with the obligations deriving from the Treaty on the Functioning of the European Union (TFEU) in the area of budgetary policy over a multiannual horizon for the general government as a whole”. To address this provision, several Member States have adopted national rules in various forms with a view to support compliance with EU rules.

To the best of our knowledge, the implications of compliance with national fiscal rules on EU fiscal rules have not been assessed. The literature has identified several drivers of compliance with fiscal rules, in particular related to the fiscal and macroeconomic environment, the type of fiscal rules and institutions and political economy factors (⁽⁹²⁾). However, the implications of compliance with and design of national fiscal rules has, to the best of our knowledge, not been assessed. The ‘design strength’ of a fiscal rule refers to the practices or arrangements that make a rule more effective in constraining fiscal policy and fostering fiscal transparency (⁽⁹³⁾). Among other criteria, it covers whether the target can easily be

changed and whether compliance with the rule is being well monitored (⁽⁹⁴⁾).

Against this background, this part provides new evidence on the implications of the national fiscal rules for the compliance with EU fiscal rules. This relationship is assessed with panel regressions focusing on the following three questions:

1. Does the *existence* of national rules influence compliance with EU fiscal rules?
2. Does *compliance* with national fiscal rules support compliance with EU rules?
3. Does the *design* of national fiscal rules matter for compliance with EU fiscal rules?

The empirical analysis relies on a novel dataset of numerical compliance with fiscal rules. The indicator used to measure numerical compliance with national rules is constructed based on information available in the Commission’s Fiscal Governance Database (FGD) regarding the rules’ design. Compliance with national fiscal rules is measured following Reuter (2019) as ex-post deviation of the outcome from the target (⁽⁹⁵⁾). Similarly, numerical compliance with the four EU fiscal rules is measured as the ex-post deviation of the outcome from the target or reference value similar to European Commission (2021b).

⁽⁹⁰⁾ Communication from the European Commission “The EU economy after COVID-19: implications for economic governance” COM(2021) 662 final.

⁽⁹¹⁾ Council Directive 2011/85/EU of 8 November 2011 on requirements for budgetary frameworks of the Member States.

⁽⁹²⁾ European Commission (2021), Reuter (2019), Larch and Santacroce (2020), Larch et al. (2020), Thygesen et al. (2019), De Jong and Gilbert (2020).

⁽⁹³⁾ The Commission uses the widely accepted definition from Kopits and Symansky (1998), Fiscal policy rules, IMF Occasional Paper 162.

⁽⁹⁴⁾ This methodology a widely accepted definition that sets out five major criteria for a well-designed rule. For more info, please see Deroose, Moulin and Wierts (2006), National expenditure rules and expenditure outcomes: evidence for EU member states.

⁽⁹⁵⁾ The national fiscal rules selected for this database and their specification do not fully match those of Reuter (2019), who uses also other sources on rule design.

Compliance indicators are indicative as they do not include information on legal compliance. As calculated, numerical compliance only captures a distance indicator, of the variable outturn from the target. Thereby, flexibility, the netting of one-offs, and escape clauses are not included. As such, the numerical compliance indicators have no official or legal status, but they still represent a valid broad measurement of the adherence to fiscal rules.

This part is structured as follows: Chapter IV.2. explains how numerical compliance with fiscal rules is measured. Chapter IV.3. presents some stylised facts. Chapter IV.4. features the empirical analysis and its findings. Chapter IV.5. concludes.

2. HOW TO MEASURE NUMERICAL COMPLIANCE WITH FISCAL RULES?

This chapter explains how numerical compliance with fiscal rules is calculated. While the numerical compliance indicators have no official or legal status, they still represent a valid interpretation of the key rationale of fiscal rules as set out in national or EU legislation.

Numerical compliance with EU fiscal rules

We define numerical compliance with EU fiscal rules as the deviation of the realised outcome from the target or reference value. The compliance indicator measures for each EU fiscal rule and for each year the ex-post deviation of the realised outcome from the target or reference value in percent of GDP⁽⁹⁶⁾. A positive value indicates an overachievement of the target or reference value implied by our definition of the rule, while a negative value refers to a shortfall.

The numerical compliance indicators are defined for the four EU fiscal rules:⁽⁹⁷⁾

- *Structural balance rule*⁽⁹⁸⁾: A positive (negative) sign means that the country's fiscal effort, as measured by the change in the structural balance, exceeds (falls below) the matrix requirements⁽⁹⁹⁾ or that the country is above its medium-term objective (MTO).
- *Expenditure rule*: A positive (negative) sign means that the annual 10-year average rate of nominal potential growth exceeds (falls below) the growth rate of net expenditure growth. We measure potential growth and net expenditure

growth rates in line with the EU expenditure benchmark⁽¹⁰⁰⁾.

