



European
Commission

ISSN 2443-8014 (online)

Report on Public Finances in EMU

2020

INSTITUTIONAL PAPER 147 | FEBRUARY 2021

EUROPEAN ECONOMY



*Economic and
Financial Affairs*

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Luxembourg: Publications Office of the European Union, 2021

PDF ISBN 978-92-76-29718-5 ISSN 2443-8014 doi:10.2765/436822 KC-BC-21-004-EN-N

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European Commission
Directorate-General for Economic and Financial Affairs

Report on Public Finances in EMU 2020

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
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	Harmonised index of consumer prices
IMF	International Monetary Fund
MFF	Multiannual financial framework
MTO	Medium-term budgetary objective

⁽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.

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 Fiscal Policy and Policy Mix, and Gilles Mourre, Head of Unit Fiscal Policy and Surveillance.

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FOREWORD

The COVID-19 pandemic has caused an unprecedented health crisis with severe economic consequences. According to the latest Commission forecast presented in Part I of this report, euro area GDP is projected to have declined by almost 7% in 2020. Economic output in the euro area is expected to reach the pre-crisis level only by 2022. These projections are subject to significant uncertainty and elevated risks.

The current situation is characterised by deep uncertainty. In my view, fiscal policy in the euro area faces three key challenges. This report provides novel insights on each of them.

The first challenge is how to support the economic recovery. Part I of this report shows that the economic policy response to the COVID-19 pandemic has been swift, comprehensive and sizeable. At national level, both automatic stabilisers and substantial discretionary fiscal policy measures have mitigated the impact of the crisis. A coordinated response at EU level has complemented the actions taken by the Member States. In particular, the Commission has set in motion a major recovery plan, the Next Generation EU package, which has been endorsed by the European Council and adopted by the Council and the European Parliament. As part of it, the Recovery and Resilience Facility will offer unprecedented financial support in the form of grants and loans to strengthen the recovery in line with its major policies, particularly the European Green Deal, the digital strategy and building economic and social resilience. To finance the Next Generation EU package, the Commission will for the first time raise debt on behalf of the European Union on the capital markets that will need to be repaid later. Ensuring that this facility is implemented effectively will be crucial to ensure a lasting and sustainable recovery.

The second challenge is how to cope with high public debt. Following the outbreak of the pandemic, public debt ratios in all Member States is expected to show a sharp rise in 2020. As shown in Part III of this report, the current environment of negative interest rate-growth differentials should help Member States to contain debt in the short term. At the same time, the findings call for caution concerning the longer-term implications for a number of reasons. First, the size of the favourable interest rate-growth differential differs considerably across countries and it is unclear how long it can be expected to last. Second, new evidence based on past experience shows that Member States tend to reduce their fiscal efforts during episodes of negative differentials. Third, Member States' public finances are facing upward pressure from structural drivers, such as population ageing and climate change expenditure, and high contingent liabilities. Therefore, once the epidemiological and economic conditions allow, it will be important to pursue fiscal policies aimed at achieving prudent medium-term fiscal positions, while enhancing investment.

The final challenge relates to the Commission's review of the EU's fiscal rules. There is ample evidence that sound fiscal rules and good institutions are key for healthy public finances. Part II presents the key findings of the Commission's backward-looking review of the economic governance framework. The review was released just before the coronavirus crisis and the planned public debate was put on hold following the outbreak of the pandemic. However, we would have to resume the consultation with the stakeholders once the pandemic is under control and the recovery takes hold. Part IV of this report analyses how the media in the Member States has reported on the fiscal rules over the past sixteen years through a scan of almost 300 million articles using text-mining 'frontier' techniques. The findings show that a higher visibility of fiscal rules and fiscal councils helps foster a lively debate and thereby contributes to more effective fiscal rules.

In brief, this edition of the Report on Public Finances in EMU shows highly-policy relevant insights. I am sure that it will promote a fruitful discussion among policy-makers and academics.

Maarten Verwey
Director General Economic and Financial Affairs

EXECUTIVE SUMMARY

The COVID-19 pandemic has caused an economic crisis unique in its severity

The COVID-19 pandemic has hit Europe hard. According to the Commission's winter forecast discussed in Part I of this report, euro-area GDP is estimated to have contracted by almost 7% in 2020. It is forecast to rebound by about 4% in 2021 and by 4% in 2022. This implies that economic output in the euro area would only make it back to pre-pandemic levels in 2022. The depth of the recession in 2020 and the speed of the recovery are projected to vary widely across Member States. The projections are subject to significant uncertainty and elevated risks.

The crisis' impact has been mitigated by swift and sizeable measures at national level ...

Part I describes the key measures taken to address the COVID-19 pandemic. At national level, fiscal policies have clearly helped to alleviate the crisis. This reflects both the impact of automatic stabilisers and the substantial discretionary fiscal policy response. Emergency measures to curb the spread of COVID-19 dominated the initial phase of the pandemic. Member States also provided ample liquidity support to counter the economic fallout of the crisis.

... and a forceful, coordinated response at EU level.

The coordinated response at the EU level has complemented the actions taken by Member States. In particular, the following measures were implemented:

- The Commission and the Council activated the general escape clause of Stability and Growth Pact for the first time. This has allowed Member States to temporarily depart from their fiscal adjustment paths and take the necessary fiscal measures to deal with the crisis.
- The Commission created the European instrument for temporary support to mitigate unemployment risks in an emergency, known as SURE. It provides up to EUR 100 billion in loans granted on favourable terms to Member States to protect employment and workers' incomes. The instrument has been taken up widely and is currently supporting 18 Member States with around EUR 90 billion in financial assistance.
- The ECB launched a new non-standard monetary policy measure, the pandemic emergency purchase programme. Its key objective is to counter the serious risks posed by the COVID-19 outbreak to the monetary policy transmission mechanism and the economic outlook of the euro area.
- The European Council followed a Commission proposal and agreed on a major recovery plan, the Next Generation EU package. As part of it, the Recovery and Resilience Facility will offer EUR 672.5 billion for investment and reforms (EUR 360 billion for loans and EUR 312.5 billion for grants). It will support a sustainable recovery, in line with its major policy objectives, particularly the European Green Deal, the digital strategy and building economic and social resilience.

The pandemic is expected to have a strong impact on public finances ...

The severe economic situation and the large fiscal policy response have led to higher budget deficits and debts. According to the Autumn Forecast, the average general government deficit of the euro area is projected at almost 9% of GDP in 2020. The impact of the COVID-19 crisis is therefore set to be even greater than that of the global financial crisis in 2008. The average level of general government debt is forecast to rise by around 15 percentage points to nearly 102% of GDP in 2020.

... and the uncertainty and risks to the forecast are large.

The projections are subject to significant uncertainty and elevated risks, predominately linked to the evolution of the pandemic and the success of vaccination campaigns. On the upside, the vaccination process could lead to a faster easing of containment measures and therefore an earlier and stronger recovery. Moreover, the strength of the rebound could surprise on the upside driven by a burst of post-crisis optimism that would unleash stronger pent-up demand and innovative investment projects. On the downside, the pandemic could prove more persistent or turn out more severe in the near term. There is also a risk of deeper scars in the fabric of the European economy and society inflicted by the protracted crisis, through bankruptcies, long-term unemployment, and higher inequalities. A premature withdrawal of fiscal support would also pose risks, by holding back the recovery and exacerbating scarring across the EU. Finally, widening cross-country divergences could deepen, disrupt the functioning of the internal market, cause efficiency losses and ultimately become self-reinforcing. Nevertheless, an ambitious and swift implementation of the NextGenerationEU programme should provide a strong boost to the EU economy.

The report describes developments in the fiscal governance framework in 2020.

Part II provides an overview of the main developments in the fiscal governance framework in 2020.

First, the activation of the general escape clause facilitated the Member States' fiscal response necessary to deal with the crisis.

First, the activation of the general escape clause of the Stability and Growth Pact had a decisive influence on fiscal policy and fiscal surveillance in 2020. In May 2020, the Commission adopted reports under Article 126(3) TFEU for all Member States except Romania, which was already under an excessive deficit procedure. These reports assessed Member States' compliance with the deficit criterion in 2020, based on their plans or on the Commission's spring 2020 forecast. For some Member States, they also assessed compliance with the debt criterion in 2019. As a consequence of their policy response to the COVID-19 crisis, Member States' planned deficits for 2020 were generally above the 3% of GDP threshold. The Commission reached the conclusion 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 path for fiscal policy. reports

Second, the report presents the main findings of the Commission's review of the economic governance framework published before COVID

Second, the report describes the main findings of the Commission's review of the economic governance framework. The review predates the outbreak of the COVID-19 pandemic and, therefore, does not take into account the new context arising from the current crisis. It identifies some well-recognised challenges with the fiscal framework and its implementation. These include high and persistent public debt levels; the pro-cyclicality of fiscal policy; the composition of public finances, which are far too often unfriendly to growth and investment; the challenge of achieving a fiscal stance that is appropriate for the euro area as a whole; the complexity of fiscal rules; and their lack of enforcement. Furthermore, the review identifies scope to improve the implementation of the Macroeconomic Imbalance Procedure and to make the surveillance strands work better together. Lastly, the framework governing (post-) programme surveillance was found to have worked reasonably well. The Commission had planned an open debate involving key stakeholders and the general public, but this was put on hold in light of the COVID-19 pandemic.

Third, it describes the latest developments in green budgeting

Third, Part II examines the latest developments regarding green budgeting. The Commission's European Green Deal Communication underlines the role of the national budgets and green budgeting tools in 'redirecting public investment, consumption and taxation to green priorities and away from harmful subsidies'. According to a joint Commission-OECD survey, almost two third of Member States have established or plan to establish some form of green budgeting in their country. Among others, these include green tagging, environmental impact assessments and the assessment and treatment of greenhouse gas emissions. Technical and methodological challenges have been identified as the main obstacles to introduce or implement green budgeting. Member States see potential for international and supranational institutions to offer technical guidance, including through sharing information and expertise. The Commission is working together with the Member States to promote the use of these practices in the EU.

Finally, it assesses if national fiscal frameworks are ready to address fiscal risks related to climate change

Finally, the report provides an assessment of climate change-related risk management and presents a review of the building blocks of disaster risk financing. Climate change is expected to increase the pressure on public finances in the future. On the one hand, there is a growing need for public investment in measures to mitigate and adapt to the effects of climate change. On the other hand, large-scale disasters related to climate change represent a real human and economic threat that will need to be better reflected in budgetary planning. While some EU provisions for disaster risk management have been in place since 2001 and national practices have improved, a consistent approach to disaster-related fiscal risks is lacking in the EU.

This year's report focuses on two analytical themes:

The first theme shows that negative interest-growth differentials have been common in the EU, but a high degree of variation exists across Member States.

Public debt tends to decline during periods when the interest-growth differential is negative

Nevertheless, the analysis suggests caution is needed with regard to the longer-term implications of the low interest rate environment

The second theme of the report analyses the impact of media visibility on the effectiveness of fiscal rules

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-growth differentials on fiscal policy in the EU. It shows that, 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-growth differentials about half the time. However, the frequency and persistence of negative differential episodes has differed widely across Member States.

Descriptive statistics show that public debt-to-GDP ratios decreased, on average, by 1.7 pps. of GDP per year in times of negative differentials. By contrast, debt increased by almost 3 pps. of GDP per year in positive differential episodes. The debt reduction during negative differential episodes largely reflects two factors. First, there is the direct impact of the interest-growth differential on the debt ratio (the so-called the snowball effect). The second debt-reducing force comes from the fact that Member States tend on average to show a positive cyclical component of the government primary balance in times of negative interest-growth differentials.

The report provides fresh evidence, which calls for caution with regard to the longer-term implications of the low interest rate environment on the operation of fiscal policy for several reasons. First, evidence from panel regressions shows that smaller fiscal efforts partly offset debt reduction during negative interest rate growth episodes, in particular in highly indebted Member States. Second, the lasting nature of the favourable interest rate-growth differential is the subject of debate and the magnitude of this effect varies across countries. Third, despite favourable interest-growth differentials, there are structural drivers of debt increases, primarily population ageing, as well as growing contingent liabilities, e.g. related to climate change.

Part IV of this report explores the relationship between the visibility of fiscal issues in the media and the numerical compliance with the fiscal rules in the EU. Media visibility tends to improve transparency, promote a more informed debate and act as an informal enforcement device for non-compliance through reputational effect. It therefore comes as no surprise that some international organisations take media visibility into account when assessing the strength of fiscal frameworks. However, media visibility has typically been assessed using the judgement of a small number of experts, which is inherently subjective and potentially incomplete.

It uses an innovative approach to evaluate 300 million news articles

To assess the content and tone of the public discussion on fiscal rules, the study applies an innovative text-mining approach, which has been frequently applied to assess the impact of communication by central banks. Concretely, a list of relevant keywords was set up, translated in different languages, and then used to identify media articles. Using the Commission's Europe Media Monitor, we scanned almost 300 million articles in EU Member States over the past sixteen years. The search results in about 20 articles on fiscal rules and 10 articles on fiscal councils per day in the EU.

Media reporting on fiscal rules appears to be more frequent in countries with sound institutions, ahead of key releases, and during bad economic times

Several factors appear to increase the media coverage of EU and national fiscal rules. First, nationwide and influential media appear to report relatively more frequently on fiscal rules than regional media. Second, media reporting on fiscal rules is more frequent in countries with well-designed institutions, such as fiscal councils. Third, there is more visibility close to the time of release of key fiscal policy news by the Commission, such as the publication of the Draft Budgetary Plans. Finally, media reporting is more frequent in bad economic times.

Evidence suggests that media visibility tends to foster numerical compliance with fiscal rules

Novel evidence from panel regressions shows that media visibility has improved the effectiveness of EU fiscal rules, as measured by a numerical compliance with these rules. In this context, the creation of fiscal councils seems to have raised the media's attention on fiscal rules.

Part I

Public finances in EMU

Please cite this as follows:

European Commission (2021), Public finances in EMU, Report on Public Finances in EMU 2020, Institutional Paper 147, 26 February 2021, 7-24.

Contributors: J. Mazur (Chapter I.1), J. Mazur and P. Mohl (Chapter I.2), I. Power (Box. I.2.1).

KEY FINDINGS

This part provides an overview of the economic and fiscal situation in the EU and describes the main measures taken in response to the COVID-19 pandemic.

The EU economy is experiencing a crisis of unique severity and uncertainty.

- According to the Commission's winter 2021 forecast, euro-area GDP is expected to contract by about 7% in 2020, before rebounding by around 4% in 2021 and 2022. The projections are subject to significant uncertainty and elevated risks.
- The projected increases in general government deficits in 2020 are expected to be much higher than the deficits reached during the global and financial crisis, due to the high impact of automatic stabilisers and the sizeable fiscal policy response. On the basis of the Commission's autumn 2020 forecast, in 2022, deficits are set to remain above 3% of GDP in almost two thirds of Member States and the debt-to-GDP ratio is forecast to rise to an all-time high in the euro area.
- The euro area fiscal stance is projected to be strongly expansionary in 2020 after having been broadly neutral on average between 2014 and 2019. The fiscal stance is also forecast to be supportive in 2021, when adjusted for the planned unwinding of temporary emergency measures. Financing from the Recovery and Resilience Facility is expected to provide additional fiscal stimulus.

Member States have taken swift and sizeable fiscal measures in response to the COVID-19 pandemic.

- The initial phase of the COVID-19 crisis saw mostly emergency measures taken. On the basis of the draft budgetary plans, in 2021, fewer emergency measures are expected and instead other support measures are due to come on stream.
- Most of the budgetary impact of the fiscal measures taken in 2020 is expected to be temporary. In 2021, most Member States plan to support their economies by taking a range of (mainly temporary) measures.
- Member States provided ample liquidity to counter the economic fallout of the pandemic, with state guarantees accounting for the largest category, amounting to almost 20% of GDP.

The EU's economic policy response to the COVID-19 pandemic has been particularly swift, comprehensive and sizeable.

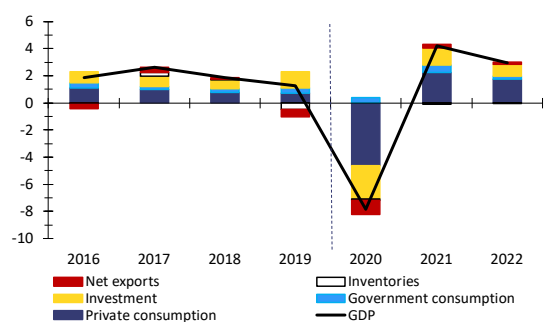
- The Commission contributed to a range of measures to address the immediate impact of the crisis, in particular the emergency adaption of EU frameworks, for example to provide (i) more budgetary flexibility, (ii) more flexibility of State aid rules and (iii) scope to mobilise EU structural funds for the most pressing needs. The EU, also put in place three new emergency instruments (backstops) with the aim of: (iv) protecting jobs and people at work, (iv) supporting companies and (v) easing financial healthcare spending. In addition, the ECB implemented large-scale monetary easing.
- The European SURE instrument, set up and managed by the Commission, has so far been one of the most used backstops. Its key objective is to help Member States protect jobs (and thus employees) and the self-employed against the risk of unemployment and loss of income. It proved to be a very popular mechanism, with 18 Member States participating for a total amount of over EUR 90 billion.
- A major policy development was the 'Next Generation EU' recovery instrument, proposed by the Commission and endorsed by the Heads of State or Government to finance a sustainable recovery in the medium term. Its centrepiece is the Recovery and Resilience Facility, which will provide EUR 672.5 billion in financial support in the form of grants and loans for investment and reforms to fund the green and digital transitions and the economic and social resilience of national economies.

1. ECONOMIC AND FISCAL ENVIRONMENT

1.1. ECONOMIC ACTIVITY

The COVID-19 pandemic has caused an economic crisis unique in its severity (Graph I.1.1) ⁽²⁾. According to the Commission's latest winter 2021 forecast, euro-area GDP is estimated to have contracted by 6.8% in 2020, before rebounding by 3.8% in 2021 and 2022 (Graph I.1.1). This means that it is likely to take until mid-2022 before output in the euro-area economy returns to pre-pandemic levels. The depth of the recession in 2020 and the speed of the recovery in 2021 and 2022 are expected to vary widely across Member States. This reflects not only differences in the severity of the pandemic and the stringency of containment measures, but also differences in economic structures and domestic policy response.

Graph I.1.1: Real GDP growth and its components (euro area, in pps. of GDP)

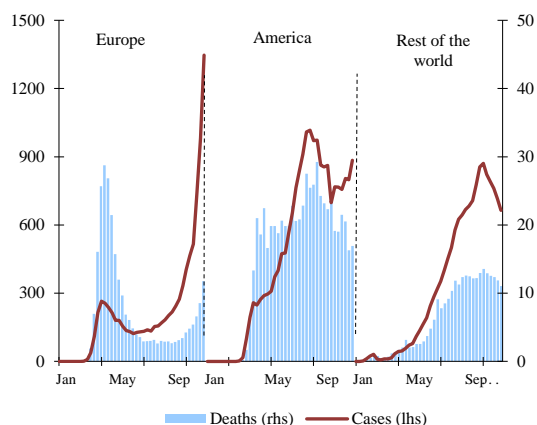


Source: Commission autumn 2020 forecast.

The pandemic is the key factor driving the economic forecast. So far, the pandemic in Europe has gone through three phases. After the initial outbreak in spring 2020 that triggered emergency policy measures to protect health and mitigate the economic impact, the restrictions eased over the summer and the disruptions receded. From an international perspective, the EU was also relatively successful in bringing down the numbers of infections and deaths, at least for few months (Graph I.1.2). In autumn, however, a new surge of infections led to the partial re-introduction

of containment measures (the 'second wave'), raising concerns about the continuation of the economic rebound.

Graph I.1.2: COVID-19 cases and deaths, Europe, America and rest of the world (Jan. - Oct. 2020, in thousands)



Note: Weekly data up to 19 October.

Source: WHO Coronavirus disease Dashboard, 22 October 2020, cut-off date: 22 October 2020.

Domestic demand is set to fall sharply before becoming the main factor driving the economic recovery (Graph I.1.1). Private consumption in the euro area was severely affected by the COVID-19 pandemic. It is expected to recover in 2021, fuelled by pent-up demand and policy measures to boost household purchasing power. Government consumption played a stabilising role to maintain public employment and the purchase of intermediate goods (e.g. medical supplies) surged.

Investment was hit hard in 2020, but is forecast to recover well over the next two years. Lockdowns and persisting pandemic-related uncertainty were a heavy drag on investment. Looking ahead, capital spending is expected to increase on the back of highly accommodative monetary policies, increased public investment and targeted government support schemes for firms. Nevertheless, investment in the euro area is not expected to regain pre-pandemic levels over the next two years.

Net exports are estimated to have fallen significantly in 2020 and are expected to contribute little to the economic recovery. The COVID-19 crisis took a particularly severe toll on the euro area's external trade in 2020. Foreign demand for European goods and services is

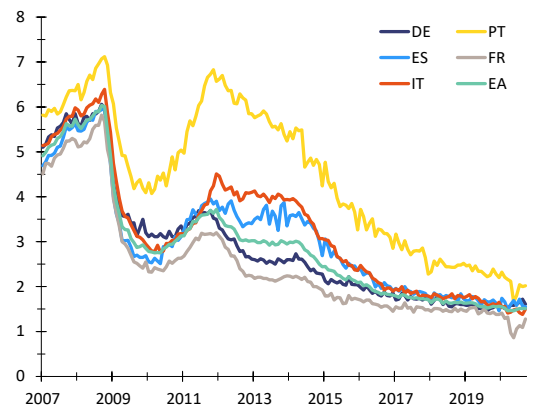
⁽²⁾ While the Commission winter 2021 forecast was published in February 2021, it only covers projections for real GDP and inflation. Therefore, this Chapter refers to the Commission autumn 2020 forecast unless otherwise mentioned.

forecast to rebound only partially, while imports are broadly expected to mirror exports. Thus, the contribution from net exports to growth in the EU and the euro area is set to be relatively modest over 2021-2022.