- *Headline deficit rule*: A positive (negative) sign means that the headline balance exceeds (is below) a deficit of 3% of GDP.
- *Debt rule*: For Member States with a debt-to-GDP ratio above 60%, a positive (negative) sign means that the actual debt-to-GDP ratio is below (above) the one required by the (backward-looking) 1/20 debt reduction rule. For countries with a debt-to-GDP below 60% of GDP, the sign is positive and measures the distance to the 60% reference value. This is a mechanical and simplified version of the debt reduction benchmark.

The compliance indicators take the changing nature of EU fiscal rules into account. We take into account that the EU fiscal rules have changed over time. In particular, the structural balance rule was modified in 2005 (mainly by introducing a country-specific MTO) and in 2015 (mainly by modulating the required fiscal adjustment around the economic cycle and public debt in the context of introduction of the matrix of requirements).

Numerical compliance with national fiscal rules

Numerical compliance with national fiscal rules is constructed based on the Commission's Fiscal Governance Database (FGD) and follows Reuter (2019)'s approach⁽¹⁰¹⁾. This database contains those national numerical fiscal rules that meet the definition by Kopits and Symansky, whereby a fiscal rule is "a permanent constraint on fiscal policy, expressed in terms of a summary indicator of fiscal performance"⁽¹⁰²⁾. It contains

⁽⁹⁶⁾ For simplicity, this chapter does not take into account the implications of the so-called "freezing" principle applied in the EU fiscal surveillance process. For further information see European Commission (2020c), Box II.4.1: Freezing principle and unfreezing modalities, Report on Public Finances in EMU 2019, p. 59-60.

⁽⁹⁷⁾ European Commission (2021).

⁽⁹⁸⁾ The deviation to the structural balance rule is calculated as the difference between the change in the structural balance and the fiscal adjustment requirement of the fiscal framework.

⁽⁹⁹⁾ The matrix of requirements was introduced in 2015 to modulate the requested fiscal adjustment across the economic cycle and the level of debt (European Commission, 2019).

⁽¹⁰⁰⁾ European Commission (2019).

⁽¹⁰¹⁾ Reuter (2019) calculated compliance as ex-post deviations of the outcome of the aggregate implied by the fiscal rule from the target that should be attained if the rule were to be met. Compliance is only assessed numerically and not legally, thereby escape clauses or other flexibility clauses are not taken into account.

⁽¹⁰²⁾ Kopits and Symansky (1998). It should be stressed that this reflects only an assessment on whether the reported rule(s) meet(s) the definition of the database or not. It is in no way an assessment on the usefulness of fiscal rules that are not

five types of numerical fiscal rules, namely expenditure rules, deficit and structural balance rules, debt rules as well as revenue rules. Rules cover the general government, central government, regional government, social security or a combination thereof⁽¹⁰³⁾.

Compliance with national fiscal rules is calculated for around two-thirds of existing fiscal rules. The national rule dataset contains rules from all 27 Member States, in force between 1998-2019⁽¹⁰⁴⁾. Out of the total 141 national rules of the FGD, this part focuses on 90 rules, selected based on the following judgement calls:

- Revenue rules were excluded, since they are not fully matched by equivalent EU rules.
- Rules covering a limited part of the general government were also excluded, due to the limited amount of impact they would have on fiscal performance.
- When a same rule type (either debt, or deficit, or expenditure, or structural balance rules) applies to different government sub-sectors, the rule with the largest coverage is selected (e.g. a rule covering general government, rather than a similar rule that only covers local government).
- Rules for which compliance is difficult to calculate are excluded. For example, a local rule that allows municipalities to set differing targets at the local level.
- The sample includes national rules, the design of which is identical or strongly resembles the one of EU fiscal rules. Despite the fact that compliance with the former often also results in compliance with the latter, such national rules might still foster EU compliance, thereby they are included in the dataset.

Numerical compliance is calculated as the deviation of the outcome from the target. The FGD description of the rules' design provides information about the target of each rule, for example a deficit of no more than 3% of GDP, and on the aggregate considered, for example the headline balance. Based on this information, compliance with national fiscal rules is calculated for each year that a rule was in force, as the deviation of the realised outcome from the target. The calculations are based on outturn variables, thereby capturing only ex-post compliance. As in the case of EU fiscal rules, a positive value indicates an overachievement of the target or reference value implied by the national fiscal rule, while a negative value refers to a shortfall. Two series of national compliance are calculated. The first one is a dummy variable, taking values zero for non-compliance and one for compliance (following Reuter, 2019). The second one measures the deviation from the target expressed in percentage of GDP, following European Commission (2021) and Larch and Santacroce (2020).

National compliance is calculated based on variables coming from several sources. These include Eurostat and the European Commission's Macroeconomic Database (AMECO). In some cases, the relevant information is drawn from national budgetary documents, from the FGD or from the IMF Government Finance Statistics database.

in the database, which may indeed be effective tools in strengthening the budgetary process.

⁽¹⁰³⁾ European Commission Services website: [Numerical fiscal rules in EU member countries | European Commission \(europa.eu\)](https://ec.europa.eu/eurostat/web/national-fiscal-rules-in-eu-member-countries/_European_Commission_(europa.eu))

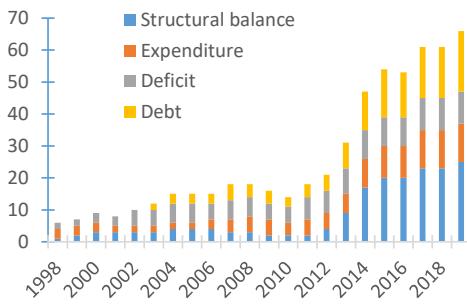
⁽¹⁰⁴⁾ Annex II displays the full set of rules included and excluded from the sample.

3. STYLISED FACTS ON NUMERICAL COMPLIANCE WITH FISCAL RULES?

This chapter presents some stylised facts on numerical compliance with fiscal rules. The figures shown here refer to the sample of fiscal rules as described in Chapter IV.2.

In recent years, the number of national fiscal rules has increased significantly in the EU (Graph IV.3.1). In 2019, there were roughly two times as many national fiscal rules in force in the EU compared to a decade earlier and three times as many since the adoption of the Stability and Growth Pact in 1997. The increase in the number of rules was particularly pronounced after the entry into force in 2013 of the Council Directive 2011/85/EU on requirements for budgetary frameworks of the Member States and the Fiscal Compact⁽¹⁰⁵⁾ (2014), since those legal instruments contain specific provisions for national fiscal rules⁽¹⁰⁶⁾.

Graph IV.3.1: Number of national fiscal rules in Member States (1998-2019) for the calculation of compliance gap for national rules



Note: The sample of national fiscal rules shown here is described in Chapter IV.2. It does not include revenue rules and certain rules for which the calculation of numerical compliance with fiscal rules was not feasible. The majority of rules covers either the general or central government.

Source: Commission services.

At national level, structural balance and debt rules are the most common types of rules (Table IV.3.1). In 2019, structural balance and debt rules were more common among Member States than expenditure and deficit rules. The

⁽¹⁰⁵⁾ Treaty on Stability, Coordination and Governance in the Economic and Monetary Union.

⁽¹⁰⁶⁾ European Commission (2019): Report on Public Finances in EMU 2018.

average design strength, as captured by the European Commission Fiscal Rule Strength Index⁽¹⁰⁷⁾, was highest for structural balance and lowest for deficit rules.

Table IV.3.1: Frequency and design strength of national fiscal rules across Member States (2019)

Type of rule	Frequency across Member States*	Average design strength**
Structural balance	96%	High
Expenditure	48%	Medium
Deficit	41%	Low
Debt	74%	Medium

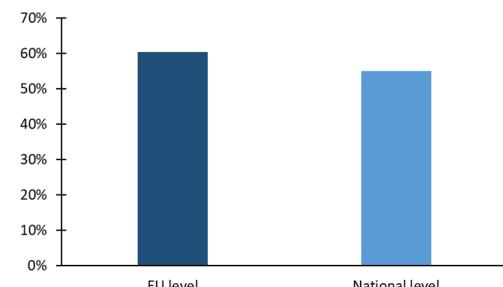
Note: * Refers to the share of Member States that have at least one rule of this type at the general or central level of government.

** Refers to the average design strength of national fiscal rules for which compliance was assessed in 2019. High/medium/low refers to the top/middle/bottom third of the design strength distribution as measured by the Commission's Fiscal Governance Database.

Source: Commission services.

The numerical compliance rates with fiscal rules seem to be slightly higher at EU than at national level (Graph IV.3.2). Over the past two decades, Member States have complied on average around 60 percent of the time with EU fiscal rules⁽¹⁰⁸⁾. Compliance with national fiscal rules appears to be slightly lower (Graph IV.3.2 +).

Graph IV.3.2: Average compliance rates with fiscal rules at EU and national level (1998-2019)



Note: The numerical compliance rate refers to the average rate across all types of fiscal rules. Compliance is measured as a dummy variable, where 1 refers to compliance and 0 to non-compliance.

Source: Commission services.

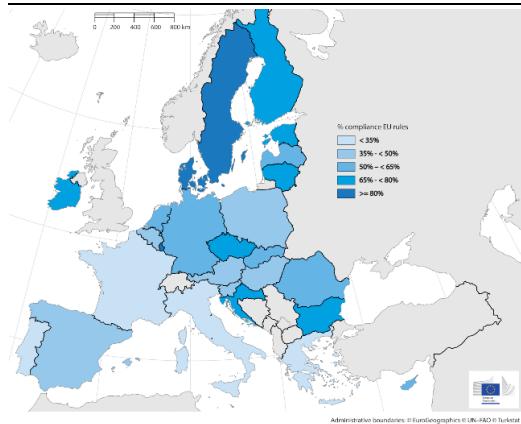
There are wide differences in EU and national compliance rates across Member States. Compliance with EU fiscal rules is particularly

⁽¹⁰⁷⁾ Numerical fiscal rules in EU member countries | European Commission (eropa.eu)

⁽¹⁰⁸⁾ Compliance rates appear to be higher in real time than ex post (European Commission, 2021).

high for Denmark, Luxembourg and Sweden (Graph IV.3.3). Compliance with national fiscal rules is particularly high for countries like Slovenia, Czechia, the Netherlands and Poland (Graph IV.3.4).