Job retention policies cushioned labour markets but a further adjustment is expected. The abrupt economic downturn saw employment fall by 4.5% in the EU and 5.3% in the euro area in 2020. The unemployment rate increased only slightly to 7.7% in the EU and to 8.3% in the euro area in 2020, in particular thanks to the successful implementation of short-time work schemes and the new EU instrument for temporary support to mitigate unemployment risks in an emergency (SURE) (Box I.2.1). The unemployment rate is set to increase further to 8.6% in the EU and 9.4% in the euro area in 2021, before falling in 2022 to 8.0% and 8.9%, respectively. There are significant differences in the unemployment levels in different countries, largely reflecting country-specific vulnerabilities linked to their economic structures.

Positive market-funding conditions are cushioning the economic impact of the pandemic (Graph I.1.3). The European Central Bank (ECB) continued to pursue a highly accommodative monetary policy. The increase in bank lending, largely backed by state guarantees, provided vital support to preserve corporate operations and helped avoid widespread bankruptcy. The assumption is that ECB continues its easing measures and that this, combined with expected low inflation, will keep real long- and short-term interest rates negative over the next few years.

Graph I.1.3: Interest rates on loans to non-financial corporations (selected Member States)



Source: Commission autumn 2020 forecast.

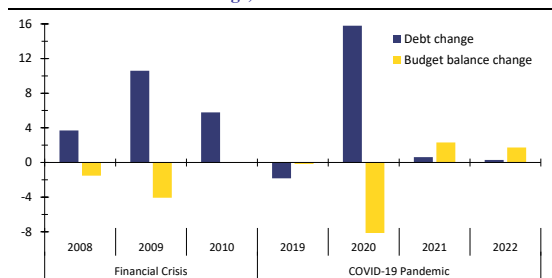
Inflation is projected to increase to 1.3% in 2022. In 2020, headline inflation is expected to reach 0.4% in the euro area according to the Commission winter 2021 forecast. Inflation is set to inch up but remain moderate at 1.4% in 2021 and 1.3% in 2022

The projections are subject to significant uncertainty and elevated risks, predominately linked to the evolution of the pandemic and the success of vaccination campaigns. On the positive side, the vaccination process could lead to a faster easing of containment measures and therefore an earlier and stronger recovery. Moreover, the strength of the rebound could surprise on the upside driven by a burst of post-crisis optimism that would unleash stronger pent-up demand and innovative investment projects, thanks to historically high household savings, low financing costs, and supportive policies. On the negative side, the pandemic could prove more persistent or turn out more severe in the near term, pushing back the expected recovery. There is also a risk of deeper scars in the fabric of the European economy and society inflicted by the protracted crisis, through bankruptcies, long-term unemployment, and higher inequalities. The uncertainties around the forecast are illustrated by the scenario analysis presenting alternative paths for the European economy under different sets of assumptions. Last, but not least, an ambitious and swift implementation of the NextGenerationEU programme, including its Recovery and Resilience Facility, should provide a strong boost to the EU economy.

1.2. GOVERNMENT BUDGET BALANCES

Budget deficits rose sharply in the euro area in 2020 (Table I.1.1). On the basis of the Commission autumn 2020 forecast, the average deficit is expected to have increased by around 8 pps. to reach 8.8% of GDP in the euro area in 2020. This deterioration is both due to the functioning of automatic stabilisers (4 pps. of GDP) and the sizeable discretionary fiscal measures (4 pps. of GDP) put in place to manage the health crisis and cushion the economic and social impact of the pandemic (Chapter I.2.1). The increase in general government deficit in the euro area in 2020 is expected to be much higher than it was during the global financial crisis (Graph I.1.4).

Graph I.1.4: Government debt and budget balance (euro area, annual change)



Source: Commission autumn 2020 forecast.

The budget deficits of Member States are set to ease over the forecast horizon (Table I.1.1). The average deficit is projected to fall to 6% of GDP in 2021 and 4½% in 2022 in the EU, and to 6.4% in 2021 and 4.7% in 2022 in the euro area. The projected decrease is due to the unwinding of pandemic-related emergency measures and the expected rebound in economic activity. It also takes into account measures announced in national draft budgets (or in the case of the euro-area 2021 draft budgetary plans), including, where possible, measures expected to be financed under Next Generation EU (NGEU) and the Recovery and Resilience Facility (RRF) (Chapter I.2.2).

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

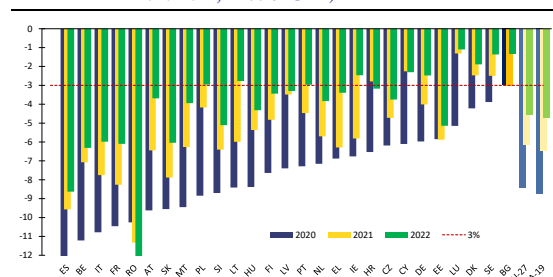
	2017	2018	2019	2020	2021	2022
Total revenue (1)	46.2	46.5	46.4	46.5	46.0	45.8
Total expenditure (2)	47.2	46.9	47.1	55.2	52.4	50.5
Actual balance (3) = (1) - (2)	-0.9	-0.5	-0.6	-8.8	-6.4	-4.7
Interest (4)	1.9	1.8	1.6	1.6	1.4	1.3
Primary balance (5) = (3) + (4)	1.0	1.4	1.0	-7.2	-5.0	-3.4
One-offs (6)	-0.1	-0.1	-0.2	0.0	0.0	0.0
Cyclically adjusted balance (7)	-1.3	-1.2	-1.5	-4.8	-4.3	-3.6
Cyclically adj. prim. balance = (7) + (4)	0.7	0.6	0.1	-3.2	-2.9	-2.3
Structural budget balance = (7) - (6)	-1.2	-1.1	-1.3	-4.8	-4.3	-3.7
Structural primary balance = (7) - (6) + (4)	0.8	0.7	0.3	-3.2	-2.9	-2.3
Change in actual balance:						
- Cycle	0.5	-0.2	-8.1	2.3	1.7	
- Interest (reverse sign)	0.4	0.1	-4.8	1.8	1.0	
- One-offs	0.1	0.2	0.0	0.2	0.1	
- Structural primary balance	0.0	-0.1	0.1	0.0	0.0	
- Structural primary balance	-0.1	-0.4	-3.5	0.3	0.6	
Change in cycl. adj. primary balance	-0.1	-0.5	-3.4	0.3	0.6	
Change in structural budget balance	0.0	-0.2	-3.5	0.5	0.7	

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

Source: Commission autumn 2020 forecast.

In most Member States, the budgetary deficit is expected to remain high (Graph I.1.5). All Member States except Bulgaria are set to run deficits of over 3% of GDP in 2020. Three quarters of Member States are expected to run deficits that exceed 6% of GDP, with Belgium, Spain, France and Italy forecast to run deficits of over 10% of GDP. Over 2021 and 2022, all Member States except Romania should see an improvement in their general government balance, with the largest falls (of more than 5 pps. of GDP) expected in Lithuania, Malta, Poland and Austria. Nonetheless, deficits are set to remain above 3% of GDP in almost two thirds of Member States in 2022.

Graph I.1.5: General government balance (in Member States, 2020-2022, in % of GDP)



Source: Commission autumn 2020 forecast.

Only a few of the national budgetary projections include measures expected to be financed under NGEU/RRF. The autumn 2020 forecast only incorporates the measures that have been credibly announced and sufficiently detailed, including in the 2021 draft budgetary plans. Given the early stage of preparations for national Recovery and Resilience Plans, the budgetary projections of only four euro-area Member States –

France, Lithuania, Portugal and Slovenia– include measures expected to be financed under the RRF, and generally only for limited amounts. These measures are recorded as deficit-increasing, though they may be financed by RRF grants (subject to, in particular, formal endorsement of the Recovery and Resilience Plans). As a result, the budgetary projections of those Member States are subject to a positive risk.

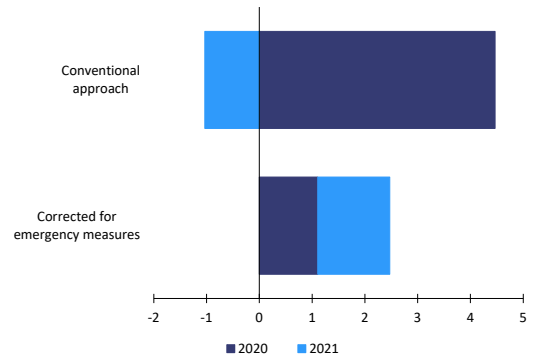
1.3. FISCAL STANCE OF THE EURO AREA

Under the current circumstances, simply reading the traditional indicators is not enough to assess the fiscal stance. The picture is distorted by the massive temporary emergency measures brought in and subsequently withdrawn, as the corresponding changes in the level of public spending from one year to the next affect the indicators used to assess the fiscal stance ⁽³⁾. Excluding the temporary emergency measures from the calculation of the fiscal stance indicators produces a more representative assessment of the underlying fiscal support to economic activity.

The euro-area fiscal stance is likely to continue to be supportive in 2021 when adjusted for the planned unwinding of temporary emergency measures. The draft budgetary plans are based on the assumption that a large share of temporary emergency measures will expire in 2021. Thus, the conventional indicators (including emergency measures) suggest a supportive fiscal stance +4.5% of GDP in 2020 but a tightening of –1.0% of GDP in 2021 (measured by the expenditure benchmark (Graph I.1.6)). By contrast, when excluding the temporary emergency measures directly linked to the pandemic, the fiscal stance remains supportive for both years at +1.1% of GDP in 2020 and +1.4% in 2021. Although the economy is not expected to be fully recovered, the fiscal measures in place will boost economic activity over 2020-2021. The deterioration of the health and economic situation in the last quarter of 2020 and at the beginning of 2021 led Member States to extend and take additional measures to those presented in their draft budgetary plans.

⁽³⁾ COVID-19 related emergency measures are not considered one-offs, although most were brought in for a temporary period to complement automatic stabilisers.

Graph I.1.6: Euro area: fiscal stance (2020-2021, % of GDP)

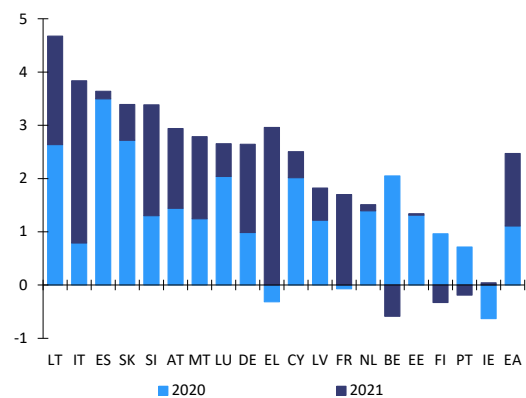


Note: The graph shows the discretionary fiscal impulse based on the expenditure benchmark methodology, which measures the growth of spending (net of discretionary measures) in excess to potential growth. In this graph, positive figures indicate an expansionary stance.
Source: Commission autumn 2020 forecast.

Financing from the Recovery and Resilience Facility will provide additional fiscal stimulus.

The Commission autumn 2020 forecast is based on the assumption that RRF-financed expenditure will have a low impact on the euro-area fiscal stance in 2021 (0.15% of GDP), as the 2021 draft budgetary plans lack sufficiently detailed information on those measures. Looking ahead, the fiscal stimulus provided by the RRF in 2021 and 2022 is likely to be greater than projected in the autumn 2020 forecast once the national recovery and resilience plans are implemented.

Graph I.1.7: Fiscal stance excl. emergency measures (2020-2021, % of GDP)



Note: Fiscal stance is calculated as the discretionary fiscal impulse based on the expenditure benchmark methodology with emergency measures excluded. Positive figures indicate a supportive stance.
Source: Commission autumn 2020 forecast.

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

	Government debt ratio							Change in debt ratio 2019-22	Change in debt ratio in 2019-22 due to:		
	2016	2017	2018	2019	2020	2021	2022		Primary balance	Snowball effect	Stock-flow adjustment
BE	105.0	102.0	99.8	98.1	117.7	117.8	118.6	20.6	19.1	0.5	1.0
DE	69.3	65.1	61.8	59.6	71.2	70.1	69.0	9.3	10.6	-2.4	1.1
EE	9.9	9.1	8.2	8.4	17.2	22.5	26.4	18.0	16.8	-1.6	2.8
IE	74.1	67.0	63.0	57.4	63.1	66.0	66.0	8.7	11.9	-1.1	-2.1
EL	180.8	179.2	186.2	180.5	207.1	200.7	194.8	14.3	8.1	9.6	-3.5
ES	99.2	98.6	97.4	95.5	120.3	122.0	123.9	28.4	23.9	5.3	-0.8
FR	98.0	98.3	98.1	98.1	115.9	117.8	119.4	21.3	21.2	-1.0	1.2
IT	134.8	134.1	134.4	134.7	159.6	159.5	159.1	24.5	14.5	9.0	1.0
CY	103.1	93.5	99.2	94.0	112.6	108.2	102.8	8.8	4.3	2.1	2.4
LV	40.4	39.0	37.1	36.9	47.5	45.9	45.5	8.6	12.1	-1.0	-2.4
LT	39.7	39.1	33.7	35.9	47.2	50.7	49.5	13.6	15.8	-3.3	1.1
LU	20.1	22.3	21.0	22.0	25.4	27.3	28.9	6.9	6.7	-0.4	0.6
MT	54.5	48.8	45.2	42.6	55.2	60.0	59.3	16.7	16.1	-0.4	1.0
NL	61.9	56.9	52.4	48.7	60.0	63.5	65.9	17.2	15.2	-0.7	2.7
AT	82.8	78.5	74.0	70.5	84.2	85.2	85.1	14.6	15.9	-0.5	-0.7
PT	131.5	126.1	121.5	117.2	135.1	130.3	127.2	10.0	6.6	2.8	0.6
SI	78.5	74.1	70.3	65.6	82.2	80.2	79.8	14.2	15.4	-0.5	-0.7
SK	52.4	51.7	49.9	48.5	63.4	65.7	67.6	19.1	19.9	-1.2	0.4
FI	63.2	61.3	59.6	59.3	69.8	71.8	72.5	13.3	13.9	-2.1	1.5
EA-19	92.2	89.7	87.7	85.9	101.7	102.3	102.6	16.7	15.6	0.4	0.8
BG	29.3	25.3	22.3	20.2	25.7	26.4	26.3	6.0	5.4	-0.1	0.7
CZ	36.6	34.2	32.1	30.2	37.9	40.6	42.2	12.0	12.4	-0.7	0.3
DK	37.2	35.9	34.0	33.3	45.0	41.1	40.9	7.6	6.5	-0.6	1.7
HR	80.8	77.5	74.3	72.8	86.6	82.3	81.6	8.8	6.2	3.7	-1.2
HU	74.9	72.2	69.1	65.4	78.0	77.9	77.2	11.8	10.9	-3.0	3.9
PL	54.2	50.6	48.8	45.7	56.6	57.3	56.4	10.7	11.9	-2.2	1.0
RO	37.4	35.1	34.7	35.3	46.7	54.6	63.6	28.3	28.3	0.5	-0.4
SE	42.3	40.7	38.9	35.1	39.9	40.5	40.3	5.2	7.4	-2.4	0.1
EU-27	85.8	83.2	81.2	79.2	93.9	94.6	94.9	15.6	15.0	0.1	0.6

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

Source: Commission autumn 2020 forecast.

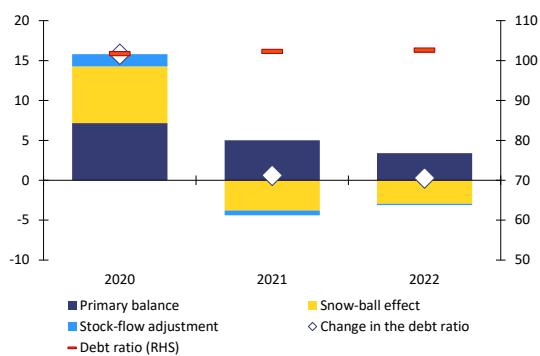
1.4. GENERAL GOVERNMENT DEBT

The average euro-area debt-to-GDP ratio is set to increase to an all-time high. After falling for five consecutive years, the general government debt-to-GDP ratio reached an average of 86% of GDP in the euro area in 2019 (Table I.1.2). Following the outbreak of the COVID-19 pandemic, triggering the severe economic situation and the larger stimulus measures, the average debt-to-GDP ratio is projected to jump by around 15 pps. to nearly 102%. It is expected to broadly stabilise at very high levels over 2021 and 2022, assuming unchanged policies.

The key driver of the increase in the public debt ratio is expected to be primary deficits (Graph I.1.8). The increase in the debt ratio in 2020 reflects the combined effects of a major deterioration of the primary balance and the contraction in GDP, which has a significant snowball effect of increasing debt⁽⁴⁾. The average primary deficit is then projected to halve from 7.2% of GDP in 2020 to 3.4% in 2022. This will continue to be a drag on debt dynamics in 2021 and 2022, but a favourable interest rate-growth differential should help contain the projected increase.

⁽⁴⁾ The snowball effect is the impact on the debt-to-GDP ratio provided by the difference between nominal growth and the implicit interest rates paid on debt.

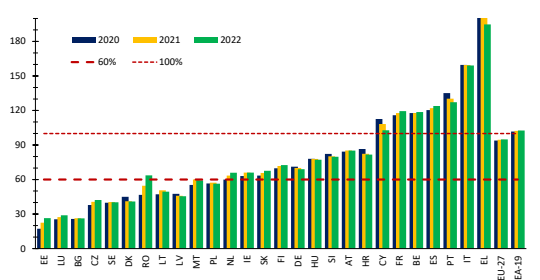
Graph I.1.8: Key drivers of government debt (euro area, % of GDP)



Source: Commission autumn 2020 forecast.

Public debt is set to increase substantially in all Member States in 2020, before falling in around a third of Member States over the following two years (Graph I.1.9). Still, in 2022, the debt ratio is forecast to remain above 150% of GDP in Greece and Italy, above 120% in Portugal and Spain, and above 100% in Belgium, Cyprus and France. Seven more euro-area countries forecast their debt in 2022 to be over 60% of GDP (Austria, Slovenia, Germany, Finland, Slovakia, Ireland and the Netherlands).

Graph I.1.9: General government debt developments (in Member States, 2020-2022, % of GDP)



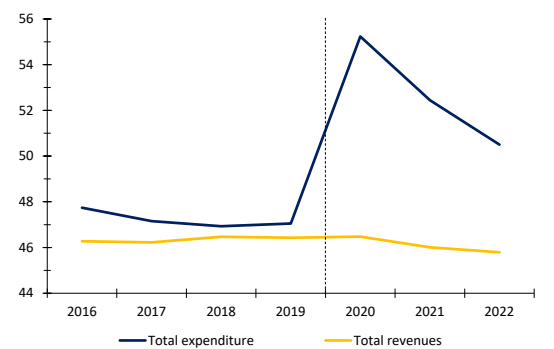
Source: Commission autumn 2020 forecast.

1.5. COMPOSITION OF PUBLIC FINANCES

Public expenditure is set to shape the euro-area aggregate deficit developments between 2019 and 2022 (Graph I.1.10, Table I.1.3). The total expenditure ratio is projected to increase by 8 pps. to above 55% of GDP in the euro area in 2020, due almost exclusively to discretionary COVID-related measures (for more details, see Chapter I.2.1) and the sharp contraction of nominal GDP. Over the following two years, the expenditure ratio is

predicted to fall to around 50% of GDP in 2022. The projected fall in expenditure ratio is due both to a gradual withdrawal of emergency policy support measures and the forecast that GDP will increase somewhat faster than expenditure. Despite the rise in the debt ratio, interest expenditure is expected to fall slightly between 2019 and 2021 thanks to highly accommodative monetary policy. The revenue ratio is projected to fall slightly from 46.4% of GDP in 2019 to about 45.8% of GDP in 2022, as discretionary measures are expected to ease the tax burden.

Graph I.1.10: Expenditure and revenue (euro area, in % of GDP)



Source: Commission autumn 2020 forecast.

Public investment is forecast to increase slightly. In terms of the quality of public spending, the aggregate public investment-to-GDP in the euro area is projected to increase from 2.8% of GDP in 2019 to 3.1% in 2020 and then to stabilise. The increase in 2020 is also the result of the Investment Plan for Europe, and of mobilising the EU structural funds to finance the most pressing needs (for more details, see Chapter I.2.2). By contrast, since at the time of the autumn 2020 forecast the national recovery and resilience plans were still at an early stage of preparation or lacked sufficient detail, the measures expected to be financed under the Next Generation EU and the Recovery and Resilience Facility are forecast to make a rather limited contribution to the profile of public investment.

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

	Revenue							Expenditure						
	2016	2017	2018	2019	2020	2021	2022	2016	2017	2018	2019	2020	2021	2022
BE	50.8	51.3	51.4	50.1	50.2	49.9	49.5	50.8	51.3	51.4	50.1	50.2	49.9	49.5
DE	45.5	45.6	46.3	46.7	46.2	46.0	46.1	45.5	45.6	46.3	46.7	46.2	46.0	46.1
EE	38.7	38.5	38.7	39.0	39.5	39.0	38.9	38.7	38.5	38.7	39.0	39.5	39.0	38.9
IE	27.6	26.0	25.7	25.0	23.9	24.1	24.3	27.6	26.0	25.7	25.0	23.9	24.1	24.3
EL	50.3	49.1	49.5	49.0	50.3	46.8	47.1	50.3	49.1	49.5	49.0	50.3	46.8	47.1
ES	38.1	38.2	39.2	39.2	41.1	40.2	39.6	38.1	38.2	39.2	39.2	41.1	40.2	39.6
FR	53.0	53.5	53.4	52.6	52.6	51.6	51.4	53.0	53.5	53.4	52.6	52.6	51.6	51.4
IT	46.7	46.3	46.2	47.0	48.0	47.3	47.1	46.7	46.3	46.2	47.0	48.0	47.3	47.1
CY	37.7	38.7	39.5	41.5	41.3	42.7	41.9	37.7	38.7	39.5	41.5	41.3	42.7	41.9
LV	37.5	37.9	38.5	37.8	38.1	38.2	38.3	37.5	37.9	38.5	37.8	38.1	38.2	38.3
LT	34.4	33.6	34.4	34.9	35.7	35.7	35.0	34.4	33.6	34.4	34.9	35.7	35.7	35.0
LU	42.8	43.4	45.3	44.6	45.6	46.2	46.4	42.8	43.4	45.3	44.6	45.6	46.2	46.4
MT	37.0	38.2	38.5	37.7	38.1	39.6	39.5	37.0	38.2	38.5	37.7	38.1	39.6	39.5
NL	43.6	43.7	43.7	43.7	42.2	43.1	41.7	43.6	43.7	43.7	43.7	42.2	43.1	41.7
AT	48.5	48.5	48.9	49.1	47.9	47.0	47.6	48.5	48.5	48.9	49.1	47.9	47.0	47.6
PT	42.9	42.4	42.9	42.7	42.8	43.0	42.5	42.9	42.4	42.9	42.7	42.8	43.0	42.5
SI	44.2	44.0	44.3	43.8	45.1	44.3	43.7	44.2	44.0	44.3	43.8	45.1	44.3	43.7
SK	40.1	40.4	40.7	41.4	42.5	42.2	41.8	40.1	40.4	40.7	41.4	42.5	42.2	41.8
FI	53.9	53.1	52.5	52.3	52.0	52.2	51.9	53.9	53.1	52.5	52.3	52.0	52.2	51.9
EA-19	46.3	46.2	46.5	46.4	46.5	46.0	45.8	46.3	46.2	46.5	46.4	46.5	46.0	45.8
BG	35.1	36.0	38.5	38.2	39.5	39.1	39.0	35.1	36.0	38.5	38.2	39.5	39.1	39.0
CZ	40.5	40.5	41.5	41.6	42.1	42.0	41.5	40.5	40.5	41.5	41.6	42.1	42.0	41.5
DK	52.4	52.3	51.2	53.0	52.3	50.8	50.3	52.4	52.3	51.2	53.0	52.3	50.8	50.3
HR	46.5	46.1	46.3	47.4	48.8	49.7	48.8	46.5	46.1	46.3	47.4	48.8	49.7	48.8
HU	45.0	44.1	43.8	43.5	43.9	42.8	41.9	45.0	44.1	43.8	43.5	43.9	42.8	41.9
PL	38.7	39.8	41.3	41.1	40.6	40.4	40.0	38.7	39.8	41.3	41.1	40.6	40.4	40.0
RO	32.0	30.8	31.9	31.8	33.2	32.8	33.2	32.0	30.8	31.9	31.8	33.2	32.8	33.2
SE	50.7	50.6	50.7	49.9	49.7	49.2	49.0	50.7	50.6	50.7	49.9	49.7	49.2	49.0
EU-27	46.0	45.9	46.2	46.1	46.2	45.7	44.4	46.0	45.9	46.2	46.1	46.2	45.7	44.4

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

Source: Commission autumn 2020 forecast.

2. KEY MEASURES IN RESPONSE TO THE COVID-19 PANDEMIC

This Chapter presents the key crisis measures taken to tackle the COVID pandemic. It focuses on the response at both national level (Chapter 2.1) and EU level (Chapter 2.2).

2.1. NATIONAL RESPONSE TO THE COVID CRISIS ⁽⁵⁾

Member States took swift and sizeable fiscal measures in response to the COVID-19 pandemic. The fiscal measures put in place for 2020 (4.2% of GDP) and 2021 (2.4% of GDP) support an expansionary fiscal stance in the euro area as a whole and in almost all euro-area countries ⁽⁶⁾. In addition, Member States provided ample liquidity support to counter the economic fallout of the pandemic. This discretionary fiscal response comes on top of large automatic stabilisers, following the unprecedented drop in economic activity.

Fiscal measures by broad objective: emergency and other support measures

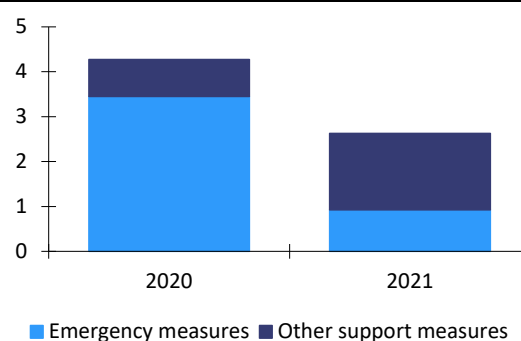
The optimal design of fiscal stimulus measures depends on how the pandemic develops. In the initial phase of the pandemic, it was essential to act swiftly by taking emergency measures. These measures were mostly temporary and were designed to support the health sector and keep households and businesses afloat, with a positive impact on the economy.

Given the resurgence of the pandemic in Europe, emergency measures may continue to prove necessary to provide a lifeline to the economy. However, when the health-related emergency gradually subsides, the measures are likely to be less efficient in supporting the recovery. Therefore, when the situation improves,

emergency measures may need to be adjusted and combined with measures that improve the fundamentals of our economies, support the green and digital transition and have a positive impact on domestic demand.

Emergency measures dominated the initial phase of the COVID-19 crisis and are set to become less relevant in 2021 (Graph I.2.1). In 2020, euro-area Member States brought in fiscal measures mostly aimed at addressing the public health situation and compensating workers and firms for income losses due to lockdown measures and supply chain disruptions. These emergency measures are estimated to amount to 3.4% of GDP in 2020, representing 80% of the total fiscal stimulus measures. Other measures of a more general recovery-supporting nature (either temporary or permanent), such as extra public works or indirect tax cuts, are expected to amount to 0.8% of GDP in 2020 (20% of total measures). In 2021, the importance of emergency measures is set to decline. According to our current forecast, they are expected to amount to 0.9% of GDP, i.e. about one third of total measures. By contrast, the amount provided under the other support measures is set to increase to 1.5% of GDP or about two thirds of total measures.

Graph I.2.1: Discretionary fiscal policy measures (2020-2021, euro area, % of GDP)



Note: Emergency measures mostly aim to address the public health situation and to compensate workers and firms for loss of income due to the lockdown and supply chain disruptions. They are mostly temporary. Recovery measures aim to provide more general support for economic activity.

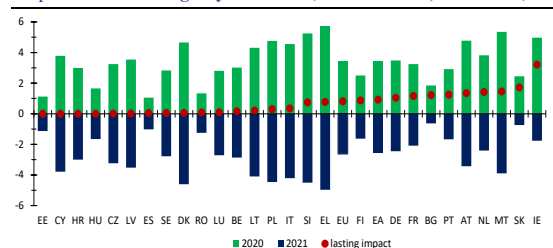
Source: 2021 draft budgetary plans and Commission autumn 2020 forecast.

⁽⁵⁾ In autumn 2020, the Commission assessed euro area Member States' draft budgetary plans for 2021, based on a qualitative assessment of fiscal measures, including their targeted and temporary nature. This chapter presents the key takeaways from that assessment.

⁽⁶⁾ Recently, many Member States have reconsidered the pace of discontinuation of fiscal measures due to the evolution of the pandemic and continued restrictions on social contact. The impact of COVID-19 related measures is currently expected to amount to around 3.7% of GDP in 2020 and around 2.9% of GDP in 2021.

In 2021, the use of emergency measures varies significantly across Member States, reflecting the persistent high degree of uncertainty on how the pandemic will develop (Graph I.2.2). Five Member States expect emergency spending amounting to 1% of GDP or more, though some countries have factored in no impact from the temporary emergency response in their 2021 budgets. Several countries plan to reduce the fiscal support in 2021 provided by emergency measures. However, in light of the recent deterioration of the health and economic situation in Europe, Member States have extended emergency measures and provided additional fiscal support to shore up the economy.

Graph I.2.2: Emergency measures (2021 and 2022, % of GDP)



Source: Commission autumn 2020 forecast

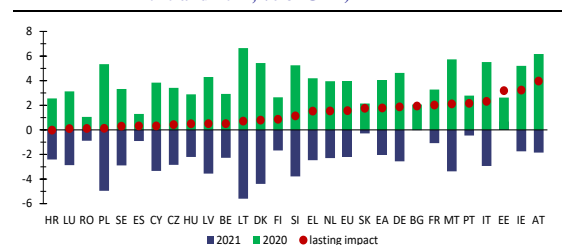
Fiscal measures by duration: temporary and permanent

Support measures need to be well targeted and temporary. In the initial phase of the COVID-19 pandemic, it was important to stabilise EU economies by adopting a swift and robust recovery package. However, it is key that support measures are targeted and reliably temporary in nature and do not create permanent entitlements to balance the need for economic support with the need to ensure medium- and long-term debt sustainability.

When economic conditions allow, governments should resume fiscal policies that aim to achieve prudent medium-term fiscal positions. Credible medium-term fiscal strategies are particularly important for highly-indebted Member States. Unanchored fiscal policy that increases uncertainty can be self-defeating. Fiscal policy can only be effective in reducing uncertainty and maintaining risk premia at acceptable levels if expectations about fiscal policy are well-anchored.

Almost half of the budgetary measures implemented in 2020 are expected to still be in place in 2021. Although the bulk of the budgetary impact of the fiscal measures taken in 2020 is expected to be temporary, part of it extends to 2021 (Graph I.2.3), foreseen to have an impact of 1.8% of GDP in the euro area (with a higher lasting impact expected in Austria, Ireland, Estonia, Italy, Portugal, Malta, France, and Germany).

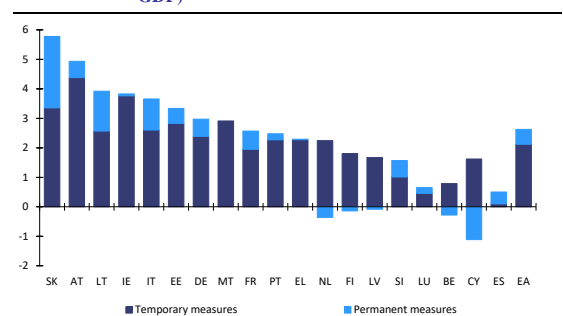
Graph I.2.3: Budgetary impact of COVID-related measures (in 2020 and 2021, % of GDP)



Source: Commission autumn 2020 forecast.

In 2021, most Member States plan mainly temporary measures to support their economies, given the considerable uncertainty (Graph I.2.4). The measures are foreseen to amount to 2.6% of GDP on average, with some countries planning stimulus of 3% of GDP or more. On average, around two thirds of all measures in 2021 are expected to be temporary.

Graph I.2.4: Temporary and permanent measures (2021, % of GDP)



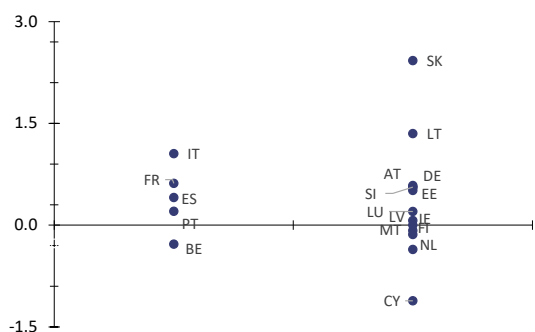
Note: The graph shows the expected fiscal impact in 2021 of discretionary measures adopted in 2020 onwards. Temporary measures are set to expire in 2022 or earlier.

Source: Commission autumn 2020 forecast.

However, a few countries have also taken some permanent measures. In a few cases, they could be in excess of 1% of GDP, with an impact on future fiscal trajectories. With the exception of Germany and Estonia, overall increases in investment account for a negligible share of

permanent measures. This may be cause for concern, as the uncertainty surrounding the second wave of pandemic remains high and additional emergency measures may be needed (Graph I.2.5).

Graph I.2.5: Permanent measures and pre-crisis medium-term fiscal sustainability risks (2021, % of GDP)



Note: The chart shows the fiscal impact in 2021 from the permanent measures taken in 2020. Member States are clustered according to their pre-pandemic medium-term sustainability risks. The debt sustainability analysis carried out for Greece in the 2019 Debt Sustainability Monitor differed somehow from the common approach, due to specific features of Greece's debt structure, notably the large share of official sector lending, with no risk classification provided.

Source: Commission autumn 2020 forecast and 2019 Debt Sustainability Monitor.

Liquidity support measures

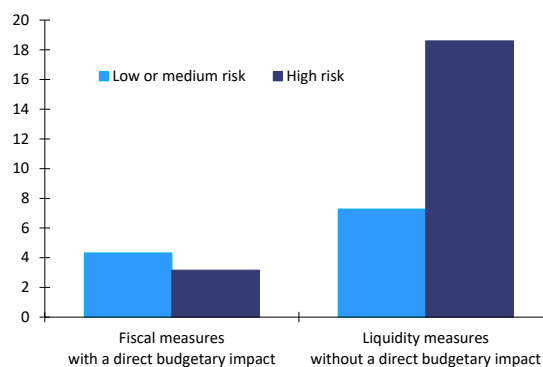
Member States provided ample liquidity support to counter the economic fallout of the COVID-19 pandemic. The most common forms of liquidity support are state guarantees to support private-sector borrowing, and tax deferrals, i.e. the option to postpone tax obligations without penalty. Member States also issued guarantees to support new EU-level instruments. Although liquidity support is not part of the budgetary projections (i.e. these measures do not have an immediate budgetary impact), it amounts to around 20% of GDP in the euro area and represents a significant risk to the fiscal forecast. Ultimately, the overall size of the crisis-related budgetary impact over the next two years will depend on the duration of the pandemic and on the speed and strength of the economic recovery.

State guarantees are the largest category of liquidity support measures. Although the size of guarantee programmes and their set-ups vary considerably, euro-area Member States have put in place schemes totalling 19% of GDP. Nevertheless, the actual take-up or contractual agreements between households, firms, financial sector and the government may be smaller. Only a

portion of the contractual obligations is likely to result in calls on governments, increasing deficit and debt levels. Member States have also issued guarantees to support new EU-level instruments, in particular SURE and the European Guarantee Fund.

Member States have also allowed tax and social security payments to be deferred, totalling more than 1% of GDP in 2020. Tax deferrals have mostly no direct impact on government deficit since taxes are recorded in national accounts for the period when the economic activity generating the tax liability takes place. However, deferrals may temporarily affect debt if they give rise to additional borrowing by the general government in the deferral period. Given the sizeable expected economic contraction in 2020, some businesses are unlikely to survive the crisis and some of the deferred tax obligations may never be paid. According to the EU statistical framework, accrued but uncollectable taxes should not be recorded as government revenue, and therefore they have a deficit-increasing impact.

Graph I.2.6: Euro area: Fiscal support and pre-crisis medium-term fiscal sustainability risk, 2020 (% of GDP)



Note: The chart shows the (simple) average discretionary fiscal support adopted in 2020. Member States are grouped according to their pre-pandemic medium-term sustainability risks, with Belgium, Spain, France, Italy and Portugal in the high-risk group. The debt sustainability analysis carried out for Greece in the 2019 Debt Sustainability Monitor took a different approach due to specificities of the Greek debt structure, notably the large share of official sector lending, with no risk classification provided.

Source: 2021 Draft Budgetary Plans, Commission autumn 2020 forecast, and European Commission's 2019 Debt Sustainability Monitor.

Member States with stronger fiscal positions have provided more direct budgetary support, while Member States with weaker fiscal positions tended to rely more on liquidity support (Graph I.2.6). Overall, countries with relatively stronger fiscal positions extended more

fiscal support with a direct budgetary impact (1% of GDP). By contrast, countries with weaker fiscal positions have relied more heavily on liquidity support that does not have a direct budgetary impact. Looking ahead, EU-level support schemes such as the Recovery and Resilience Facility should provide additional fiscal space to support economic recovery and resilience.

2.2. EU RESPONSE TO THE COVID CRISIS

The EU's economic policy response to the deep crisis was swift, comprehensive and sizeable.

The Commission started working straight away on multiple instruments designed to save lives and jobs, protect companies and support Member States whose public finances were put under severe stress. The response complemented the action taken at national level (Section I.2.2.) and provided the coordinated response that this unprecedented crisis called for.

Immediate crisis response

Many new measures were adopted at EU level to provide support for workers, businesses and sovereigns.

- **More budgetary flexibility.** In March 2020, the ministers of finance agreed with an assessment carried out by the Commission and activated the general escape clause under the Stability and Growth Pact (SGP) ⁽⁷⁾. The general escape clause facilitates the coordination of budgetary policies in times of severe economic downturn in the Union as a whole. The activation of the clause allows Member States to temporarily depart from the adjustment path towards their medium-term budgetary objectives (MTO), provided that this does not endanger fiscal sustainability in the medium term. As a result, while the general escape clause does not suspend the Stability and Growth Pact, its activation provides the Member States with the fiscal space necessary

to respond to the challenges arising from the pandemic.

- **More flexibility in the State aid rules.** In April 2020, the European Commission adopted a temporary framework to enable Member States to use the full flexibility provided for under State aid rules to support the economy in the context of the COVID-19 outbreak. It was later amended to increase possibilities for public support to research, testing and production of products relevant to fight the pandemic, to protect jobs and to further support the economy. Later, it was extended to enable recapitalisation and subordinated debt measures, to further support small companies and to incentivise private investments. More recently, the Temporary Framework was prolonged until end 2021, certain aid ceilings were increased and the conversion of certain repayable instruments into direct grants was allowed. Together with many other support measures available to Member States under the existing State aid rules, the temporary framework enables Member States to ensure that sufficient liquidity remains available to businesses of all types and to shore up the economy during and after the COVID-19 pandemic.
- **Mobilising the EU Structural Funds for most pressing needs.** In April 2020, the Commission approved two packages to make full use of the flexibility and liquidity offered under the Cohesion Funds to help those most affected: healthcare workers and hospitals, SMEs, and workers. First, the Corona Response Investment Initiative (CRII) allows Member States to mobilise all unspent Structural Funds, releasing up to EUR 37 billion of EU fundings. Second, under the Coronavirus Response Investment Initiative Plus (CRII+), exceptional additional flexibility to re-programme and transfer resources between funds and categories of regions will facilitate the use of uncommitted funding to combat the crisis. EU funds will no longer need to be matched by national co-financing before they can be released.
- **Protecting jobs and people at work:** In April 2020, the European Council endorsed a new

⁽⁷⁾ 'Statement of EU ministers of finance on the Stability and Growth Pact in light of the COVID-19 crisis', available at: <https://www.consilium.europa.eu/en/press/press-releases/2020/03/23/statement-of-eu-ministers-of-finance-on-the-stability-and-growth-pact-in-light-of-the-covid-19-crisis/>

instrument to provide temporary support to mitigate unemployment risks in an emergency (SURE). It provides up to EUR 100 billion in loans granted on favourable terms to Member States to address sudden increases in public expenditure needed to protect employment and workers' income (Box I.2.1). The SURE instrument helps Member States finance the cost of short-time work schemes, which allow firms experiencing economic difficulties to temporarily reduce the hours worked by their employees. Workers are provided with public income support for the hours not worked. It will also fund similar schemes providing income replacement, in particular for the self-employed. SURE can also support, as ancillary aid, the financing of some health-related measures, in particular in the workplace. The Commission finances loans to requesting Member States by issuing social bonds. They are underpinned by a system of irrevocable, unconditional and on-call guarantees, provided voluntarily by all EU Member States, even those that do not request financial assistance under SURE. These guarantees embody the spirit of solidarity between Member States, coordinated by the EU.

- **Supporting companies.** The European Commission has unlocked EUR 1 billion from the European Fund for Strategic Investments (EFSI) to serve as a guarantee to the European Investment Fund (EIF), part of the European Investment Bank Group. This allows the EIF to issue special guarantees to incentivise banks and other lenders to provide liquidity to at least 100,000 European small and medium-sized business and small mid-cap companies hit by the economic impact of the pandemic. The guarantees provide an estimated EUR 8 billion of available funding. In addition, a new Pan-European Guarantee Fund, created by the EIB Group, aims to provide finance to hard-hit companies that are viable in the long-term (in particular small and medium-sized companies). The fund is underpinned by guarantees from the Member States and is expected to mobilise up to EUR 200 billion of additional financing. The EIB Group is also repurposing existing instruments to support companies affected by the crisis and to finance urgent infrastructure improvements and equipment needs in the health sector.

- **Easing financing of healthcare spending in euro-area Member States.** The Pandemic Crisis Support, set up by the European Stability Mechanism (ESM), is able to provide loans of up to EUR 240 billion. The loans are available to all euro-area Member States, with a benchmark provision of 2% of each Member State's gross domestic product (as of end-2019). To access the Pandemic Crisis Support, Member States need only commit to using this credit line to support domestic financing of direct and indirect healthcare, treatment and prevention-related costs due to the COVID-19 crisis⁽⁸⁾.
- **ECB monetary easing.** In March 2020, the ECB launched a new non-standard monetary policy measure, the pandemic emergency purchase programme (PEPP). Its key objective is to counter the serious risks posed by the COVID-19 outbreak to the monetary policy transmission mechanism and the economic outlook for the euro area. The PEPP is a temporary asset purchase programme of private and public-sector securities. It had an initial budget of EUR 750 billion, increased in June and December 2020 by EUR 600 billion and EUR 500 billion respectively, to total EUR 1,850 billion. The ECB Governing Council extended the PEPP until at least the end of March 2022 and will end net asset purchases under the PEPP once it deems the COVID-19 crisis phase to be over.

New and large scale support for investment and structural reforms to promote a sustainable recovery.

The immediate crisis response measures could only partly address the economic fallout of the COVID-19 pandemic. Further measures were taken to address the dramatic costs of the pandemic and to keep the EU on track with its longer-term economic, social and environmental goals.

⁽⁸⁾ Afterwards, euro area member states will remain committed to strengthen economic and financial fundamentals, consistent with the EU economic and fiscal coordination and surveillance frameworks, including any flexibility applied by the competent EU institutions.

On 27 May 2020, the Commission presented a comprehensive plan to tackle the crisis ⁽⁹⁾. The aim was to protect lives and livelihoods, repair the single market and build a lasting recovery. It included a revamped seven-year EU budget, the financial framework for 2021-2027, and a new recovery instrument, Next Generation EU ⁽¹⁰⁾.