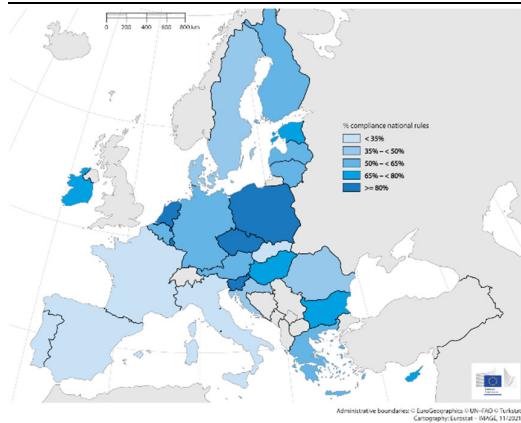
Graph IV.3.3: Numerical compliance rates with EU fiscal rules across Member States (1998-2019)



Note: The numerical compliance rates refer to the average rate across all types of EU fiscal rules. Compliance is measured for each fiscal rule as a dummy variable, where 1 refers to compliant and 0 to non-compliant.

Source: Commission services.

Graph IV.3.4: Numerical compliance rates with national fiscal rules across Member States (1998-2019)



Note: The numerical compliance rate refers to the average rate across all national fiscal rules as described in Chapter 2. Compliance is measured for each fiscal rule as a dummy variable, where 1 refers to compliant and 0 to non-compliant.

Source: Commission services.

Compliance rates differ across types of fiscal rules. Expenditure rules show the highest compliance rates at national level, while deficit rules have the highest rates at EU level. Compliance rate with expenditure rules is higher at national than at EU level. By contrast, compliance

rates with structural balance, deficit and debt rules are higher at EU than at national level (Table IV.3.2). Such comparison should however be made with caution, given the difference in the two samples, often covering for a specific year different rules and different Member States.

Table IV.3.2: Compliance rates by type of fiscal rules at EU and national level (1998-2019)

Type of rule	National level	EU level
Structural balance	48%	54%
Expenditure	64%	58%
Deficit	46%	67%
Debt	62%	63%

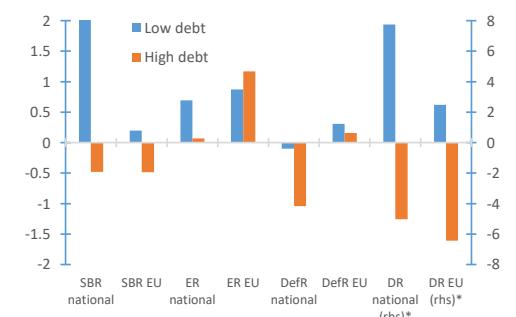
Note: Compliance is measured for each fiscal rule as a dummy variable, where 1 refers to compliant and 0 to non-compliant. The differences between the compliance rates at the EU and national levels are potentially affected by differences in the time period being assessed. For the EU fiscal rules, the sample does not include periods in which Member States were under an excessive deficit procedure.

Source: Commission services.

Based on simple correlations, numerical compliance with fiscal rules seems to be higher ...

- ... in cases with lower public debt ratios.
- Compliance rates with almost all fiscal rules are higher in periods with low- compared to periods with high-public debt-to-GDP ratios, where low and high are below and above 60% of GDP, respectively. In addition, on average, fiscal rules are overachieved when debt is low. (Graph IV.3.5).

Graph IV.3.5: Numerical compliance rates in cases of low and high public debt (% of GDP)

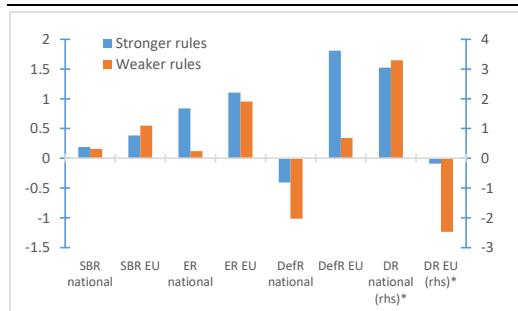


Note: Numerical compliance here is shown in a more precise measurement, i.e. in terms of average gap to the target expressed as % of GDP. Low debt corresponds to public debt at or below 60% of GDP. High debt corresponds to public debt above 60% GDP. The values for the national and EU debt rules are displayed on the right-hand side of the graph.

Source: Commission services.