On 21 July, the EU's heads of state and government reached a landmark political agreement on a EUR 1.82 trillion package for a sustainable and green recovery. As proposed by the Commission, the recovery plan is based on a 'Next Generation EU' recovery instrument, which will raise EUR 750 billion of financing on the financial markets and a revamped long-term EU budget. Both funds, Next Generation EU and the multiannual budget, will help the EU recover and transform in line with its major policies, particularly the European Green Deal, the digital strategy and building economic and social resilience.

Next Generation EU will provide funding of EUR 750 billion for Europe's recovery. For the first time ever the Commission borrows on the financial markets and then channel these funds through the EU budget to the Member States, either via new programmes or by topping up existing ones. Relaunching the economy does not mean going back to the status quo before the crisis, but bouncing forward by investing in the long-term future, while repairing the damage of the crisis.

The revamped and new programmes funded by Next Generation EU are grouped into three categories:

- support to Member States with investments and reforms
- kick-starting the EU economy by incentivising private investments
- learning from the crisis.

⁽⁹⁾ The press release is available at: https://ec.europa.eu/commission/presscorner/detail/en/ip_20_940

⁽¹⁰⁾ Proposal for a Council Regulation establishing a European Union Recovery Instrument to support the recovery in the aftermath of the COVID-19 pandemic, COM/2020/441 final, 28.5.2020.

The centrepiece and the biggest programme under Next Generation EU is the Recovery and Resilience Facility (RRF), under the first pillar. The RRF will provide EUR 672.5 billion (EUR 360 billion for loans and EUR 312.5 billion for grants) in financial support for reforms and investments to foster the green and digital transitions and to promote economic, social and territorial cohesion by improving the resilience, crisis preparedness, adjustment capacity and growth potential of Member States, and mitigating the social and economic impact of the crisis.

Under the RRF framework, Member States prepare Recovery and Resilience Plans setting out their comprehensive reform and investment agendas. The plans should effectively address the country-specific challenges and priorities identified in the EU process of economic coordination, the 'European Semester'. The RRF Regulation also requires Member States to explain how their Recovery and Resilience Plan (RRP) measures contribute to the green and digital transitions or to challenges resulting from them.

Apart from financing the RRF, Next Generation EU will also provide substantial funding for other instruments. One example here is ReactEU, which continues and extends the crisis response and crisis repair measures delivered through the Coronavirus Response Investment Initiative and the Coronavirus Response Investment Initiative Plus and constitutes a bridge to the long-term recovery plan that is the RRF. Another example is the upgrade InvestEU, the programme that aims to mobilise private investment across the EU and boost the resilience of strategic sectors linked to the green and digital transitions.

To repay the amounts borrowed, the EU will start a collective reflection on new revenue-generating instruments. According to the Commission's forecast, the funds will be repaid between 2028 and 2058. This may seem a distant prospect, but it is important to start the discussion now on how to pay this debt back. To help do this in a fair and shared way, the Commission will propose a number of new revenue streams, known as 'own resources' in EU shorthand. They include a European tax for large companies, a carbon border adjustment tax, revenue from emissions trading, and a digital tax.

Box 1.2.1: The European instrument for temporary support to mitigate unemployment risks in an emergency – SURE

This box describes the main objectives and features of the European instrument for temporary support to mitigate unemployment risks in an emergency (SURE).

Part of a comprehensive EU response to help Member States manage the COVID-19 crisis

The SURE instrument is a crucial aspect of the EU’s comprehensive economic response to the COVID-19 pandemic. On 9 April 2020, the Eurogroup met in inclusive format⁽¹⁾ and agreed on an emergency support package comprising three immediate safety nets designed to support jobs and workers, businesses and Member States in managing the COVID-19 crisis. As part of this package, the EU created the SURE instrument on 19 May 2020 to help workers and the self-employed⁽²⁾.

The key objective of SURE is to help Member States protect jobs and thus protect employees and self-employed against the risk of unemployment and loss of income. SURE is available for Member States that need to mobilise significant funds to tackle the negative socio-economic consequences of the coronavirus outbreak. SURE can provide emergency financial assistance of up to EUR 100 billion in the form of loans from the EU to affected Member States to cover the ‘sudden and severe’ increase in actual and planned public expenditure as of 1 February to safeguard employment. The SURE instrument acts as a second line of defence, backing up national short-time work schemes and similar measures.

SURE is a temporary instrument that respects the remit of the Member States’ to design their own social security systems. Member States can request financial assistance under SURE only during the COVID-19 crisis with a sunset clause of 31 December 2022, unless the Council extends this for a six-month period. Importantly, the instrument does not impose any conditions on the design of short-time work schemes or similar measures, as these remain the prerogative of each Member State.

Protecting EU workers against the risk of unemployment, including the self employed

The focus of SURE on short-time work schemes is to protect jobs and secure workers’ income in the face of major external and transitory shocks. Member States are eligible for financial assistance under SURE in the event of a ‘sudden and severe’ increase in national spending to fund short-time work schemes. Short-time work schemes allow firms experiencing a severe drop in economic activity to temporarily reduce the hours worked, while providing their employees with income support from the state for the hours not worked. The schemes can prevent a temporary shock from having more severe and long-lasting negative consequences on the economy and on the labour market in Member States. This helps sustain household incomes and maintain staffing levels and the productive capacity of firms and of the economy as a whole.

The measures supported by SURE are particularly effective at safeguarding employment in the context of the COVID-19 crisis. Recent academic contributions have explicitly supported the approach taken by the Commission. They highlight the efficiency of the schemes in the context of containment measures and closure of firms due to the disruption of supply chains⁽³⁾. Other public measures such as unemployment benefits and active labour market policies are less efficient in terms of impact but become more useful when unemployment rises. Short-time work schemes played a meaningful economic role in only a few countries during the global and financial crisis and were in place in two thirds of Member States

⁽¹⁾ The Eurogroup in inclusive format includes the euro area and non-euro area Member States.

⁽²⁾ The three safety nets are worth EUR 540 billion. In addition to the SURE instrument (up to EUR 100 billion), the other two safety nets are the European Stability Mechanism (ESM) credit line to the nineteen euro-area countries (total budget of EUR 240 billion) and the EIB’s pan-European guarantee fund (EUR 200 billion).

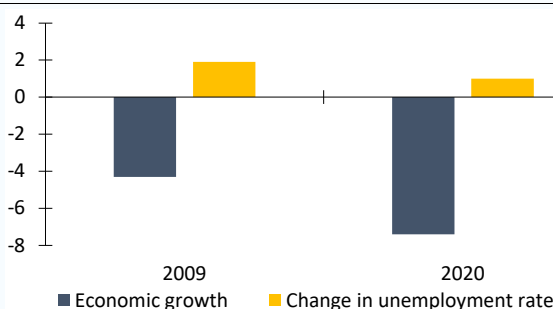
⁽³⁾ Giupponi, G., Landais, C., (2020). Building effective short-time work schemes for the COVID-19 crisis. VoxEU.org, 1 April. Vandenbroucke, F., Andor, L., Beetsma, R., Burgoon, B., Fischer, G., Kuhn, T., Luigjes, C., Nicoli, F. (2020). The European Commission’s SURE initiative and euro-area unemployment re-insurance. VoxEU.org, 6 April.

(Continued on the next page)

Box (continued)

before the COVID outbreak. But all Member States either brought in, extended or made intensive use of these schemes in response to the pandemic. The increase in take-up of schemes supported by SURE in the COVID-19 crisis helped ensure that the fall in output in the EU resulted in a much smaller increase in unemployment compared to the global and financial crisis (Graph 1).

Graph 1: Impact of major crises on GDP and the unemployment rate: 2009 vs. 2020

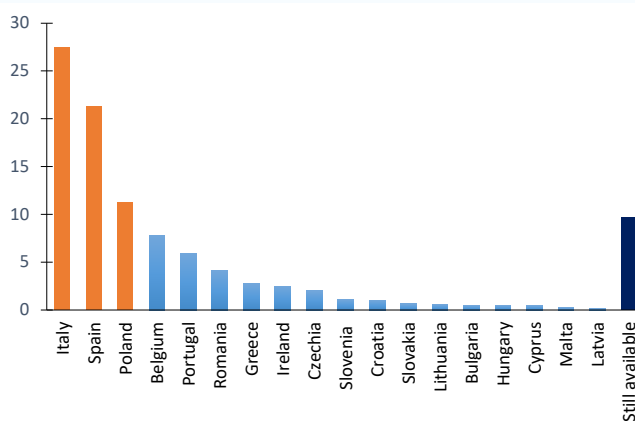


Source: Eurostat, Commission autumn 2020 forecast.

A high level of take-up by Member States

SURE has proven very popular, providing a total EUR 90.3 billion already allocated to 18 Member States. The Council approved a total EUR 90.3 billion in financial support to 18 Member States, based on proposals from the Commission (Graph 2). A 19th Member State, Estonia, requested financial assistance under SURE in February 2021 and the Commission proposed that it is granted EUR 0.23 billion in support on 26 February. The broad country coverage and total funding amount confirm that SURE support has been very attractive to Member States. The Member States requesting the three largest loans reached the maximum total of EUR 60 billion, but received over 95% of their initial requests. Member States can still submit requests for support from the remaining budget of EUR 9.4 billion.

Graph 2: Take-up of financial assistance under SURE (in EUR bn)



Note: The three largest loans (IT, ES and PL) are subject to a EUR 60 billion concentration limit, as highlighted in red. The dark bar represents the amount still available.

Source: Commission services.

(Continued on the next page)

Box (continued)

The funds embody EU-wide solidarity and have proven credible on the markets

SURE provides financial assistance in the form of back-to-back loans granted by the EU to Member States on favourable terms. Under this instrument, the EU can borrow on the financial markets by issuing bonds with low interest rates, thanks to the EU's solid credit rating. The EU then lends the funds to the Member States concerned at the same conditions it received.

The Commission issues social bonds to finance SURE loans to Member States. The Social Bond Framework is designed to provide investors with confidence that the funds mobilised will be used to finance targeted social policy measures.

The SURE instrument is a direct expression of EU solidarity, enabling Member States to support each other by providing guarantees coordinated by the EU. Loans provided to Member States under the SURE instrument are underpinned by a system of voluntary guarantees from all Member States. Each Member State's contribution to the overall amount of the guarantee corresponds to its relative share in the EU's total gross national income, based on the 2020 EU budget. In the (unlikely) event that the guarantees are called, Member State liabilities are strictly limited to their own contribution. The system of guarantees provides sufficient financial firepower and is a tangible expression of EU solidarity.

SURE includes a number of additional prudential safeguards on top of the guarantee system. These safeguards consist of an annual exposure limit of EUR 10 billion (10% of the total budget), a concentration limit to diversify the portfolio (the three largest loans provided to Member States must not exceed EUR 60 billion) and the option for the Commission to roll over the loans, where necessary.

The financial markets considered these prudent financial arrangements to be very credible. The first four bond issuances by the Commission were very successful in terms of level of subscription and pricing. EUR 53.5 billion has already been disbursed to 15 Member States in four instalments. As of February 2021, five Member States have received the total amount granted to them by the Council, two Member States have received approximately three quarters and eight Member States have received approximately half. The average maturity of the loans disbursed is close to the maximum average maturity of 15 years, well in excess of the maturity on standard 10-year bonds. The remaining loans are expected to be disbursed in the first half of 2021.

Part II

Developments in fiscal surveillance

Please cite this as follows:

European Commission (2021), Developments in fiscal surveillance, Report on Public Finances in EMU 2020, Institutional Paper 147, 26 February 2021, 25-59.

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KEY FINDINGS

The activation of the general escape clause granted Member States enough budgetary flexibility to deal with the crisis.

- The activation of the general escape clause has facilitated the coordination of budgetary policies in times of severe economic downturn. Its activation allows for a temporary departure from the adjustment path towards the medium-term budgetary objective of each Member State, provided this does not endanger fiscal sustainability in the medium term.
- In May 2020, the Commission adopted reports under Article 126(3) of the Treaty on the Functioning of the EU for all Member States except Romania, which was already under an excessive deficit procedure. The Commission reached the conclusion 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 path for fiscal policy.

The Commission released its review of the economic governance framework.

- The Commission's review of the economic governance framework predates the outbreak of the COVID-19 pandemic and, therefore, does not take into account potential new challenges arising from the current crisis. It identifies some well-recognised challenges with the fiscal framework and its implementation. The review found that there was scope to improve the implementation of the MIP and to make the surveillance strands work better together. As for the regulation governing (post-) programme surveillance, the framework was found to have worked reasonably well.
- The Commission planned an open debate amongst key stakeholders and the general public, guided by nine concrete questions for reflection. In light of the COVID-19 pandemic, this public debate has been put on hold until further notice, although the review process has not been formally suspended.

Member States are increasingly aligning their budgetary processes with national and international environmental objectives.

- Based on information from a joint Commission-OECD survey, almost two third of Member States have established or plan to establish some form of green budgeting in their country. Among others, these include green tagging, environmental impact assessments and the assessment and treatment of greenhouse gas emissions.
- Technical and methodological challenges have been identified as the main obstacles to introduce or implement green budgeting. Member States see potential for international and supranational institutions to offer technical guidance, including through sharing information and expertise. The Commission works together with the Member States to promote the use of these practices in the EU.

It provides an assessment of climate change-related risk management and presents a review of the building blocks of disaster risk financing.

- Climate change is expected to increase the pressure on public finances in the future. On the one hand, there is a growing need for public investment in measures to mitigate and adapt to the effects of climate change. On the other hand, large-scale disasters related to climate change represent a real human and economic threat that fiscal frameworks will need to be better reflected in budgetary planning.
- While some EU provisions for disaster risk management have been in place since 2001 and national practices have improved, a consistent approach to disaster-related fiscal risks is lacking in the EU.

1. IMPLEMENTATION OF FISCAL SURVEILLANCE IN 2020

This chapter summarises the main developments in the implementation of fiscal surveillance in the EU in 2020. First, it presents key developments and procedural steps taken under the corrective arm's excessive deficit procedure (Section II.1.1) and the preventive arm's significant deviation procedure (Section II.1.2.). It then summarises the 2020 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 2021 (Section II.1.4).

The general escape clause of the Stability and Growth Pact (SGP) has been activated for the first time. On 20 March 2020, the Commission adopted a Communication⁽¹¹⁾ setting out its view that given the expected severe economic downturn resulting from the COVID-19 outbreak the conditions were met to activate the general escape clause⁽¹²⁾. On 23 March 2020, the Member States' Finance Ministers agreed with the Commission's assessment⁽¹³⁾. The escape clause facilitates the coordination of budgetary policies in times of severe economic downturn in the Union as a whole. The activation of the clause allows for a temporary departure from the adjustment path towards the medium-term budgetary objective of each Member State, provided this does not endanger fiscal sustainability in the medium term. As a result, while the general escape clause does not suspend the Stability and Growth Pact and its procedures, its activation provides the Member States with the fiscal space necessary to respond to the pandemic. The escape clause consequently had a decisive influence on fiscal policy and on fiscal surveillance in 2020 (Chapter I.1.2).

⁽¹¹⁾ Communication from the Commission to the Council on the activation of the general escape clause of the Stability and Growth Pact, Brussels, 20.3.2020, COM(2020) 123 final.

⁽¹²⁾ The clause is set out in Articles 5(1), 6(3), 9(1) and 10(3) of Regulation (EC) 1466/97 and Articles 3(5) and 5(2) of Regulation (EC) 1467/97.

⁽¹³⁾ 'Statement of EU ministers of finance on the Stability and Growth Pact in light of the COVID-19 crisis', available at: <https://www.consilium.europa.eu/en/press/press-releases/2020/03/23/statement-of-eu-ministers-of-finance-on-the-stability-and-growth-pact-in-light-of-the-covid-19-crisis/>.

1.1. EXCESSIVE DEFICIT PROCEDURE

This section focuses on the implementation of the excessive deficit procedure in 2020. Under this procedure, fiscal developments are monitored with a view to identifying gross policy errors. Under this procedure, 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⁽¹⁴⁾.

1.1.1. Euro area Member States

No euro area Member State was expected to fulfil the deficit criterion in 2020. On 20 May 2020, the Commission issued reports under Article 126(3) TFEU for all euro area Member States⁽¹⁵⁾. In these reports, the Commission reviewed compliance with the deficit criterion of the Treaty, as general government deficits were planned or forecast to exceed the 3% of GDP Treaty reference value in 2020. All euro area Member States were found not to have fulfilled the deficit criterion. Furthermore, the Commission reviewed compliance with the debt criterion in 2019 by Belgium, Cyprus, France, Greece, Italy and Spain⁽¹⁶⁾: Belgium, France and Spain were found not to have fulfilled the debt criterion.

⁽¹⁴⁾ 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

⁽¹⁵⁾ See Commission's reports issued on 20 May 2020 under Article 126(3) TFEU for all Member States (except Romania) 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

⁽¹⁶⁾ The debt rule requires any Member State with a general government debt above 60% of GDP reference value to reduce its debt by an average minimum pace of 1/20th of the excess above 60% of GDP. In 2019, France, Greece and Spain came under transitional arrangements (the transitional debt rule), which apply during the 3 years following the correction of an excessive deficit.

The Commission concluded that no decision on placing euro area Member States under the excessive deficit procedure should be taken. The Commission considered that the pandemic outbreak had an extraordinary macroeconomic and fiscal impact and had created exceptional uncertainty, including for designing a credible multi-year path for fiscal policy ⁽¹⁷⁾.

The Commission reports took into account a variety of relevant factors. The reports examined whether the planned deviations of the government deficits from the 3% of GDP reference value in 2020 were planned or forecast to be: (i) exceptional; (ii) close to the reference value; or (iii) temporary. The reports also considered a variety of relevant factors, including the economic and budgetary impact of the pandemic and the track record of adjustment towards the medium-term budgetary objective. 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 reports on Belgium, France and Spain concluded that the deficit and debt criteria were not fulfilled. The 2020 stability programmes expected the general government deficit to increase in 2020 to 7.5% of GDP in Belgium, 9.0% in France and 10.3% in Spain. The planned excesses over the deficit reference value of 3% of GDP in 2020 were considered exceptional, i.e. resulting from the impact of the pandemic, but not temporary, as the deficits for these Member States were expected to remain above the reference value in 2021, and not close to the reference value. Moreover, general government debt at end-2019 stood at 98.6% ⁽¹⁸⁾ of GDP in Belgium, 98.1% in France and 95.5% in Spain. None of these Member States complied with the debt reduction benchmark.

⁽¹⁷⁾ See See Communication from the Commission on 2020 European Semester: Country-specific recommendations, Brussels, 20.5.2020, COM(2020) 500 final

⁽¹⁸⁾ 98.1% of GDP according to Eurostat’s updated validation of public finance data in October 2020.

The report on Italy concluded that the deficit criterion was not fulfilled, and that there was not sufficient evidence to conclude on whether the debt criterion was fulfilled. The 2020 stability programme expected the general government deficit to increase to 10.4% of GDP in 2020. The planned excess over the deficit reference value was considered exceptional, but not temporary and not close to the reference value. Italy’s general government debt stood at 134.8% of GDP at the end of 2019. After examining all relevant factors, the Commission’s analysis was not conclusive as to whether the debt criterion was complied with. This conclusion took into account a number of relevant factors, which are set out below. Firstly, it considered the observed macroeconomic conditions, namely the slowdown recorded since 2018, which can partly explain Italy’s large gaps to compliance with the debt reduction benchmark. Secondly, Italy has made some progress on implementing growth-enhancing structural reforms in past years. Thirdly, there is no robust evidence of Italy having deviated significantly from the preventive arm in 2019 or over 2018 and 2019 taken together.

The reports on Cyprus and Greece concluded that the deficit criterion in 2020 was not fulfilled, while the debt criterion was complied with in 2019. The 2020 stability programmes expected the general government deficit to increase in 2020 to 4.3% of GDP in Cyprus and 4.7% in Greece. Their planned excesses over the deficit reference value of 3% of GDP in 2020 were considered exceptional and temporary, but not close to the reference value. Cyprus’s general government debt stood at 95.5% of GDP at the end of 2019 and did not comply with the debt reduction benchmark. However, the Commission concluded that Cyprus had complied with the debt criterion, basing its conclusion on assessment of the relevant factors, in particular: (i) the observed macroeconomic conditions; (ii) progress (though limited) on implementing growth-enhancing structural reforms in past years; and (iii) the compliance with the medium-term budgetary objective. Greece’s general government debt stood at 176.6% of GDP at the end of 2019 and did not comply with the debt reduction benchmark. However, the Commission again concluded that Greece had complied with the debt criterion, basing its conclusion on the assessment of relevant factors, in particular: (i) the observed

macroeconomic conditions; (ii) some progress on implementing growth-enhancing structural reforms in past years, and (iii) Greece's compliance with its fiscal targets in the context of the enhanced surveillance procedure⁽¹⁹⁾.

The reports on Austria, Estonia, Finland, Germany, Ireland, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Portugal, Slovakia and Slovenia all found that the deficit criterion was not fulfilled. Finland's 2020 stability programme expected the general government deficit to increase to 7.2% of GDP in 2020. The Netherlands planned a deficit of 11.8% of GDP in 2020 according to the Dutch Spring Budget Memorandum. Finland and the Netherlands planned deficits in excess of the reference value in 2020. This was considered exceptional, but not temporary and not close to the reference value. Austria, Germany, Ireland, Slovenia and Portugal also planned deficits in excess of the reference value in 2020. This was considered exceptional and temporary, but not close to the reference value. Austria's 2020 stability programme expected the general government deficit to increase to 8.0% of GDP in 2020. Germany's programme projected an increase in the deficit to 7¼% of GDP, while for Ireland the deficit was forecast to reach 7.4% of GDP. Slovenia's programme projected a deficit in 2020 of 8.1% of GDP. In the case of Portugal, the conclusion on non-compliance with the deficit criterion was based on the Commission spring 2020 forecast, which projected a deficit of 6.5% of GDP in 2020⁽²⁰⁾.

Estonia, Latvia and Slovakia also planned deficits in excess over the reference value in 2020. In the case of these three countries, the Commission reports considered that the excess was deemed exceptional, but neither temporary nor close to the reference value. Estonia's 2020 stability programme expected the general government deficit to increase to 10.1% of GDP in 2020. Latvia's programme projected the deficit to

rise to 9.4% of GDP in 2020, while Slovakia planned a deficit of 8.4% of GDP⁽²¹⁾.

Lithuania, Luxembourg and Malta planned deficits in excess over the reference value in 2020 that were considered both exceptional and temporary, but not close to the reference value. Lithuania's 2020 stability programme expected the general government deficit to increase to 11.4% of GDP in 2020. Luxembourg's programme projected a deficit of 8.5% of GDP in 2020, while Malta forecast a deficit of 7.5% of GDP.

1.1.2. Non-euro area Member States

Bulgaria complied with the deficit criterion, while the other non-euro area Member States and the United Kingdom did not comply with the criterion in 2020⁽²²⁾. The following summary groups the countries following the approach used in the preceding section on the euro area Member States (Section II.1.1.1).

Bulgaria's 2020 convergence programme expected the general government deficit to increase to 3.1% of GDP in 2020, which was above but close to the 3% of GDP Treaty reference value. The planned excess over the reference value was therefore considered both exceptional and temporary.

Hungary's 2020 convergence programme expected the general government deficit to increase to 3.8% of GDP in 2020. The planned excess over the reference value was considered to be exceptional, but neither temporary nor close to the reference value.

Croatia's 2020 convergence programme expected the general government deficit to increase to 6.8% of GDP in 2020. The planned excess over the

⁽¹⁹⁾ See Commission report on enhanced surveillance for Greece, https://ec.europa.eu/info/publications/enhanced-surveillance-report-greece-november-2020_en

⁽²⁰⁾ In spring 2020, Portugal had not provided the requested clarification on the size of the planned deficit.

⁽²¹⁾ According to the letter sent by the Slovak authorities to the Commission on 11 of May 2020.

⁽²²⁾ 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). EU 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.

reference value was considered exceptional and temporary, but not close to the reference value.

Czechia and Poland planned deficits in excess over the reference value in 2020 that were exceptional, but not temporary and not close to the reference value. Czechia's 2020 convergence programme expected the general government deficit to increase to 5.1% of GDP, while Poland's convergence programme planned a deficit of 8.4% of GDP in 2020.

Denmark and Sweden planned deficits in excess over the reference value in 2020 that were exceptional and temporary, but not close to the reference value. Denmark's 2020 convergence programme expected the general government deficit to increase to 8% of GDP in 2020, while Sweden's convergence programme projected a deficit of 3.8% of GDP.

Romania is the only Member State under an excessive deficit procedure. On 14 February 2020, the Commission issued a report under Article 126(3) TFEU for Romania. This report was prepared since, according to the fiscal strategy of the Romanian government, the general government deficit in 2019 was planned to increase to 3.8% of GDP, which was above and not close to the Treaty reference value. The planned excess over the reference value was neither exceptional nor temporary, while relevant factors did not provide mitigating elements to change the assessment. Therefore, the analysis suggested that the deficit criterion was not complied with, and that an excessive deficit procedure was thus warranted. Subsequent to the Commission report, the Economic and Financial Committee issued its opinion in accordance with Article 126(4) TFEU on 24 February 2020. That opinion was consistent with the assessment in the Commission report. Consequently, on 4 March 2020 the Commission issued its Opinion under Article 126(5) TFEU stating that an excessive deficit existed in Romania due to non-compliance with the deficit criterion. On the same day, the Commission also issued the proposal for a Council decision on the existence of an excessive deficit under Article 126(6) TFEU and a recommendation for a Council recommendation to bring an end to the situation of an excessive government deficit. According to subsequently published Eurostat-validated data, the deficit in 2019 amounted to 4.4% of GDP,

above the figures on which the described steps were prepared.

On 3 April 2020, the Council decided that an excessive deficit existed and recommended that Romania put an end to the present excessive deficit situation by 2022 at the latest. The Council set the deadline of 15 September 2020 for Romania to take effective action and to report in detail on the consolidation strategy envisaged to achieve the targets. On 15 September 2020, Romania submitted its report. That report pointed to a major deterioration in public finances during 2020. For 2020, Romania targeted a general government headline deficit of 8.6% of GDP. This was consistent with the budget amendment adopted on 14 August 2020, incorporating the impact of the emergency measures against the impact of COVID-19 pandemic taken until October 2020. Through its August budget amendment, the government also attempted to limit the fiscal deterioration in 2020 by limiting planned increases in social expenditures and in public wages (adopted before the COVID-19 outbreak).

New steps under the excessive deficit procedure for Romania will be considered after reassessment of the budgetary situation in spring 2021. In its Communication to the Council of 18 November 2020 on the fiscal situation in Romania, the Commission took fully into account the economic and fiscal impact of the COVID-19 outbreak as well as the implications of the general escape clause of the Stability and Growth Pact. The analysis in the Communication indicated that even after correcting for the effect of the COVID-19 crisis, the projected budget deficit deviated from the adjustment that would have been expected according to the Council Recommendation, although the size of the deviation could not be precisely assessed at that stage. Based on the Commission autumn 2020 forecast and the analysis of recent macroeconomic and budgetary developments, Romania was not set to make the necessary adjustments to ensure that the excessive deficit would be corrected in the foreseeable future. There had been no change in important underlying drivers of the fiscal situation, which were already present before the pandemic struck. In spring 2021, the Commission is set to reassess Romania's budgetary situation based on the 2020 outturn data, the 2021 budget and the

Commission spring 2021 forecast. If appropriate, the Commission will propose new steps under the excessive deficit procedure.

1.2. SIGNIFICANT DEVIATION PROCEDURE

A significant deviation procedure is launched if a Member State has deviated significantly from its medium-term budgetary objective or the adjustment path towards it. When such a deviation is observed, the Commission issues a warning. Within one month, the Council issues a recommendation to the Member State concerned to take measures to tackle the deviation.

Significant deviation procedures for Hungary and Romania were discontinued in 2020 and no new procedures were launched in 2020.

Hungary was subject to subsequent significant deviation procedures, which started in June 2018. The Council, in its last decision of 5 December 2019, established that Hungary had not taken effective action in 2019 and adopted a revised recommendation on measures to take to correct the significant deviation in 2020⁽²³⁾. Based on the Commission autumn 2019 forecast, Hungary was projected to deviate from the recommended adjustment for 2019 and projected to achieve the recommended adjustment in 2020. Consequently, the Council called on Hungary to take the necessary measures to ensure that the nominal growth rate of net primary government expenditure does not exceed 4.7% in 2020, corresponding to an annual structural adjustment of 0.75% of GDP. Hungary was also asked to report to the Council by 15 April 2020 on action taken in response to the recommendation.

Hungary took effective action in response to the Recommendation of 5 December 2019 and further steps under the significant deviation procedure for Hungary were not warranted. This conclusion was reached by the Council on 20 July 2020 as part of the Council Recommendation on Hungary's 2020 national reform programme and based on the Council opinion on Hungary's 2020 convergence

programme. The conclusion was based on the Commission's overall assessment. It 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.

Romania has been subject to subsequent significant deviation procedures starting from June 2017. The Council Decision of 5 December 2019 established that Romania had not taken effective action; as a result, the Council provided a revised recommendation on measures to take to correct the significant deviation⁽²⁴⁾. Based on the Commission autumn 2019 forecast, Romania's projected fiscal effort fell short of the requirements in both 2019 and 2020. Moreover, the Commission projected a general government deficit of 3.6% in 2019 and 4.4% in 2020, thus exceeding the reference value (3% of GDP). Consequently, the Council called on Romania to take the necessary measures to ensure that the nominal growth rate of net primary government expenditure does not exceed 4.4% in 2020, corresponding to an annual structural adjustment of 1.0% of GDP. This would put the country on an appropriate adjustment path towards the medium-term budgetary objective. Romania was asked to report to the Council by 15 April 2020 on action taken in response to the recommendation. The excessive deficit procedure for Romania superseded the significant deviation procedure. (Section II.1.1.2).

1.3. FISCAL RECOMMENDATION

The outbreak of the COVID-19 pandemic had a major impact on the preparation and submission of the 2020 stability and convergence programmes in April 2020. In this context, Member States agreed with the Commission to submit simplified programmes with reduced reporting requirements, taking into account the exceptional economic uncertainty and the severe constraints faced by national administrations in charge of designing the policy response and projecting the budgetary implications.

⁽²³⁾ OJ L 329, 19.12.2019, p. 91 and OJ C 420, 13.12.2019, p. 1.

⁽²⁴⁾ OJ L 324, 13.12.2019, p. 5 and OJ C 420, 13.12.2019, p. 4.

In their 2020 stability and convergence programmes, all Member States announced substantial fiscal measures to limit the economic damage caused by the pandemic ⁽²⁵⁾. Automatic stabilisers and discretionary fiscal measures contributed to increased government spending and reduced revenue. The Commission spring 2020 forecast projected that the aggregate government fiscal deficit of the euro area and the EU would surge from 0.6% of GDP in 2019 to around 8½% in 2020. 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 ratio was forecast to increase from 86% in 2019 to 102¾% in 2020, while in the EU it was forecast to rise from 79.4% in 2019 to around 95% in 2020.

Member States were recommended to take all necessary measures to effectively address the pandemic, sustain the economy and support the ensuing recovery. The Council adopted country-specific recommendations for all Member States on 20 July 2020 as part of the 2020 European Semester economic coordination process. The fiscal elements of the country-specific recommendations reflected the activation of the general escape clause and information provided in the 2020 stability and convergence programmes (and in the national reform programmes). The Council addressed the same recommendation to all Member States (except Romania): to take all necessary measures to effectively address the pandemic, sustain the economy and support the ensuing recovery. When economic conditions allow, fiscal policies should aim to achieve prudent medium-term fiscal positions and ensure debt sustainability, while enhancing investment. Romania was recommended, in addition to taking all necessary measures to effectively address the pandemic, sustain the economy and support the ensuing recovery, to pursue fiscal policies to correct its excessive deficit, in line with the above-mentioned Council Recommendation of 3 April 2020. Romania was also recommended to avoid implementing permanent measures that would endanger its fiscal sustainability.

⁽²⁵⁾ The 2020 Stability and Convergence Programmes: an Overview, with an Assessment of the Euro Area Fiscal Stance, https://ec.europa.eu/info/sites/info/files/economy-finance/ip131_en_0.pdf

Fiscal policy guidance was fine-tuned in autumn 2020. The Annual Sustainable Growth Strategy 2021 ⁽²⁶⁾ and the letter of 19 September 2020 from the Commission to the EU Ministers of Finance ⁽²⁷⁾ invited the Member States to continue providing targeted and temporary fiscal support in 2021, in a context where the general escape clause remains activated, while safeguarding fiscal sustainability in the medium term. The letter also indicated that the application of the general escape clause would be reassessed in spring 2021.

1.4. DRAFT BUDGETARY PLANS

The euro area Member States' draft budgetary plans for 2021 were overall in line with the fiscal policy recommendations. In October 2020, all euro area Member States submitted their draft budgetary plans for the 2020 budget year, which were then assessed by the Commission. All euro area Member States submitted their draft budgetary plans in time, except for Cyprus and Italy, which submitted their draft budgetary plans with minor delays. Lithuania submitted a Draft Budgetary Plan prepared under a no-policy-change assumption ⁽²⁸⁾ because of a change in government during the adoption of the budget for 2021. Initially, Belgium submitted a Plan under a no-policy-change assumption, but this was updated by the Draft Budgetary Plan submitted on 30 October 2020, on which the Commission opinion was based. In contrast with past years, the Commission did not have to request further information on the plans from any Member State.

⁽²⁶⁾ Communication from the Commission on Annual Sustainable Growth Strategy 2021, Brussels, 17.9.2020, COM(2020) 575 final.

⁽²⁷⁾ https://ec.europa.eu/info/business-economy-euro/economic-and-fiscal-policy-coordination/eu-economic-governance-monitoring-prevention-correction/stability-and-growth-pact/annual-draft-budgetary-plans-dbps-euro-area-countries/draft-budgetary-plans-2021_en. The letter

⁽²⁸⁾ Estimates under a no-policy-change assumption extrapolate past revenue and expenditure trends and relationships in a way that is consistent with past policy orientations, and includes all measures that imply a change to these past policy orientations, on the condition that they are sufficiently detailed as well as adopted or at least credibly announced.

The Commission's assessment took into account the ongoing health crisis, the high level of uncertainty and the severe economic downturn resulting from the COVID-19 pandemic. The assessment was based on the fiscal policy recommendation adopted by the Council on 20 July 2020. It took into account the continued activation in 2021 of the general escape clause of the Stability and Growth Pact.

The plans pointed to an aggregate headline deficit of the euro area Member States of almost 6% of GDP in 2021 and a debt-to-GDP ratio of around 100%. This was broadly in line with the Commission autumn 2020 forecast⁽²⁹⁾. The resurgence of the virus in Europe implied downside risks that could worsen economic and fiscal outcomes in 2021 compared to the estimates in the draft budgetary plans. The Commission found that most of the measures in the draft budgetary plans supported economic activity against the background of considerable uncertainty.

The Commission assessed the temporariness of the measures taken to mitigate the impact of the pandemic and support the economy. For Austria, Belgium, Cyprus, Estonia, Finland, Germany, Greece, Ireland, Latvia, Luxembourg, Malta, Netherlands, Portugal, Slovenia and Spain, the measures were found to be (mostly) temporary. On the other hand, some measures set out in the plans of France, Italy, Lithuania and Slovakia did not appear to be temporary or matched by offsetting measures.

The euro area Member States were invited to review their support measures regularly, focusing on their use, effectiveness and adequacy. Member States were invited to stand ready to adapt their support measures as necessary to changing circumstances.

Belgium, France, Greece, Italy, Portugal and Spain should ensure that, when taking supportive budgetary measures, fiscal sustainability in the medium term is preserved. The Commission's Opinions took account of the level of government debt and high sustainability challenges in the medium term in those Member States already before the outbreak of the COVID-19 pandemic.

⁽²⁹⁾ The treatment of the Recovery and Resilience Facility (RRF) in the Commission's autumn 2020 forecast is explained in detail in Box I.4.3 of the European Commission's Economic Forecast Autumn 2020 (https://ec.europa.eu/info/sites/info/files/economy-finance/ip136_en.pdf). In line with the customary no policy-change assumption, the forecast only incorporates those measures that are credibly announced and sufficiently detailed in the Draft Budgetary Plans, irrespective of whether they are planned to be part of Recovery and Resilience Plans. No financing from the RRF has been included on the revenue side of the budgetary projections. Only the pre-financing of RRF grants is included in the forecast for 2021. The assumptions on expenditure measures linked to the RRF in the Commission forecast are without prejudice to the assessment of the Recovery and Resilience Plans.

2. MAIN FINDINGS OF THE COMMISSION'S ECONOMIC GOVERNANCE REVIEW

2.1. INTRODUCTION

This chapter summarises the main findings of the Commission's review of the EU economic governance framework, which was published on 5 February 2020. In this backward-looking review, the European Commission assessed the application and effectiveness of the main elements of the economic governance framework, with a specific emphasis on the 'six-pack' (2011) and 'two-pack' (2013) reforms⁽³⁰⁾ in line with the legal requirements. The analysis covers the period until 2019, thus covering two decades of implementation of the EU economic governance framework. There is, however, a focus on the last decade, to which the six-pack and two-pack reforms applied. The review sought to identify both the successes and shortcomings of the reformed economic governance framework, while refraining from drawing conclusions on the future of the framework. As the review pre-dated the outbreak of the COVID-19 pandemic, it does not take into account potential new challenges arising from the current crisis. However, it remains a useful input to the reflection on the past functioning of the economic governance framework.

In light of the COVID-19 outbreak, the public consultation activities that were meant to follow publication of the review have been put on hold until further notice. In its Communication of 5 February 2020, the Commission invited all stakeholders to engage in a public debate on how to enhance the effectiveness of the framework. Outreach activities were, however, effectively put on hold due to the COVID-19 pandemic. By the cut-off date for this report, the consultation had not yet resumed.

The chapter is structured around the three dimensions of the economic governance framework. These dimensions are: fiscal surveillance (Section 2.2); macroeconomic surveillance (Section 2.3); and reinforced surveillance for euro area Member States with financial stability issues (Section

2.4). By way of concluding remarks, the chapter presents the main questions for the public debate on improving the economic governance framework, as set out in the review itself (Section 2.5).

2.2. FISCAL SURVEILLANCE

While public finances overall improved in the years to 2019, some Member States did not sufficiently build fiscal buffers and reduce public debt in good economic times. In 2019, headline deficits reached their lowest levels since the creation of Economic and Monetary Union and all Member States had exited the corrective arm of the Stability and Growth Pact. In the preceding years, the excessive deficit procedure (EDP) proved itself to be an effective tool in correcting excessive deficits. During the 2009-2010 economic and financial crisis, 24 Member States entered the EDP due to their having breached the Stability and Growth Pact's deficit reference value of 3% of GDP. By 2019, all Member States had corrected their excessive deficits. It appears that the 3% of GDP threshold –which is easy to grasp for both policy-makers and the public alike– has acted as an efficient anchor for Member States, even those with an otherwise weak fiscal performance (Graph II.2.1). However, a number of Member States corrected their excessive deficits thanks to better-than-initially-expected macroeconomic conditions rather than through structural fiscal adjustments. These countries pursued what is known as a 'nominal strategy' and used the 3% reference value as a target rather than a ceiling.

Graph II.2.1: **Headline balances in EU Member States (% of GDP, 1995-2017)**



Source: European Commission (2018), Report on Public Finances in EMU 2018.

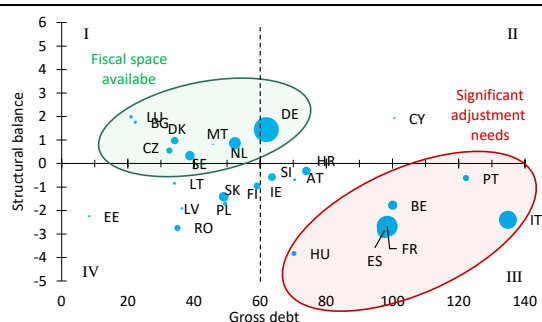
⁽³⁰⁾ The Communication and the accompanying staff working document can be found here:

https://ec.europa.eu/info/business-economy-euro/economic-and-fiscal-policy-coordination/eu-economic-governance-monitoring-prevention-correction/economic-governance-review_en.

The graphs in this section use the same datasets as the Commission's Communication.

The six-pack reform appears to have contributed to better budgetary positions in most Member States. The six-pack reform reinforced the preventive arm of the Stability and Growth Pact, in particular by adding incentives for Member States to build fiscal buffers during economic good times by converging towards their medium-term budgetary objectives, i.e. a sound budgetary position. It appears that this has worked for a majority of Member States, albeit to varying degrees. However, some Member States remained far away from their medium-term budgetary objectives in the period to 2019, despite the good economic times. This means that they did not build sufficient buffers with respect to the 3% of GDP deficit threshold, which would have improved their fiscal sustainability and allowed for more macroeconomic stabilisation during economic downturns.

Graph II.2.2: Structural balance and debt ratios (% GDP, 2018)



Note: The size of the bubbles is proportional to country shares in total EU GDP. I, II, III and IV refers to, respectively: 'Low debt / structural surplus'; 'High debt / structural surplus'; 'High debt / structural deficit'; 'Low debt / structural deficit'.

Source: Commission autumn 2019 forecast.

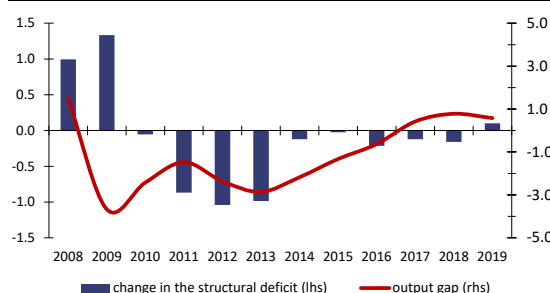
While compliance with the rules of the preventive arm has improved, this has not succeeded in reducing high levels of public debt in several Member States. Compliance with the preventive arm was rather loose prior to the 2011 reform⁽³¹⁾. While this situation improved in the period to 2019, several (large) Member States still had debt ratios around or (well) above 100% of GDP before the COVID-19 crisis (Graph II.2.2), with the crisis strongly increasing debt levels in all Member States. This observation shows that maintaining headline deficits just below 3% of GDP in good times may not be sufficient to ensure

⁽³¹⁾ For a more detailed overview of recent fiscal developments in the EU, see Mangov et al. (2019).

sustainable debt dynamics. The strong focus on compliance with annual requirements may also have contributed to an insufficient differentiation between Member States that have markedly different fiscal positions and sustainability risks.

The reinforced fiscal rules did not prevent pro-cyclical fiscal policies in many Member States. The innovations of the six- and two-pack reforms aimed to ensure that Member States adjust their fiscal policies during good economic times. Such adjustments would have allowed Member States to build sufficient fiscal space to allow automatic stabilisers to operate and to provide meaningful fiscal support during downturns. However, national fiscal policies remained largely pro-cyclical after the reforms, both in good and in bad times, respectively by not building sufficient buffers in some periods or not making sufficient use of fiscal space in others. After undertaking sizeable fiscal adjustments in 2011-2013⁽³²⁾, several Member States subsequently did not use more benign economic times to (re)build fiscal buffers (Graph II.2.3). Empirical evidence suggests that compliance with the EU fiscal rules reduces the pro-cyclicality of national fiscal policies (Graph II.2.4)⁽³³⁾. Member States that have (i) met the preventive arm requirements, (ii) avoided high headline deficits or (iii) kept public debt below 60% of GDP show less pro-cyclical fiscal policies than others do. Conversely, high deficit and debt levels tend to amplify pro-cyclicality.