- ... in Member States with well-designed fiscal rules. Member States with well-designed national fiscal rules, as captured by the European Commission Fiscal Rule Strength Index, display higher compliance rates with EU fiscal rules (Graph IV.3.6).

Graph IV.3.6: Numerical compliance rates for stronger and weaker design of fiscal rules (% of GDP)



Note: The values for the national and EU debt rules are displayed on the right-hand side of the graph. The numerical compliance rates are measured in % of GDP. The strength of the rules is based on the National Fiscal Rule Strength Index of the Commission's Fiscal Governance Database. This index looks at national rules. Stronger rules are considered rules that are stronger than average for that year, whereas weaker rules are below the average for that year. For further information on the different dimensions of the strength index, please see: https://ec.europa.eu/info/business-economy-euro/indicators-statistics/economic-databases/fiscal-governance-eu-member-states/numerical-fiscal-rules-eu-member-countries_en

Source: Commission services.

4. EMPIRICAL ANALYSIS

This chapter presents the empirical analysis used to assess the implications of national rules on numerical compliance with EU rules. It tries to identify whether national rules support compliance with EU fiscal rules.

For this purpose, we use a panel regression approach for EU Member States for the period 1999-2019. We measure the compliance with fiscal rules with the indicators described in Chapter IV.2 and further specified in Box IV.4.1. We also control for the relevant drivers of compliance with fiscal rules in line with the literature (see Box IV.4.1 for an overview). The analysis is based on data from the Commission spring forecast 2021. More technical details on the regression approach are described in Box IV.4.1. Annex I provides a detailed overview of data sources by variable.

Main findings of compliance with fiscal rules

Does the existence of national rules influence EU rule compliance?

The existence of national rules *per se* does not matter for EU rules' compliance. Estimation results show an insignificant relationship between the existence of national fiscal rules and numerical compliance with EU rules. This finding holds irrespective of the type of EU fiscal rule (Table IV.4.1).

Table IV.4.1: Regression coefficients of EU compliance on the existence of national rules

	Dependent variable: deviation from ...			
	structural balance rule	expenditure rule	deficit rule	debt rule
	(1)	(2)	(3)	(4)
Dependent variable (t-1)	0.022 (0.049)	-0.007 (0.0503)	0.674*** (0.0360)	0.722*** (0.0359)
Change in output gap (t-1)	-0.0232 (0.0383)	-0.142* (0.0728)	0.335*** (0.0470)	-0.176 (0.111)
EU/IMF adjustment programme	2.137*** (0.402)	5.250*** (0.752)	1.363** (0.531)	-4.581*** (1.111)
Implicit interest rate (t-1)	0.270** (0.130)	1.186*** (0.247)	-0.0648 (0.156)	-1.986*** (0.329)
Debt to GDP ratio (t-1)	0.00984 (0.00807)	0.0201 (0.0149)	0.00893 (0.0104)	0.0161 (0.0221)
Pre-election period	-0.00498* (0.00291)	-0.00743 (0.00535)	-0.00806** (0.00361)	0.00697 (0.00667)
2009-2011 crisis dummy	-0.0888 (0.438)	0.513 (0.801)	-0.991** (0.429)	-2.934*** (0.884)
Existence of national rules	-0.296 (0.417)	-0.253 (0.762)	-0.0106 (0.550)	1.123 (1.346)
Observations	489	489	491	474
Number of country_id	28	28	28	28
Wald test time dummies	0.0167	0.00258	0.0197	1.74e-05

Note: Compliance is calculated as deviation of outcome from target and is here expressed in terms of % of GDP. Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1. Panel estimations using Bruno (2005a) bias-correction for autoregressive panels

Source: Commission services.

Does compliance with national fiscal rules support compliance with EU fiscal rules?

Compliance with national fiscal rules tends to be strongly associated with compliance with EU fiscal rules. Estimation results show that higher compliance with national fiscal rules fosters compliance with all types of EU fiscal rules. This result is robust to different indicators measuring compliance with national rules: (i) a numerical compliance indicator by type of fiscal rule and (ii) an average numerical compliance indicator across all types of national fiscal rules (see Box IV.4.1 for a more detailed description of these indicators) (Table IV.4.2).

Table IV.4.2: Regression coefficients of EU compliance on national compliance

	Dependent variable: deviation from ...							
	Structural balance rule	Expenditure rule	Deficit rule	Debt rule	Structural balance rule	Expenditure rule	Deficit rule	Debt rule
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	
Dependent variable (t-1)	-0.006 (0.048)	-0.161 (0.048)	0.654*** (0.103)	0.711*** (0.103)	0.177*** (0.053)	0.347*** (0.053)	0.371*** (0.053)	0.369*** (0.053)
Change in output gap (t-1)	0.126 (0.038)	-0.143** (0.038)	0.214*** (0.048)	-0.195** (0.113)	-0.123*** (0.042)	-0.083 (0.106)	-0.109*** (0.068)	-0.240 (0.205)
EU/IMF adjustment programme	2.137*** (0.401)	5.250*** (0.760)	1.255** (0.530)	-4.893*** (1.110)	0.735** (0.342)	1.448 (1.436)	0.048 (0.549)	-3.834** (1.779)
Implicit interest rate (t-1)	0.310** (0.129)	1.241*** (0.250)	-0.054 (0.156)	-1.927*** (0.324)	0.136 (0.137)	0.207 (0.464)	-0.622** (0.259)	-2.679** (0.822)
Debt to GDP ratio (t-1)	0.015* (0.008)	0.025* (0.015)	0.013 (0.020)	0.024 (0.023)	0 (0.012)	0 (0.044)	-0.043 (0.012)	0.036*** (0.050)
Pre-election period	0.004 (0.003)	-0.004 (0.003)	-0.004 (0.003)	-0.004 (0.003)	-0.005* (0.003)	-0.005* (0.003)	-0.004 (0.003)	-0.004 (0.013)
2009-2011 crisis dummy	0.031 (0.430)	0.641 (0.802)	0.851*** (0.427)	-2.788*** (0.878)	0.119 (0.652)	0.230 (1.047)	0.175 (0.441)	-1.346 (1.408)
Average National Compliance Dummy	1.965*** (0.512)	1.985*** (0.552)	1.733*** (0.675)	3.085*** (1.234)	0.550*** (0.069)	0.516*** (0.110)	0.624*** (0.064)	0.245*** (0.06)
Numerical compliance with equivalent national rule								
Observations	489	489	491	474	175	114	134	136
Number of country_id	28	28	28	28	28	28	28	28
Wall test time dummies	0	0.027	0	0	0.087	0.461	0.007	0.0310

Note: Standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1.
Panel estimations using Bruno (2005a) bias-correction for autoregressive panels.

Source: Commission services.

The relationship between national and EU compliance appears robust to endogeneity, although with a lower degree of significance. There could be reverse causality between compliance with EU fiscal rules and the economic cycle and/or compliance with national fiscal rules. In both cases, the estimates provided above would be biased. As a consequence, we use internal instruments to address this problem (namely, the lagged dependent, the output gap and the national compliance dummy). However, the positive and significant relationship between national compliance and EU compliance appears to hold for all fiscal rules but the debt rule (Table IV.4.3). Compared to previous estimations, however, the regression coefficients display a lower significance, suggesting a somehow weaker relationship when robustness is taken into account.

Table IV.4.3: Endogeneity corrected regression coefficients of EU compliance on national compliance

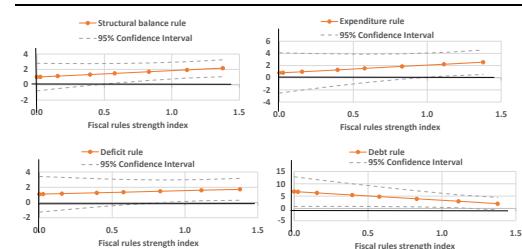
	Dependent variable: deviation from ...			
	structural balance rule	expenditure rule	deficit rule	debt rule
	(1)	(2)	(3)	(4)
Average National Compliance Dummy	2.555* (1.293)	3.558* (1.924)	2.183* (1.269)	1.264 (3.497)
Observations	474	474	504	459
Number of country_id	28	28	28	28
AR(1) (p-value)	0	0.001	0.038	0.047
AR(2) (p-value)	0.029	0.102	0.114	0.863
Instr.	33	33	33	32

Source: Commission services.

Does the design of national rules affect the relationship between EU and national compliance?

The relationship between the two sets of compliance is sensitive to rule design. Rule design is here captured by the European Commission Fiscal Rule Strength Index, which combines information on the legal basis, degree of bindingness, role of monitoring bodies, possible correction mechanisms, and resilience to shocks. For all rules except the debt rule, estimates of national compliance on EU compliance conditional on the fiscal rule index are positive and significant only at higher values of the index. This suggests that national compliance and EU rule compliance are strongly related only when national rules are well designed. At the 80th percentile of the fiscal rule index, the relationship between national and EU compliance is twice as strong as the one observed at a 30th percentile of the index, for the EU structural balance rule and three times stronger for the expenditure rule. For the deficit rule, the relationship becomes stronger by a magnitude of 1.5 (Graph IV.4.1). By contrast, for the debt rule, the impact of national compliance is inversely related to the design, namely that the two sets of compliance are more strongly associated at poor levels of the index. This could be due however to a selection bias, given that in most cases debt rules would score low in the FRSI, as they lack correction mechanisms and are not resilient to shocks.

Graph IV.4.1: Impact of national compliance with fiscal rules on compliance with EU fiscal rules conditional on the design strength of national rules



Note: Estimation based on equation (3) of Box IV.4.1, using Bruno (2005a) bias-correction for autoregressive panels. The strength of national rule design is calculated based on the fiscal rule index of the European Commission, for which the 30th, 40th, 50th, 60th, 70th, 80th and 90th percentiles are shown on the X-axis.