Graph II.2.3: Change in EU structural deficit versus output gap (% of potential GDP)

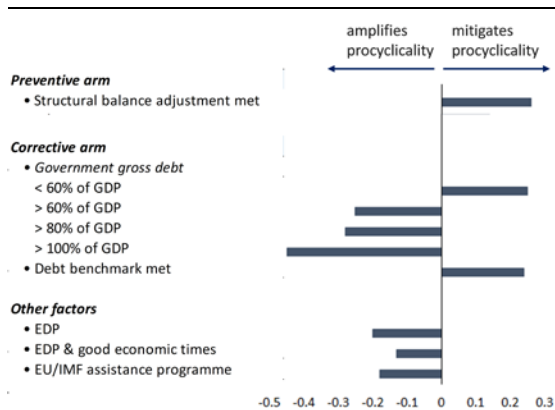


Source: Commission autumn 2019 forecast.

⁽³²⁾ Reflecting the lack of fiscal buffers at the onset of the 2009 crisis, the need to correct excessive deficits and, in some cases, heightened market pressure.

⁽³³⁾ European Commission (2019a, b).

Graph II.2.4: Cyclicalities of the fiscal effort and compliance with EU rules



Source: European Commission (2018), Report on Public Finances in EMU 2018.

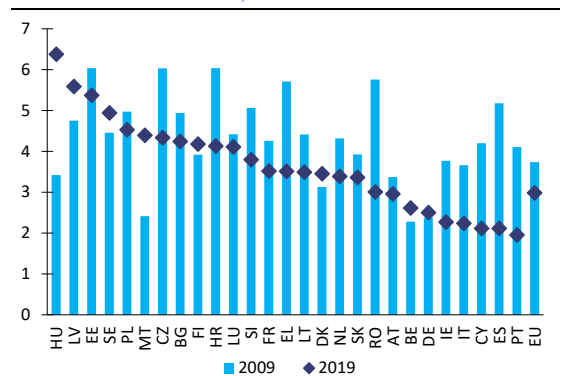
The fiscal framework did not prevent a decline in public investment. The quality of public finances is a complex and multi-faceted issue⁽³⁴⁾. It lies largely outside the reach of the fiscal rules but is covered by other EU instruments such as the country-specific recommendations issued under the European Semester. Public investment, nevertheless, has an essential role in delivering public goods and supporting sustainable public finances. The EU has faced a widespread and persistent decline of public investment over the last decade (Graph II.2.5). If not reversed, this fall will result in a substantial reduction of the public capital stock. Moreover, the objective set by the European Green Deal to achieve a carbon-neutral continent by 2050 will require significant public and private investment. While the Stability and Growth Pact is in principle neutral regarding the composition of public revenue and expenditure, it may be politically more expedient during periods of fiscal consolidation to raise taxes or to cut public investment rather than to cut current expenditure. However, empirical evidence does not suggest that fiscal rules have hampered public investment in the EU. Instead, sound national fiscal rules appear to have reduced the negative impact of public debt on public investment⁽³⁵⁾. The Commission's 2015 flexibility Communication aimed to protect public

⁽³⁴⁾ See e.g. Cepparulo and Mourre (2020).

⁽³⁵⁾ European Commission (2017), 'Government investment in the EU' in Report on Public Finances in EMU 2017, Institutional Paper 069; Mohl and Poissonnier (mimeo), 'Do fiscal rules hamper public investment?'

investment during downturns. However, as it was designed to protect investment in the specific situation of a deep downturn, it has only been applied in few cases.

Graph II.2.5: Public investment by Member State (% of GDP, 2019 vs. 2009)



Source: Commission autumn 2019 forecast.

The fiscal rules have become increasingly complex, thus making communication more difficult and reducing ownership. The development of 'smarter' rules and a broadening of their focus has come at the cost of increased complexity⁽³⁶⁾. There are currently multiple rules, with different indicators for measuring compliance, and various clauses allowing for deviations from the required adjustments. Moreover, the legitimate desire to make the framework more adaptable to changing economic conditions has led to a reliance on variables that are not directly observable and that are frequently revised, such as the output gap and the structural balance. This hampers the provision of stable policy guidance and has likely reduced ownership and political buy-in. To some extent, these shortcomings have been addressed in recent years by an increased focus on the expenditure benchmark, which provides more stable and operational policy guidance. However, the medium-term budgetary objective, which is the central anchor of the preventive arm, is still expressed in terms of an (unobservable) structural balance position.

⁽³⁶⁾ On the root causes for the complexity of the EU rules, see Deroose et al. (2018).

In parallel to a multiplicity of rules, numerous procedures for implementing them have been developed. The annual assessment of Member States' draft budgetary plans has provided useful *ex ante* coordination of fiscal policy in the euro area, but has underlined the difficulty of influencing national fiscal policy. The strong focus on compliance with annual requirements, both in *ex ante* guidance and in *ex post* assessments, has contributed to insufficient differentiation between Member States with markedly different fiscal positions. While the six- and two-pack reforms have strengthened enforcement mechanisms (e.g. the significant deviation procedure in the preventive arm and gradual sanctions in the corrective arm), they have rarely been used in practice.

National fiscal frameworks have been strengthened, but significant differences across Member States exist. The six- and two-pack reforms included general requirements related to national fiscal frameworks. These included a strengthening of the rules, procedures and institutions underlying the conduct of budgetary policy in Member States, thus improving Member States' procedures for developing and implementing fiscal policy⁽³⁷⁾. This strengthening of the rules has increased national ownership of the EU fiscal rules and promoted compliance with them. Progress is most visible in Member States that had less developed national frameworks before the financial crisis, mainly as they used EU requirements as a guide to constructing modern fiscal frameworks. At the same time, the design of national frameworks differs significantly across countries. This is perhaps not surprising given the diversity of institutional structures and administrative traditions. Such diversity is also catered for by EU law in this field. Nevertheless, experience shows that some design features of national frameworks (such as a stronger medium-term orientation) are generally associated with better fiscal policy⁽³⁸⁾.

2.3. MACROECONOMIC SURVEILLANCE

The macroeconomic imbalance procedure (MIP) widened the scope of EU surveillance to cover other potential sources of risks to macroeconomic stability beyond fiscal policies.

The global financial crisis highlighted the need to monitor and address challenges arising from issues such as large current accounts, private debt or house price bubbles. If imbalances are judged to be particularly severe, the excessive imbalance procedure (EIP) may be activated. Under the EIP, the Member State concerned should prepare and run an agreed corrective action plan; the EIP includes the possibility of sanctions for euro area Member States in case of non-compliance. The MIP has complemented other surveillance instruments, notably the Stability and Growth Pact, by helping to address issues that compound fiscal challenges (e.g. external imbalances or persistently low competitiveness and productivity in high-debt countries). It also gives the EU an instrument to make recommendations that contribute to more expansionary fiscal policies where needed to correct imbalances, for instance to correct large current account surpluses.

The MIP proved effective in the years following the financial crisis. Given the wide scope of potential imbalances, MIP surveillance does not lend itself to a mechanistic reading of indicators. Instead, a balanced use has been made of the economic judgement allowed under the MIP Regulations. At the same time, enhanced transparency and accountability aimed to ensure equal treatment and predictability. To date, the EIP has never been launched⁽³⁹⁾. The MIP has helped to raise awareness of the risks posed by macroeconomic imbalances through the development of a stronger analytical basis in EU surveillance and via deepened dialogue with

⁽³⁷⁾ See also Review of the suitability of Council Directive 2011/85/EU on requirements for budgetary frameworks of the Member States, Commission staff working document (SWD(2020) 211).

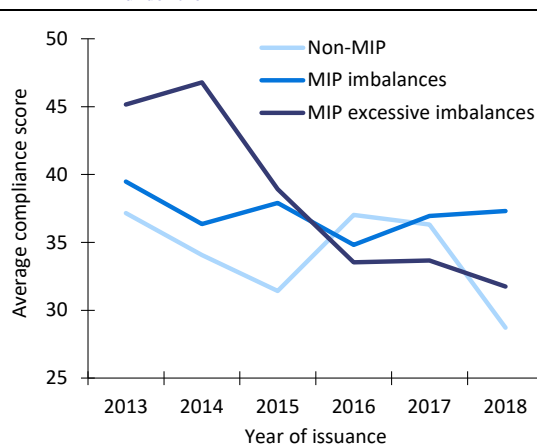
⁽³⁸⁾ Pench et al. (2019).

⁽³⁹⁾ There have been some calls to make full use of MIP instruments, including the EIP. Such calls include the [Five Presidents' Report](https://ec.europa.eu/commission/publications/five-presidents-report-completing-europes-economic-and-monetary-union_en) (https://ec.europa.eu/commission/publications/five-presidents-report-completing-europes-economic-and-monetary-union_en); Council conclusions e.g. on the [2015](https://data.consilium.europa.eu/doc/document/ST-9473-2019-INIT/en/) or the [2019](https://data.consilium.europa.eu/doc/document/ST-9473-2019-INIT/en/) (<https://data.consilium.europa.eu/doc/document/ST-9473-2019-INIT/en/>); and the European Court of Auditors (2018).

Member States⁽⁴⁰⁾. Recommendations under the MIP have helped to focus policy action and to strengthen policy-making processes in Member States. Over the past decade, the MIP provided a framework to prioritise policy measures in Member States under severe stress but not subject to a macroeconomic adjustment programme linked to financial assistance. In such cases (e.g. Slovenia and Spain), considerable results were achieved in terms of reform action and improved market sentiment.

The traction of MIP surveillance in driving necessary reforms has weakened over time. MIP surveillance has resulted in a correction of most flow imbalances and led to a gradual reduction of debt stock-related imbalances (Graph II.2.7). However, while MIP surveillance was accompanied by a sustained correction of large current account deficits, large current account surpluses have largely persisted (Graph II.2.8). Furthermore, compliance with recommendations in countries under MIP surveillance has been falling (Graph II.2.6). In general, the MIP has not generated the political traction needed to sustain reform ambition in Member States where imbalances persist. At the same time, as the MIP was introduced in a context where imbalances were already present in many Member States, its effectiveness in preventing the accumulation of new imbalances remains to be tested.

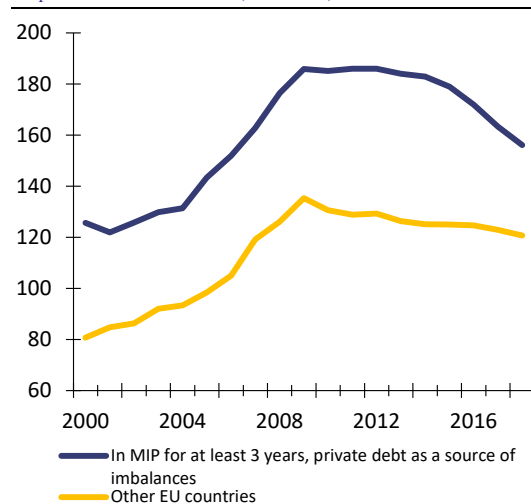
Graph II.2.6: Policy compliance with policy recommendations under the MIP



Note: The indicator is calculated as the simple average of progress for all country-specific recommendations addressed by the Commission and the Council. It is based on five categories of progress as assessed by the Commission: no progress; limited progress; some progress; substantial progress; full progress. These categories are assigned with values of 0, 25, 50, 75 and 100, respectively. For example, a progress indicator of 100 indicates full progress for all recommendations, and a reading of 0 arises if there is no progress at all. This follows the methodology first used in Deroose, S. and J. Griesse (2014).

Source: European Commission, on the basis of the CeSaR database.

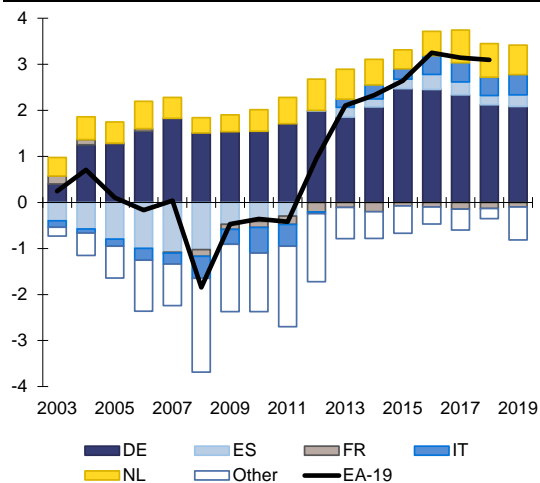
Graph II.2.7: Private debt (% of GDP)



Source: Eurostat.

⁽⁴⁰⁾ See, for example, the MIP Compendium, European Commission (2016).

Graph II.2.8: Euro area current account



Source: Eurostat (Balance of Payments data) and Commission autumn 2019 forecast.

2.4. REINFORCED SURVEILLANCE FOR EURO AREA MEMBER STATES WITH FINANCIAL STABILITY ISSUES

Reinforced surveillance procedures for euro area Member States with financial stability issues have proven effective. The two-pack reform included a Regulation⁽⁴¹⁾ that allows for three reinforced surveillance procedures: enhanced surveillance, macroeconomic adjustment programmes and post-programme surveillance. These procedures apply to euro area Member States with financial stability issues. They have contributed to closer coordination of the economic policies of Member States, primarily by ensuring consistency between the normal surveillance cycle of the European Semester and strengthened surveillance under a macroeconomic adjustment programme. They also contributed to reducing the temporary divergence of the Member States concerned from the rest of the euro area, while laying the ground for renewed convergence. Furthermore, all euro area Member States that received financial assistance were able to return to markets at reasonable financing rates, external and fiscal deficits were largely resolved, and the

⁽⁴¹⁾ Regulation 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.

stability of the financial sector was preserved or restored.

2.5. CONCLUSIONS

The Commission's assessment revealed the strengths of the economic governance framework, but also possible areas where it can be improved. Most of these issues concern fiscal surveillance, as highlighted above.

Given the need for a broad consultation on these issues, the Commission launched a public debate on the way forward, structured around nine broad questions.

A first set of the questions aims at rebuilding trust and consensus on the policy goals:

- How to better ensure sustainable public finances and tackle macroeconomic imbalances?
- How to ensure responsible fiscal policies that safeguard long-term sustainability while allowing for macroeconomic stabilisation?
- What is the role of the EU framework in incentivising reforms and investment to tackle tomorrow's economic, social and environmental challenges?
- How to take into account the euro area dimension and EMU deepening?

A second set focuses on how to achieve the policy goals:

- How to make the framework simpler and more transparent?
- How to focus on Member States with more pressing policy challenges?
- How to ensure effective enforcement?
- What role for national fiscal frameworks and how to improve the interaction with EU rules?
- How can the SGP and the MIP work better together?

In light of the COVID-19 pandemic, the consultation activities of the economic governance review have effectively been put on hold, but without formally suspending the process. By the cut-off date of this report, the public consultation had not yet resumed, due to the need to focus attention on combatting the ongoing health and economic crisis, which in itself is creating considerable uncertainty surrounding future economic trajectories and challenges. When the consultation process is relaunched, it has to be factored in that the context for the debate has changed substantially since the February 2020 Communication. In its 2020 annual report, the European Fiscal Board has proposed some ways to streamline and strengthen the EU fiscal framework, taking into account the COVID-19 crisis ⁽⁴²⁾.

⁽⁴²⁾ European Fiscal Board (2020).

3. GREEN BUDGETING IN THE EU – NEW INSIGHTS ON EXISTING AND PLANNED PRACTICES

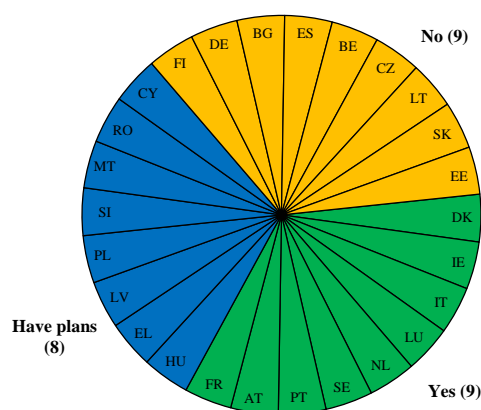
This chapter describes green budgeting practices established and planned in Member States. The information presented in this chapter reflects the results of a recent survey on green budgeting led jointly by the Commission and the OECD (Box II.3.1). As green budgeting practices, this survey encompassed all *tools of budgetary policy-making that help achieve environmental and climate goals* (OECD 2020)⁽⁴³⁾. Given the wide range of tools considered, the identified experiences are quite varied⁽⁴⁴⁾.

Current priorities call for developing effective green budgeting frameworks in the Member States. The European Commission Green Deal Communication issued in December 2019 clearly underlines the role of the national budgets and green budgeting tools in ‘redirecting public investment, consumption and taxation to green priorities and away from harmful subsidies’⁽⁴⁵⁾. An alignment of budgetary policies with green priorities is even more crucial in the current context, given the ambitious objective of fostering the green transition in Europe, including by spending at least 30% of the EU budget and the Next Generation EU recovery instrument on climate objectives. The Commission has therefore started to work together with the Member States to promote the use of these practices in the EU. As part of this work, it has established a regular exchange of best practice among countries and has started to assess the existing green budgeting practices with a view to identifying the challenges encountered in their implementation.

According to the survey, around two thirds of Member States have established, or plan to introduce, some form of green budgeting measures (Graph II.3.1). As of June 2020, 9 EU Member States had already established some form of green budgeting in their country, while eight

Member States planned to do so in the future. However, the remaining Member States had no plans to include any such practices in their budgetary cycles, at least in the foreseeable future.

Graph II.3.1: Green budgeting practices across Member States



Source: Joint Commission-OECD survey on green budgeting.

The survey shows that Member States most frequently use the following green budgeting practices (Graph II.3.2):

- Environmental impact assessments (EIAs):** This is the most widespread way to include green considerations in the budget. Impact assessments can take place at different moments along the budgetary cycle, be it *ex ante* at the budget planning stage or *ex post* after the execution phase. EIAs may be conducted either routinely for all policies, or selectively (e.g. for policies which are likely to have a significant impact on the environment or climate). In total, eight Member States (AT, DK, FR, IT, IE, NL, PT and SE) have incorporated EIAs into their budgetary cycle.
- Assessment and treatment of greenhouse gas emissions:** Seven Member States (AT, DK, FR, IE, IT, NL and SE) conduct carbon assessments of the budget, meaning that they identify the estimated greenhouse gas emissions associated with some, or all, budgetary measures. A further 5 countries (FR, IE, NL, PT and SE)

⁽⁴³⁾ OECD, 2020.

⁽⁴⁴⁾ The first scoping exercise by the Commission focused on identifying budgetary documents that presented the contribution of budgetary measures to environmental objectives (European Commission, 2020). Such practice is close to what is commonly defined as ‘green budget tagging’, that is, the identification and tracking of budget measures in accordance to their environmental and/or climate impact.

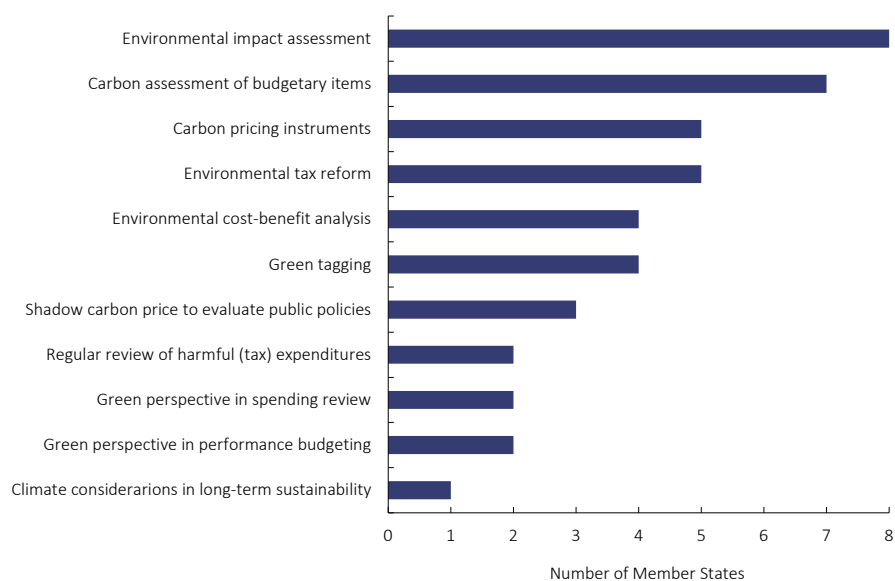
⁽⁴⁵⁾ European Commission, 2019c.

Box II.3.1: The joint Commission-OECD survey on green budgeting

The Commission and the OECD jointly conducted a survey to screen existing and planned green budgeting practices in the EU and OECD Member States. The survey focused on developments related to existing and planned green budgeting measures up until June 2020. As regards existing practices, the survey covers a wide range of information, from institutional arrangements governing the practices to the various green budgeting tools used and the experiences emerging from them. The survey replies identify aspects that have proven most challenging for countries that already have, or plan to have, green budgeting practices. Finally, Member States were asked to identify areas in which they considered supranational and international organisations like the Commission or the OECD could provide guidance to support the creation or strengthening of national green budgeting frameworks.

The survey offers interesting insights into the experience of green budgeting practices in the EU. The response rate was high, as 26 out of 27 Member States replied to the questionnaire. Each country was asked to submit one single questionnaire completed in cooperation with the central budgetary authority (CBA) and environment ministry. The broad scope of the survey and the high participation among Member States allowed the Commission and the OECD to extract valuable and timely information regarding countries' experiences of and plans in developing national green budgeting frameworks.

Graph II.3.2: Green budgeting tools used by Member States



Source: Joint Commission-OECD survey on green budgeting.

have created systems that put a price on environmental externalities such as greenhouse gas emissions, which can be done through taxes and emissions trading systems. Such practices are comprised under the heading 'carbon pricing instruments' in Graph II.3.2 and have proven valuable in making it easier to achieve national and climate goals.

- **Green tagging:** As described in the 2019 report on public finances, FR, IT, IE and SE have green tagging in place ⁽⁴⁶⁾. Green tagging is here defined as the systematic identification of environmental contribution of budgetary items. Since then, LU also has established green tagging practices, while for several countries (such as AT, DK and FI), a lighter

⁽⁴⁶⁾ European Commission, 2020c.

form of green tagging is in place, which is not considered to be proper green budgeting. Differently from proper green tagging, these Member States release a report every year describing the policies that have contributed to addressing environmental issues in the country, as well as the amounts spent on those policy areas. Despite the absence of proper tagging of each item in the budget specifying their environmental and climate contribution, these partial approaches still can be seen as promising first steps that could develop into fully-fledged green budgeting methodologies in these countries in the near future.