Source: Commission services.

Main findings of key control variables

As expected, compliance with the EU deficit rule improves if economic conditions improve. This finding –which is consistent across model specifications– would suggest a procyclical

behaviour for the deficit rule – in line with previous literature. This is not the case for the other rules, which are either weakly and negatively associated with changes in the output gap or display an insignificant relationship.

Initial debt levels are weakly positively associated with compliance with EU fiscal rules. The higher is the initial public debt level, the more likely is compliance with the EU structural balance, expenditure and deficit rules. However, the coefficients are not significant in all specifications.

The relationship with the interest rates is ambiguous across rules. For the EU structural balance and expenditure rules, higher levels of debt servicing as measured by the implied interest rate are associated with stronger compliance. By contrast, the coefficient is strongly significant and negative for the debt rule, thereby indicating that at higher levels of debt servicing compliance with debt rule is more challenging. The coefficient tends to be insignificant for the deficit rule.

Compliance with EU fiscal rules appears to be more lax prior to elections. Results for the pre-election period dummy are weakly significant and negative particularly for the deficit rule.

Under a macro-adjustment programme, compliance is much stronger but not for the debt rule. Coefficients for the adjustment programme dummy are strongly significant and positive for the structural balance rule, the expenditure benchmark and the deficit rule. They are instead negative for the debt rule, which might imply a selection bias, as those countries with very high debt would be in an adjustment programme. Such last finding can also explain why high interest rates are positively associated with compliance with the EU structural balance and expenditure rules, as this relationship can be affected by the presence of an adjustment programme.

The global financial crisis of 2009-11 strongly weakened compliance with the EU debt and deficit rules. The global financial crisis dummy is in fact negatively and significantly associated with compliance with the debt rules (with a negative coefficient of around 3) and to a lesser extent with the deficit rules (with a negative coefficient of

almost 1). As expected, the crisis dummy has no implications for the EU structural balance and expenditure rules, which indeed entered into force after the crisis.

Establishing a causal link warrants caution. The regressions only capture the *relationship* between compliance with EU and national rules. Besides being quite challenging in econometrics terms, establishing causality of such relationship presents its own conceptual hurdles. The relationship can in fact be shaped in either direction; either a national rule supporting EU rules; or EU rules supporting national rules. Such direction could be indeed different by type of rule, or country by country, and even over time, with a year in which the EU rule could act as a reference for the national rule, and vice versa in another year. Ultimately, such causality direction could also be perceived differently according to the administration involved and policy makers more generally.

Box IV.4.1: Empirical specification

This box describes the dynamic panel regression approach used to assess the implications of national fiscal rules on numerical compliance with EU fiscal rules⁽¹⁾. The analysis concentrates on up to 27 EU Member States and the UK (i) and covers 21 years (t) between 1999 to 2019.

The specification looks as follows:

$$\text{compliance}_{i,t}^{EU,\text{type}} = \beta_1 \text{compliance}_{i,t}^{EU,\text{type}} + \beta_2 \text{compliance}_{i,t}^{\text{national}} + \beta_3 X_{i,t-1} + \theta_t + \vartheta_i + u_{i,t} \quad (1)$$

The dependent variable corresponds to the numerical compliance indicator with the EU fiscal rules. It measures the numerical deviation of the realised outcome from the fiscal target or reference value for each type of EU fiscal rule. We distinguish between the four EU fiscal rules, namely structural balance, expenditure, deficit and debt rules (see Chapter 2 in the main text). A positive coefficient corresponds to an over-achievement of the fiscal rule, while a negative coefficient means an under-achievement.

The key independent variable refers to national fiscal rules. We use three different indicators for national fiscal rules.

- **Existence of national fiscal rules:** We measure the existence of fiscal rules with a simple dummy variable, which takes the value of one if a rule is in place and zero otherwise.
- **Numerical compliance by type of national fiscal rule:** Similarly to compliance with EU rules, we measure numerical compliance as the deviation of the realised outcome from the rules' target in percentage points of GDP. This indicator is calculated for each type of rule, but it cannot be meaningfully aggregated across all types of rules. For instance, a deviation from the debt rule target is not comparable to a deviation from the deficit rule.
- **Average numerical compliance with all types of national fiscal rules.** Finally, we measure the average numerical compliance as the average compliance rate across all types of national fiscal rules, i.e. structural balance, expenditure, deficit and debt rule. In this case compliance with each fiscal rule is defined as a dummy variable, where 1 refers to compliant and 0 to non-compliant. As a result, the average national compliance dummy takes values between one, when all four rule types are in place and complied with, and zero, when the rules are either not complied with. It has the advantage of capturing compliance with any type of national rule. For example, in Germany compliance with the German debt break could have an impact not only on compliance with the EU debt rule, but also with the EU deficit, structural balance or expenditure rule. Moreover, this measure is available for all countries over the entire sample period, unlike the numerical compliance variable limited to the type of rule, country and period when the respective rule was in force.

We also include a set of relevant determinants of compliance in line with the literature. The expected sign with respect to compliance is shown in brackets, while +/- corresponds to a fostering/weakening compliance:

- **A change in the output gap (+/-):** Evidence points to a procyclicality of fiscal effort, but also for rules that constrain stock variables rather than flow variables (Reuter, 2019; European Commission, 2021), higher compliance of nominal rules when growth and inflation rise (Larch and Santacroce, 2020).
- **Fiscal space and adjustment programme (+/-):** high borrowing needs due to high debt levels and high interest rates could be associated with high deficits and debts, thereby limiting compliance with deficit and debt rules. Evidence shows that countries in excessive deficit procedure appear to improve

⁽¹⁾ A similar set-up is chosen as in European Commission (2021).

(Continued on the next page)

Box (continued)

compliance with fiscal rules (Thygesen et al, 2019). The presence of an adjustment programme can go in the same direction.

- **Fiscal rule design** (+): A stronger national fiscal framework tends to improve compliance with rules (Reuter, 2019; European Commission, 2018).
- **Political economy channel:** Compliance appears to be weaker in election years (Reuter, 2019; European Commission, 2021).
- **Country and time-fixed effects:** The specification includes time-fixed effects (θ) and country-fixed effects (ϑ) to capture systematic differences across Member States and time, while u represents an error term. Within the time dummies, a crisis dummy covering the 2009-11 global financial crisis has also been inserted.

We use an interaction model to test if the design of national fiscal rules matter for compliance with EU fiscal rules:

$$\text{compliance}_{i,t}^{EU,\text{type}} = \beta_1 \text{compliance}_{i,t}^{EU,\text{type}} + \beta_2 \text{compliance}_{i,t}^{\text{national}} + \beta_3 \text{fri}_{i,t}^{\text{national}} + \beta_4 \text{compliance}_{i,t}^{\text{national}} \cdot \text{fri}_{i,t}^{\text{national}} + \beta_5 X_{i,t-1} + \theta_t + \vartheta_i + u_{i,t} \quad (2)$$

where the design of fiscal rules is measured with the fiscal rules' strength index (*fri*) of the European Commission. From equation (2) we can derive the marginal effect: it measures how a change of compliance with national fiscal rules impacts compliance with EU fiscal rules for different levels of design strength of national fiscal rules:

$$\frac{\partial \text{compliance}_{i,t}^{EU,\text{type}}}{\partial \text{compliance}_{i,t}^{\text{national}}} = \beta_2 + \beta_3 \text{fri}_{i,t}^{\text{national}} \quad (3)$$

The estimation uses a bias-corrected fixed effects estimator developed for the autoregressive panel as in Bruno (2005a). To address endogeneity resulting from not only the lagged dependent variable, but also the output gap and compliance with national rules dummy, a *robustness estimation* is conducted on the baseline specification. This uses a difference-GMM instrumental variable estimation, treating the lagged dependent, the output gap and the national compliance dummy as endogenous, for which internal instruments are used.

5. CONCLUSIONS

This part examined the implications of national fiscal rules on numerical compliance with EU fiscal rules. Particularly, this part investigated whether (i) the *existence* of national rules influences compliance with EU rules; (ii) *compliance* with national fiscal rules support compliance with EU rules and (iii) the *design* of national rules fosters compliance with EU rules.

Using a novel dataset of numerical compliance and panel regressions this part presents the following findings:

First, the existence of national fiscal rules *per se* has no significant implications on compliance with EU fiscal rules.

Second, compliance with a national rule seems to be associated with compliance with EU fiscal rules. We find that compliance at the EU level is positively and strongly correlated with compliance at the national level. The finding is robust across different measures of compliance with national rules.

Third, a strong rule design seems to reinforce the relationship between national and EU compliance. The relationship between the two sets of compliance is strong and positive only when national fiscal rules are well-designed as captured by the European Commission Fiscal Rule Strength Index. The finding emerges when interacting national compliance with the European Commission's fiscal rule index, which captures the strength and quality of a national rule design.

Establishing a causal link between national and EU compliance is technically and conceptually challenging. On a technical level, possible reverse causality is a major source of endogeneity for various estimations. On a conceptual level, the causal relationship can in principle go in both directions, i.e. from national to EU compliance or vice versa. Ultimately, and particularly when rule designs are very close, establishing whether it is the EU rule affecting compliance of national rules or the other way round could be challenging.

Against the usual caveats of economic regression analyses, the findings bear some implications for policy making. National and EU fiscal rules appear to reinforce each other; although the direction of causality cannot be fully established. Synergies appear to materialise only when rules are complied with, at least in numerical terms, and/or national rules are well-designed. Going forward, such conclusions could be supported by additional testing and robustness estimations, and by taking into account the role played by *legal*, as opposed to *numerical*, compliance.

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