- **Other key initiatives:** Several countries (DK, IE, IT, NL) apply a cost-benefit analysis to projects or policies that have a deliberate or indirect impact on the environment. Others (DK, IE, NL, PT, SE) have adopted environmental tax reforms, while DK and IE have introduced a green perspective in their spending review exercises, assessing the efficacy in terms of environmental impact of some spending items. Finally, NL and FR regularly review harmful tax expenditures, while NL has incorporated climate considerations into its long-term fiscal sustainability analyses.

Additional tools that are outside the budgetary process but still close to it can also contribute to environmentally responsible policy- and decision-making. For instance, in several Member States (like DE, LU and PL), the issuing of green bonds contributes to climate and sustainability objectives. Moreover, some Member States link their budgetary practices to some degree to the Sustainable Development Goals (this is already the case in FI, and is planned in ES). This can also have a positive impact on the environmental and climate dimensions. A large number of Member States also reported having incorporated environmental impact assessments into their policy development processes, without necessarily linking them explicitly to budgetary steps.

Member States are establishing or plan to introduce green considerations into their budgetary processes for several reasons. The most common motivation was complying with international commitments, followed by promoting environmentally responsive decision-making and

complying with national commitments. Countries do therefore see the value of green budgeting for directing their policy-making efforts towards environmental considerations and for tracking their progress towards their objectives in this field. Another recurring reason for countries to develop green budgeting was to enhance budget transparency.

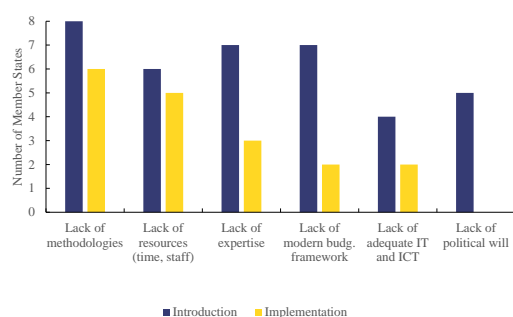
The present and future consequences of the COVID crisis have called for immediate and long-term recovery measures spreading over many policy areas. At the time of the submission of the survey replies, about a third of the EU countries had already started doing so. The measures were of varied nature, the most common ones being the introduction of environmental or climate impact assessments of individual measures and the development of a green budget tagging methodology to identify how measures support national climate and environmental objectives. In turn, a large majority of all EU Member States have signalled their intention to integrate green perspectives into their recovery packages in the future⁽⁴⁷⁾. The planned actions mostly revolve around conducting environmental impact assessments, developing a green tagging methodology and applying green conditionality attached to support measures.

As regards governance, the main actors involved in managing green budgeting practices in the EU are the central budgetary authorities, environment ministries and line ministries. In almost half of the cases, the governance of green budgeting is the responsibility of central budgetary authorities alone. In the remaining cases, it was a shared responsibility for different combinations of the actors mentioned above. The most common legal basis of these green budgeting tools or exercises is a reference in the Budget Law (for almost half of the Member States who have green budgeting in place). Less widely used forms to formalise green budgeting are high-level political commitments and other types of legal texts, including regulations and constitutional requirements.

⁽⁴⁷⁾ These plans predate the Resilience and Recovery Facility related plans.

Several challenges exist in introducing or implementing green budgeting practices (Graph II.3.3). Among the countries with established green budgeting frameworks, the main challenges in implementing them are lack of methodologies and lack of resources, followed by lack of expertise and adequate ICT. For those Member States who still have not introduced green considerations in their budgetary processes, the lack of methodologies stands out as the main difficulty. Other common challenges in introducing green budgeting are the lack of a modern budgetary framework, the lack of expertise and the lack of resources. A significant number of Member States would welcome institutions like the European Commission or the OECD taking an active role by offering technical guidance through the sharing of information and expertise (be it through reports on best practices, guidance notes or the organisation of international conferences and workshops).

Graph II.3.3: **Key challenges to introduce and implement green budgeting practices**



Source: Joint Commission-OECD survey on green budgeting.

While it is too early for a complete impact assessment of green budgeting practices, there are first signs of a positive effect. For example, in some countries, respondents indicated that political awareness has increased due to the introduction of green budgeting, and the importance of environmental measures has been highlighted in the policy dialogue. Other benefits consist in enhanced transparency and accountability in working towards environmental objectives, as well as in a more environmentally conscious allocation of the country's resources. It is expected that tangible results will be achieved once green budgeting covers a wider range of budgetary items and becomes more established in the national frameworks.

4. NATIONAL MANAGEMENT OF FISCAL RISK FROM CLIMATE CHANGE

4.1. INTRODUCTION

Climate-related fiscal risks are key challenges for public finances. The EU is exposed to nearly all kinds of natural disaster risks, such as droughts, earthquakes, windstorms and floods, which besides human losses cause damage to private and public assets and income by billions of euros. Past EU economic losses from weather and climate-related extremes amount to EUR 12 billion per year, but conservative estimates show that the current trend in global warming could result in an additional annual loss of at least EUR 170 billion (1.36% of GDP⁽⁴⁸⁾). The increasing occurrence of such events can have lasting effects for public finances, calling for reflection on how to better prepare for this challenge.

All types of disasters –natural or manmade– generate human, material and financial damage with implications for public finances. This calls for reflection encompassing all types of disaster-related fiscal risks, including those from climate change. Such reflection would need to focus on how to increase financial resilience, and how to better prepare and strengthen capacity to withstand the immediate and long-lasting impacts of disasters on public finances as also underlined in the New EU Strategy on adaptation to climate change⁽⁴⁹⁾.

Two main approaches can contribute to better informing policy-makers and to limiting disaster impacts on public finances.

- **Disaster risk management (DRM):** this encompasses the processes and policy tools aimed at reducing the risk *ex ante* and reducing *ex post* the costs of natural and manmade disasters. The instruments available range from *ex ante* risk assessment, to disaster prevention and preparedness, emergency response and recovery.
- **Disaster risk financing (DRF):** this focuses on the financing side and covers *ex ante*

risk-sharing arrangements, the mix of available budgetary arrangements and tools and risk transfer instruments such as insurance that can be activated when a disaster occurs.

This chapter provides an assessment of disaster risk management in the EU Member States and presents a brief review of the building blocks of disaster risk financing. It is structured as follows: Section 2 looks into provisions for disaster risk management in EU Member States; Section 3 provides an overview the possible building blocks of disaster risk financing strategies with examples from the EU Member States; lastly, Section 4 provides conclusions.

4.2. DISASTER RISK MANAGEMENT IN MEMBER STATES – AN OVERVIEW

Key elements of disaster risk management strategies

Disaster risk management encompasses all processes and policy tools aimed at reducing *ex ante* risk and limiting *ex post* the costs of natural and manmade disasters. The typical breakdown of DRM includes the following phases: risk assessment, prevention, preparedness, response and recovery⁽⁵⁰⁾. DRM practices are reinforced and developed over cycles, where *ex post* impact assessments provide lessons learnt in order to yield a stronger DRM framework in the future. Overall, the role of the public sector in disaster risk management spans from setting legal requirements and procedures to providing the necessary resources for all DRM phases in a timely manner. This concerns each phase of the DRM process:

- **Risk assessment** entails identifying possible risks and ideally includes the quantification of these risks or at least assessing the likelihood and severity of impact. The relevance for fiscal policy of this DRM phase is related to the quantification of the risks, which is key to better grasping potential future fiscal costs

⁽⁴⁸⁾ <https://ec.europa.eu/jrc/en/peseta-iv/economic-impacts>

⁽⁴⁹⁾ European Commission (2021), Communication of February 24 2021 COM(2021) 82 final.

⁽⁵⁰⁾ Poljanšek, K. et al. (2017), 'Science for disaster risk management. Knowing better and losing less'.

from disasters. Knowing the type, frequency and impact of fiscal risks is key for a robust approach to fiscal policy-making over the medium to long term. As to the necessary budgetary resources, risk assessments are funded by the public sector, at various administrative levels.

- **Risk prevention** includes the activities and measures to limit exposure to the risks identified in the assessment phase. Possible examples are the construction of dams or embankments, land-use regulations that for instance may restrict any settlement in high-risk zones, seismic engineering designs, etc. The budgetary allocation for public investment in risk prevention is typically spread over several years.
- **Preparedness** for a disaster comprises all measures taken to minimise the damage from a disaster if it materialises. This includes a sound assessment of disaster costs and strong early warning systems, as well as activities such as contingency planning, the stockpiling of equipment and supplies, the development of arrangements for coordination, evacuation and public information. The funding of preparedness measures is generally included in the budget of the public authority, ensuring the implementation of preparedness measures.
- **(Emergency) response** covers all actions taken directly before, during or immediately after a disaster to save lives, reduce health impacts, ensure public safety and meet the basic subsistence needs of the people affected. Immediate disaster relief spending has a large impact on the budgets over the shorter horizon.
- **Recovery** is the restoring or improving of livelihoods and health, as well as the economic, physical, social, cultural and environmental assets, systems and activities of a disaster-affected community or society, aligning with the principles of sustainable development and ‘build back better’, to avoid or reduce future disaster risk. Various budgetary instruments and risk-sharing arrangements can be put in place to cover costs of recovery after disasters.

The importance of national risk assessments for effective DRM

National risk assessments (NRAs) are currently the main tool informing disaster risk management strategies in Member States. A solid understanding of disaster risks and the responsibilities of stakeholders is key to the design of effective risk management strategies. While the competence for civil protection rests mainly with Member States (Art 196 TFEU)⁽⁵¹⁾, a Union Civil Protection Mechanism (UCPM)⁽⁵²⁾ has been set up at EU level (European Parliament and Council Decision 1313/2013) requiring Member States to have in place NRAs as a civil protection instrument. NRAs are used to define the type and level of natural or manmade risks, to inform the policy-makers about the country’s vulnerabilities and therefore to determine the appropriate allocation of resources before and after the disaster strikes. With the public authorities acting as disaster relief provider of last resort, it is key to inform all stakeholders (households and businesses, public sector, insurance sector) about their respective roles in case disasters materialise. This encourages insurance take-up and paves the way to including disaster risks in the budgetary processes (e.g. planning public investment in risk prevention and preparedness).

An essential feature of risk assessments is their coverage. A comprehensive overview of relevant risks ensures that DRM and the ensuing disaster risk financing (DRF) strategy build on an all-encompassing assessment. A broad assessment of the physical and financial consequences of disasters for all relevant sectors, including the public sector, gives an indication of the potential impact on public finances. Finally, a risk assessment should be more than a snapshot and

⁽⁵¹⁾ Article 196 TFEU states that ‘The Union shall encourage cooperation between Member States in order to improve the effectiveness of systems for preventing and protecting against natural or man-made disasters, excluding any harmonisation of the laws and regulations of the Member States’.

⁽⁵²⁾ The UCPM establishes cooperation among civil protection authorities, and a mechanism whereby Member States who are overwhelmed by a disaster, can request assistance from other Member States, or draw on commonly established civil protection resources (rescEU) and it establishes a European Response Coordination Center. The UCPM also requires Member States and the Commission to act on disaster prevention, including risk assessments.

should provide a full picture over time, as some risks are changing (some risks diminish, while others increase over time). For each risk, an estimate of the likelihood and magnitude of the impact would be warranted.

Despite great variety in practices across Member States, there is a general understanding and expectation that NRAs should include some predefined elements. The first effort to provide coherence and consistency to risk assessments at EU level came in 2010 when the Commission issued a staff working paper with guidelines for risk assessment and mapping for disaster risk management⁽⁵³⁾. The 2013 Union Civil Protection Mechanism legislation further asked Member States to develop risk assessments at national and sub-national level when appropriate and to provide the Commission with summaries of them every 3 years⁽⁵⁴⁾. The 2019 revised UCPM decision and guidelines⁽⁵⁵⁾ on how to report summaries of NRAs give more prominence to climate change and adaptation and apply to reports submitted from 2020 onwards. Member States are encouraged to submit the summary reports, including a list of elements on governance arrangements, the methodology used and details on the financing needs and resources available for the planning and implementation of prevention and preparedness measures (Box II.4.1).

Large variety and limited fiscal relevance of disaster risk management reporting across Member States

An initial review of NRAs by the Commission services points to varying practices⁽⁵⁶⁾. The NRAs reports submitted by Member States are broadly in line with the guidelines⁽⁵⁷⁾. In some Member States, the risk assessments themselves remain classified documents for national security reasons. The assessments of what is relevant differ across Member States, and the underlying reasons for such different perspectives vary. All reports

cover a wide range of natural disaster risks that are significant for the Member State (extreme weather, floods, droughts, wildfires, geophysical risks). Coverage varies more in relation to manmade or hybrid threats (pandemics/epidemics, nuclear and radiological accidents, disruption of critical infrastructure, industrial accidents, cyber threats, etc.). The timeframe of national risk assessments to identify and analyse risks spans from a 5-year period to the year 2100 in some cases, depending on the type of risk and with differences across Member States. While a wide range of relevant natural hazards are generally well identified and mapped, information on economic impacts are more scarcely available and mainly qualitative in nature.

Although no recommended template for NRAs exists, the reports display common features that ensure some degree of comparability and consistency between Member States. The classification of the likelihood and impact of a specific risk scenario used consistently across reports ranges from very low, to low, high and very high, but quantification of the economic impacts is generally absent or presented at a highly aggregated level in monetary terms. A quantification of the impacts is useful at the aggregate level, but more so if detailed for the private and the public sectors. While providing such a breakdown is an essential step to include climate change risk in national policies and processes, this information is currently often missing or under-presented.

The available information has a limited use for public finance purposes. The NRAs' reporting of details that are relevant for public finances was in previous exercises non-systematic and relatively scarce, as reporting on these elements is not prescribed specifically. In particular, essentially descriptive information is available on the lead public administration or the administrative level most affected by a risk, and on the budget allocated (by responsible ministries or specific budgetary provisions) for the planning and implementation of prevention and preparedness measures. It must also be acknowledged that the focus of NRAs is on the *ex ante* phases of DRM, the aim being to identify and assess risks, inform prevention, preparedness and emergency response. Investment in preparedness is significant but can be prioritised and spread out over several years,

⁽⁵³⁾ SEC(2010)1626.

⁽⁵⁴⁾ In some Member States, NRAs can be produced with a frequency of 4 or 5 years.

⁽⁵⁵⁾ The 2019 guidelines will apply to reports submitted by 31 December 2020.

⁽⁵⁶⁾ See SWD(2020)330. NRAs as reported by 2019. The 2020 reporting cycle is not yet completed or analysed.

⁽⁵⁷⁾ Also reporting were the UK and several participating states like Norway, Iceland, North Macedonia and Serbia.

while the impact on public finances of recovery and reconstruction efforts is more concentrated in the immediate aftermath of a disaster, when the economy is still vulnerable.

National reporting on resource allocation is limited. Member States provide some information (albeit incomplete) on the process to determine the DRM financial needs and how the funds for risk prevention and preparedness are secured in the budgets. The main reported sources of financing are the national budget (state, regions, local authorities) and the EU Solidarity and Cohesion Funds. The provisions for flexibility embedded in the budget determine how swiftly supplementary disaster-related needs can be met beyond what is already budgeted. The estimated investment needs for preparedness and prevention are rarely linked with the corresponding risk scenarios. The disaster risk cost-sharing arrangements between stakeholders are not clear or the public sector is the implicit risk bearer.

The 2020 Commission cross-sectoral overview of natural and manmade disasters facing the EU includes a more thorough overview of the NRAs and ideas for future DRM development ⁽⁵⁸⁾. The Commission overview highlights the need to pursue and deepen the NRAs' coverage of the effect of climate change on disaster risks, but also to maintain a wider scope on all hazards and a cross-sectoral approach. Moreover, NRAs could provide more qualitative and quantitative elements that could feed into the policy response. Finally, financial resilience, in particular from a budgetary perspective, is presented as an area to be considered for future action given the rising economic cost of disasters.

⁽⁵⁸⁾ SWD(2020)330/F1.

Box II.4.1: EU legal provisions and guidelines for disaster risk management practices

At the EU level, the legal provisions focus on the early phases of disaster risk management (DRM) from a civil protection perspective. The legal texts of the Union Civil Protection Mechanism (Decision (EU) 2013/1313) and guidelines for the EU disaster risk management framework build on the principles of solidarity and on the responsibility of the Member States, which are particularly relevant for disasters with cross-border impacts and where the national dimension holds a key role in ensuring an accurate overview of risks and capabilities. The legislation and guidelines ⁽¹⁾ focus on risk assessment, preparedness, prevention and the response to disaster. The recovery phase is not covered. Such provisions and guidelines aim to provide an overview of the needs and material and human resources available in the event of disaster in each Member State, which could be pooled to provide a response at EU level. Other components include deployment of expert teams on prevention. Finally, they encourage a systematic approach to disaster risk management. The 2019 amendments to the reporting guidelines and the legal basis, as well as the 2020 proposal ⁽²⁾ to amend the legal basis for DRM highlight the need for DRM to match the challenges posed by climate change and other types of disasters, as also shown by the COVID-19 pandemic.

The EU Directives on specific natural or man-made disasters have a narrower scope. For example, the Water Framework Directive (2000/60/EC) aims to contribute to mitigating the effects of floods and droughts. The Flood Directive (2007/60/EC) introduces a requirement to assess national flood risk and impact in 6-year cycles, and requires Member States to produce and regularly review preliminary flood risk assessments, risk maps and flood risk management plans with a focus on prevention, protection and preparedness. The 2009 Nuclear Safety Directive calls for the Member States to perform risk self-assessments and detail the prevention and mitigation measures in case of a nuclear disaster. These legal provisions refer to DRM to some extent by introducing specific requirements for natural disaster risk assessments or management. However, they have a limited contribution to the quantitative assessment of the economic and fiscal impacts of a disaster that are relevant from a fiscal policy perspective.

Whilst the civil protection mechanism focuses on the early phases of the disaster risk management strategies, the recovery phase is also relevant. The existing provisions for national risk assessments and for the planning and implementation of prevention and preparedness measures are relevant for the pre-disaster phases in DRM, where public spending and investment in risk reduction and adaptation can be without doubt significant, but spread over several years. However, when a disaster materialises, its impact on public finances can be destabilising due to its scale and the sudden nature of public spending on emergency response, recovery and reconstruction. While there is no ‘one size fits all’ approach for the design and implementation of disaster financing strategies, there is only limited comprehensive and comparable information on existing practices in the Member States and how they match the challenges posed by disasters.

The EU strategy on adaptation to climate change ⁽³⁾ and the EU disaster risk management framework are complementary and mutually reinforcing. On the one hand, the EU framework for natural and man-made disasters is broader as it covers various types of disasters, relating to natural phenomena, geological risks, man-made disasters, but also those that can be amplified by climate change. On the other hand, the EU climate adaptation strategy is focused on climate change and ways to apprehend and mitigate it. Naturally, enhancements in any of these two fields should consider implications for the other if they are not carried out in synchronised fashion. This is pertinent in particular for fiscal aspects, as robust fiscal frameworks must be able to cope with climate change-related expenses and with the consequences of natural or man-made risks.

⁽¹⁾ OJ L347, 20.12.2013, p. 924 and SEC(2010) 1626.

⁽²⁾ 2019 amendment OJ L 77 I, 20.3.2019, p.1, revised reporting guidelines OJ C428, 20.12.2019, p.8, Commission Implementing decision (EU) 2020/452 OJL 94, 27.3.2020, p1 and revision proposal COM(2020)220.

⁽³⁾ COM(2013)216.

(Continued on the next page)

Box (continued)

Table 1: EU legal provisions and reporting guidelines for DRM strategies

Name	Year	Legal basis and content	Key elements for disaster risk management
Commission Communication on the Community approach on the prevention of natural and man-made disasters (COM(2009)82 final)	2010	Commission Communication offers a set of measures for an overall European approach to the prevention of natural and man-made disasters	A set of measures at European and national level to support the risk management cycle (prevention, preparedness, response and recovery). These are intended to: <ul style="list-style-type: none"> • develop knowledge-based disaster prevention policies at all levels of government; • link the relevant actors and policies throughout the disaster risk management cycle; • improve the effectiveness of existing policies for disaster prevention that support Member States' action on prevention.
Risk assessment and mapping guidelines for disaster management (SEC(2010) 1626 final)	2010	Non-binding guidelines refer to the processes and methods used to produce the national risk assessment and mapping in the prevention, preparedness and planning phases of disaster risk management	Highlight the following aspects: <ul style="list-style-type: none"> • the importance of participation by stakeholders such as public authorities, research and businesses, NGOs and the wider public in governance under the authority of a designated coordinator; • the national risk assessment (NRA) should rely on empirical evidence and experience from past disaster data, established quantitative models of impact and informed opinion. All data sources and assumptions should be documented; • NRAs should present three impacts: human (in terms of affected population), economic and environmental (in euro); political and social (measured through a qualitative scale: e.g. limited, minor, moderate, significant, catastrophic); • NRAs should include risk matrices for each type of hazard with the severity of impact and likelihood (from low to very high); • NRAs should deal with data and model uncertainty; run sensitivity analysis to determine the size and magnitude of risks to changes.
EU strategy on adaptation to climate change (COM (2013) 216)	2013	Commission Communication proposes a framework and mechanisms to improve preparedness to climate change at EU level	The strategy is built around eight actions, two of which are particularly relevant for disaster risk management: <ul style="list-style-type: none"> • action 3: bridging the knowledge gap regarding the information on the impact of disasters, the risk assessments at relevant layers of administration; • action 8: promoting insurance to natural disasters as a means to mitigate risks for relevant stakeholders. The Commission adaptation guidelines put emphasis on the coordination of all the relevant authorities.
Decision No 1313/2013 of the European Parliament and of the Council on a Union Civil Protection Mechanism (UCPM) ⁽⁴⁾	2013	Decision enables assistance from Member States in case of natural and man-made disasters in Europe and elsewhere	<ul style="list-style-type: none"> • Calls on Member States to: (i) develop national risk assessments and the assessment of their risk management capability periodically and (ii) share a summary with the European Commission every 3 years to ensure an overall picture of disaster risks across Europe. • The Commission is also asked to provide a cross-sectoral overview of natural and man-made risks across the EU and a coherent approach to those policies that address or might affect disaster prevention while also taking into account the effects of climate change.

⁽⁴⁾ OJ L347, 20.12.2013, p. 924.

(Continued on the next page)

Box (continued)

<p>Guidelines for risk management capability (Commission notice 2015/C 261/03) (repealed)</p>	<p>2015</p>	<p>Non-binding guidelines</p>	<p>The guidelines provide a list of questions for Member States for each phase of the risk management cycle (as defined in the 2010 guidelines: risk assessment, prevention, preparedness and planning), requiring information on:</p> <ul style="list-style-type: none"> • the governance arrangements of the process, and on the expertise and training of the stakeholders involved; • the methodology and type of communication of the results; • also for the national risk assessment, the planning and implementation of prevention and preparedness measures, as well as the financing needs and available resources. (NB: replaced by the 2019 reporting guidelines).
<p>Decision (EU) 2019/420 amending the Union Civil Protection Mechanism (UCPM) ⁽⁵⁾</p>	<p>2019</p>	<p>Revision of the UCPM Decision of 2013</p>	<ul style="list-style-type: none"> • maintains the requirement to further develop risk assessments and the assessment of risk management capability; • includes a balancing mechanism whereby the Commission can make recommendations on strengthening of prevention measures to a Member State • requires the Commission to establish guidelines for the reporting of summary information on the assessments, which were adopted in December 2019.
<p>Reporting guidelines for Disaster Risk Management (Commission notice C 2019/C 428/07) ⁽⁶⁾</p>	<p>2019</p>	<p>Non-binding guidelines established according to the revised UCPM</p>	<p>Key requirements for the guidelines:</p> <ul style="list-style-type: none"> • provide a set of questions on the national risk assessment, risk management capability assessment and a description of priority prevention and preparedness measures to be addressed in the national risk summaries. • merge the reporting of summaries of the risk assessments and the management capability assessments in the template. The reported information remains largely qualitative, but it should capture the various institutional arrangements and also the financial commitments of the public sector, in particular for risk assessment, prevention, preparedness and, to a certain extent, response to disaster risks, as well as certain information on disaster loss data collection and procedures. • give more prominence to climate adaptation.
<p>Commission proposal COM(2020) 220 final to amend the Decision (EU) No 1313/2013 on the UCPM</p>	<p>2020</p>	<p>Revision of the UCPM Decision of 2013 aims to improve resilience planning</p>	<ul style="list-style-type: none"> • Proposal to introduce resilience planning to disasters likely to have cross-border effects, including climate change. Resilience planning should take into account various scenarios and resilience goals at EU level for disaster prevention and response. These should be based on national risk assessments, the overview of risks, disaster risk management planning, disaster loss data, asset mapping and the development of plans for the deployment of response capacities.

Source: Commission services.

⁽⁵⁾ OJ L 77 I, 20.3.2019, p.1.

⁽⁶⁾ OJ C428, 20.12.2019, p.8.

4.3. DISASTER RISK FINANCING – EVIDENCE FROM MEMBER STATES

Key elements of disaster financing strategies

Disaster risk financing (DRF) aims to increase financial resilience to the impact of disasters. DRF is typically part of a comprehensive approach to disaster risk management. The financial costs of disasters are a challenge for many countries, in particular when exposure to a particular type of disaster is high. This challenge is amplified by country-specific circumstances such as debt level or sustainability concerns. A DRF strategy is closely linked to DRM. This is because it relies on risk assessments to determine the financing needs and financing gap. In addition, it is usually complemented by liability management, which refers to the use of risk-sharing agreements or disaster insurance. Liability management mitigates the financial impact of natural disasters on some sectors of the economy and the final cost for the public coffers.

From a public finances perspective, robust and effective disaster risk management frameworks and disaster risk financing strategies reduce the fiscal cost of natural disasters, while providing the adequate amounts and types of financial support. Several common features fostering robustness and effectiveness emerge from good practices. First, the availability of appropriate risk information is the foundation of a robust disaster costs assessment and informed public investment decisions. This hinges on advanced risk assessments and on information on risks and financing needs from the relevant government layers. Second, each DRM phase is endowed with funds proportional to the actions that need to be taken. Finally, from a budgetary perspective, the DRF strategy reflects country specificities and builds on a mix of budgetary resources and risk-sharing instruments adapted to the severity and frequency of disasters. Clear disaster cost-sharing arrangements for stakeholders facilitate planning and avoid moral hazard.

An informed view on the financing instruments to manage disasters contributes to stronger disaster risk management. Depending on the magnitude, frequency/likelihood and nature of the risk, different instruments can be used to manage them. These instruments range from budgetary

reallocations to ‘rainy day funds’ and increased borrowing (Table II.4.1). When the expected impact from a disaster is clearly above the available budgetary resources, risks can be transferred through traditional insurance or other financial instruments.

Table II.4.1: **Managing climate change risks: disaster risk allocation**

Risk reduction	Reduce vulnerability	
	Reduce exposure to hazards	
Risk financing	Risk retention	Budgetary reallocation (low/medium severity, high frequency event)
		Contingency and reserve funds (medium/high frequency event)
		Ex ante contingent credit (low/medium severity, medium frequency event)
		Ex post borrowing (high severity, medium frequency event)
	Risk transfer and pooling	Insure public assets
		Multi country sovereign disaster insurance Catastrophe bonds
Managing residual risk	Post-disaster response	Relief spending Budget reallocation

Source: World Bank 2018, European Commission.

Set out below is a description of the main instruments used in disaster risk management.

- **Reallocation of spending** is the first type of response to events with localised, moderate damage and losses. The expenditure ceilings set by the national budgetary framework remain unchanged and overall fiscal balance targets are still respected by shifting budgetary allocations under the approved budget (this is the case, for example, in Finland, Denmark and Cyprus). Another reallocation option is a supplementary budget, which changes the annual budget limits to cater for higher impacts. The use of reallocation of spending or supplementary budgets has been quite common to deal with the immediate and unexpected costs of the COVID-19 pandemic. However, budgetary reallocations should not compromise fiscal transparency and should therefore be the object of timely and comprehensive reporting.
- **Rainy day funds or other fiscal buffers/reserves** accumulated over time can provide additional resources to deal with natural disasters. They can also be used to ensure that the fiscal targets are met. Rainy day funds are not common in the EU Member

States (a few examples are the Estonian Stabilisation Reserve Fund, the Irish Rainy Day Fund, and the Latvian Long Term Stabilisation Reserve). The main rationale for adopting surplus-funded rainy day funds is to visibly commit to pre-financing of long-term budgetary costs (in particular, the cost of ageing populations) and to encourage counter-cyclical fiscal policies.

- **Contingency reserves** are additional and dedicated fiscal space when the annual budget is proposed for adoption. They can cover the cost of moderate but frequent natural disasters. Most countries have such funds in place. Ideally, contingency reserves are set as a small fraction of expenditure. They are subject to stringent access conditions approved by the Ministry of Finance after the official declaration of disaster. In addition, they should be monitored in budget reports. Many EU Member States have contingency reserves or contingency funds generally used to cope with emergency or unforeseen costs while respecting the annual budget (e.g. Spain maintains a contingency fund of 2% of expenditure, the French precautionary reserve keeps annual budget execution in line with plans, in Sweden the budget margin is used when certain fiscal risks materialise, in Latvia the fiscal safety reserve is set to at least 0.1% of GDP on the basis of quantifiable fiscal risks);
- **Natural disaster funds** ⁽⁵⁹⁾ aim to provide a fiscal buffer while protecting long-term fiscal sustainability. They are built outside periods affected by natural disasters. The funds are calibrated on the size of the expected medium- to long-term estimates of impacts from natural disasters. In the EU, Austria's Catastrophe Fund (*Katastrophenfonds* with around 0.1% of GDP allocated tax revenues each year) and France's CATNAT (*Catastrophes Naturelles* benefiting from State guarantee) fulfil such a role. Both funds are used to finance damage incurred when natural catastrophes occur.

⁽⁵⁹⁾ *Natural disaster funds* include under *response funds* providing immediate liquidity support, *recovery funds* supporting the medium-term recovery and *resilience funds*, which finance long-term reconstruction and resilience investment. Here we refer to recovery and resilience funds.

- **Contingent credit lines** from international lenders (European Investment Bank, World Bank, etc.) can be used when budgetary reallocations and fiscal buffers are insufficient, when a country has suboptimal tools to address the consequences of natural disasters, and when access to financial markets is not feasible.

To limit the impact on public finances, countries can consider risk-sharing solutions.

Ex ante determined risk-sharing agreements provide a clear allocation of the roles held by the relevant public and private sector actors. By clarifying who pays what, insurance arrangements reduce the unforeseen impact of disasters on public finances. A developed insurance market fosters full or partial financial protection of private actors against the effects of natural disasters. Traditional individual insurance against natural disasters is a straightforward way to share such risks (e.g. compulsory insurance schemes or voluntary subscription). These practices ideally aim for a high degree of insurance penetration, therefore reducing the share of residual risk ⁽⁶⁰⁾ (Table II.4.1). Other options for disaster risk financing include parametric insurance ⁽⁶¹⁾ and *ex post* financing tools (e.g. Czechia issued two flood bonds in 1997 and 2009-2010 to address financing needs following two floods that hit the country).

Regional cooperation provides shared risk information and disaster risk management tools at regional level, thereby enhancing national and regional resilience to natural disasters.

In the EU, the Union Civil Protection Mechanism is a mechanism for cooperation and support provided by participating states ⁽⁶²⁾ in case of disasters inside and outside the Union. Via the UCPM, the European Commission supports and complements the national prevention and preparedness when national response capacity is overwhelmed by a disaster. Civil protection assistance can take the form of in-kind assistance, deployment of specially equipped teams, or of experts sent to the field.

⁽⁶⁰⁾ Residual risk is the part of risk that is uninsured, the cost of which usually falls explicitly or implicitly on the public purse.

⁽⁶¹⁾ Parametric insurance makes payments dependent on certain predetermined parameter values (wind speed, rainfall levels).

⁽⁶²⁾ EU Member States and six participating states (Iceland, Norway, Serbia, North Macedonia, Montenegro and Turkey).

An increasing number of countries include disaster risk financing strategies as part of their fiscal policy, but challenges remain. There is no common disaster data reporting for line ministries and the different government layers and data on economic losses due to disasters is scarce. Finally, governance and institutional arrangements need to fit into the existing national fiscal frameworks and be compatible with EU requirements. Understanding the different available options for risk sharing and how to better deploy them would strengthen DRM practices.

needs. More generally, a conceptual analytical framework identifying the essential elements at the foundation of robust DRM and effective DRF strategies would lead to better understanding of their role in the national fiscal frameworks and how they could contribute to meeting the needs of society in preventing, preparing and dealing with the consequences of climate change and disaster risks.

4.4. CONCLUSIONS

Climate change is expected to increase the pressure on public finances. On the one hand, there is a growing need for public investment in measures to mitigate and adapt to the effects of climate change. On the other hand, large-scale disasters induced by climate change represent a real human and economic threat that fiscal frameworks will need to better reflect in budgetary planning, governance and institutional arrangements, building on the existing DRM processes.

While some EU provisions for disaster risk management have already been in place since 2001 and national practices have improved with every exercise, a consistent approach to disaster-related fiscal risks is lacking in the EU. The EU provisions for disaster risk management were not designed to meet the needs of fiscal policy-makers. This is because they apply to stakeholders such as civil protection agencies and mainly serve the functioning of the UCPM. Only a few Member States perform a systematic and regular fiscal risk analysis, while climate change and disaster considerations are in the early stages and still mostly qualitative in nature. The increase in frequency of impacts from climate change emphasises the need to build financial resilience to climate change, underpinned by a systematic evaluation of climate change and disaster risks.

Steps towards strengthening current DRM and DRF frameworks also seem particularly warranted in light of the current COVID-19 pandemic. The COVID-19 crisis underscores the importance of robust DRM and DRF strategies to respond to the emergency, recovery and resilience

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

Steps in EDP procedure	Treaty Art.	Member State							
		HU	PL	RO	CZ	BG	DK	HR	UK
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		15.06.2010	27.01.2011	27.01.2011	02.06.2014	
Commission adopts recommendations for Council decision establishing inadequate action	126(8)	22.12.2004							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							
Commission adopts recommendation for NEW Council recommendation to end excessive deficit situation	126(7)	26.09.2006							11.11.2009
Council adopts NEW recommendation to end excessive deficit situation	126(7)	10.10.2006							02.12.2009
<i>new deadline for correction of excessive deficit</i>		2009							<i>fin. year 2014/15</i>
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)								
<i>deadline for correction of excessive deficit</i>				2022					
Follow-up									
Commission adopts communication on fiscal situation in Romania				18.11.2020					

Source: Commission services.

Table II.A.3: Overview EDP steps - 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
Commission adopts Council recommendation for decision to give notice	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

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>
Council adopts: 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

Fiscal policy in a negative interest rate-growth differential environment – new evidence

Please cite this as follows:

European Commission (2021), Fiscal policy in a negative interest rate-growth differential environment – new evidence, Report on Public Finances in EMU 2020, Institutional Paper 147, 26 February 2021, 61-80.

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KEY FINDINGS

This part sets out new evidence on the impact of negative interest rate-growth differentials on fiscal policy in the EU over the past two decades.

Negative interest rate growth differentials have been common in the EU and advanced economies, driven by structural factors, but there has been a high degree of variation across Member States.

- The difference between the implicit interest rate on public debt and the nominal economic growth rate tended to narrow and turned negative in most advanced economies, including the EU, in recent decades. This has been due more to the decrease in nominal interest rates than to rising economic growth rates.
- Member States have experienced negative interest rate-growth differentials about half the time in the last two decades. The frequency of negative differential episodes has differed widely across Member States. Those with high real GDP growth rates and low public debt-to-GDP experience negative differentials more frequently.

Negative interest rate-growth differentials help reduce public debt and enhance sustainability. .

- Descriptive statistics show that, on average, public debt-to-GDP ratios decreased by 1.7 pps. of GDP per year in times of negative differentials. In contrast, debt increased by almost 3 pps. of GDP per year in positive differential episodes.
- The debt reduction during negative differential episodes is largely explained by:
 - the ‘snowball effect’ reflecting the direct impact of the interest rate-growth differential, i.e. an automatic reduction in public debt-to-GDP that arises when nominal GDP increases at a faster rate than the implicit interest rate; and
 - an average cyclical government budget surplus, since negative differentials tend to be associated with cyclical upturns.

However, past experience shows that Member States tend to reduce their fiscal efforts during episodes of negative differentials, especially when debt is already high.

- Evidence from panel regressions shows that smaller fiscal efforts tend to partly offset debt reduction during negative interest rate-growth episodes. This is particularly the case in highly-indebted Member States.
- As a result, a reduction in interest rate-growth differentials does not lead to a one-to-one change in the pace of debt reduction.

While debt reduction becomes easier to achieve in times of negative interest rate-growth differentials in the EU on average, the analysis suggests caution is needed with regard to the longer-term implications of the current low interest rate environment, in particular in high-debt Member States.

- Our evidence shows that public debt tends to decline in the EU following a public-debt-increasing shock, in particular in an environment of negative interest rate-growth differentials. This responsiveness is an important element to preserve sound public finances.
- However, there is uncertainty on the long-term sign and size of the interest-growth differential and many countries will emerge from the crisis with significantly higher public debt.

1. INTRODUCTION

The COVID-19 pandemic has hit the EU hard, putting pressure on public finances. The unprecedented economic downturn and forceful fiscal policy response to the COVID-19 crisis have significantly changed the EU's economic and fiscal outlooks. According to the Commission's 2020 autumn forecast, EU GDP is expected to contract by about 7½% in 2020 before recovering by 4% in 2021. Public debt is set to increase to about 94% of GDP in 2020 and is projected to remain around that level in 2021–2022. The aggregate outlook hides large differences across Member States and is surrounded by a high degree of uncertainty.

The cost of servicing public debt has been extraordinarily low for most Member States for the past few years, reflecting both temporary and structural forces. The differential between the implicit interest rate on government debt and the nominal GDP growth rate has been declining since the 1980s in many advanced economies, largely driven by falling interest rates. The economic literature points to two main structural drivers of lower interest rates:

- the ageing of the population; and
- the slowdown in (total factor) productivity growth.

These factors result in a decline in potential growth and a larger decline in 'risk-free' interest rates by pushing investment below the desired level of savings⁽⁶³⁾. A temporary downturn and deleveraging in some Member States in the years following the global and financial crisis have also contributed to lower interest rates⁽⁶⁴⁾. Consequently, despite the rise in public debt levels, low interest rates and a flattening of the yield curve have gradually reduced governments' average interest payments.

The implications of negative interest rate-growth differentials for fiscal policy are the subject of heated debate, with some arguing

⁽⁶³⁾ This explanation lies at the heart of the secular stagnation hypothesis (Summers, 2014) and finds empirical support (Lunsford and West, 2019). There are other theories trying to explain the secular decline in interest rates, including the 'global savings glut' approach (Bernanke, 2005, 2015).

⁽⁶⁴⁾ Borio (2014).

that public debt may have no fiscal costs⁽⁶⁵⁾. Governments generally face a trade-off between short-term gains from a more expansionary fiscal policy and the medium-term costs of higher public debt⁽⁶⁶⁾. Negative interest rate-growth differentials affect this trade-off by reducing the latter. Moreover, countercyclical fiscal policy is arguably more effective in a low-interest-rate environment, when monetary policy is operating at or close to the effective lower bound⁽⁶⁷⁾. Economic stabilisation purposes aside, lower interest rates favour the financing of growth-enhancing public spending via public debt rather than taxation or the curtailment of other expenditure.

Others argue that public debt is no 'free lunch'⁽⁶⁸⁾. There are several reasons why the current negative interest rate-growth differential should not be taken as an incentive for higher debt levels⁽⁶⁹⁾:

- **Negative interest rate-growth differentials can be associated with structural factors (such as population ageing) that could raise future public debt levels.** These factors could further reduce potential growth, thus putting upside pressure on interest rate-growth differentials;
- **A negative differential may not last.** The COVID-19 crisis has put a big question mark over the future dynamics of interest rate-growth differentials. On the one hand, rates are expected to remain low for longer, for instance due to an increase in precautionary savings⁽⁷⁰⁾. On the other hand, GDP growth is

⁽⁶⁵⁾ Blanchard (2019).

⁽⁶⁶⁾ In the tax smoothing model (Barro, 1979), governments optimally let debt fluctuate and smooth variations in tax rates over long periods, because the negative welfare effect of marginal tax rates are larger with higher tax rates. Assuming that the welfare effect of expenditure cuts also increases with the size of the consolidation justifies the same smoothing behaviour.

⁽⁶⁷⁾ Christiano, Eichenbaum and Rebelo (2011), Blanchard and Leigh (2013), Miyamoto, Nguyen and Sergeyev (2018).

⁽⁶⁸⁾ Rogoff (2019).

⁽⁶⁹⁾ Low interest rates also increase the net present value of future unfunded liabilities related to ageing (Auerbach, 2019).

⁽⁷⁰⁾ Contrary to wars, pandemics do not destroy capital and are not followed by periods of high investment (Jordà, Singh and Taylor, 2020).

set to decline. Which of the two factors will dominate depends on the shape and severity of the aftermath of the crisis. Also, high and growing public debt tends to be associated with unfavourably high interest rate-growth differentials in the future⁽⁷¹⁾. This may require governments to generate large and politically challenging primary surpluses⁽⁷²⁾; and

- **Negative differentials may lead to reduced fiscal efforts.** Governments may be concerned about the immediate financing needs resulting from debt, but may care less about the longer-term implications of high debt levels. Therefore, they could use the savings from lower interest expenditure to finance expansionary fiscal policy. In such cases, a reduction of the differential would not arithmetically lead to an one-for-one or proportional change in the pace of debt reduction. This could strengthen the deficit bias, i.e. governments' tendency to allow deficit and public debt levels to increase without a corresponding rise in capital stocks⁽⁷³⁾. This part provides new empirical evidence for these effects.

Existing empirical evidence on the effect of negative differentials has focused on the stabilising role of fiscal policy in times of constrained monetary policy. There is growing evidence that fiscal multipliers are higher when monetary policy is constrained⁽⁷⁴⁾. Recent studies on Japanese and US data conclude that fiscal multipliers are low in normal times (between 0.3 and 0.8), but that fiscal expansions enacted during episodes of constrained monetary policy have a bigger impact on output (around 1.5)⁽⁷⁵⁾. This strengthens the argument for a more activist

fiscal policy stance in periods when monetary policy is increasingly constrained.

To the best of our knowledge, there is no empirical evidence on the impact of a negative differential on fiscal policy. Empirical studies typically show that countries react to a growing public debt ratio by tightening the fiscal policy stance. This should eventually help stabilise public debt-to-GDP ratios and ensure sustainable public finances. These studies usually find that primary balances improve by about 0.4 pp. of GDP for every 10 pps. of GDP increase in public debt⁽⁷⁶⁾. Some studies have looked for evidence that fiscal policy becomes less responsive at higher levels of debt ('fiscal fatigue'), with inconclusive results⁽⁷⁷⁾. Other studies show that fiscal policy may alternate between sustainable and unsustainable arrangements, while remaining sustainable on average⁽⁷⁸⁾. To the best of our knowledge, no study has investigated whether fiscal policy is affected by the interest rate-growth differential.

Against this background, this part assesses patterns of negative interest rate-growth differentials and their impact on fiscal policy in the EU in 2000-2019. We answer the following questions:

1. How frequent have negative interest rate-growth episodes been in the past two decades (Chapter III.2)?
2. Do countries adjust their fiscal stances during such episodes (Section III.3.1)?
3. Has the pace of debt reduction been sufficient to stabilise debt during such episodes (Section III.3.2)?

The outline is structured as follows: Chapter III.2 sets out stylised facts on debt dynamics in an environment of negative interest rate-growth differentials; Chapter III.3 uses panel regressions to analyse whether Member States have reduced their fiscal efforts during negative differential episodes and assesses the pace of debt reduction in such episodes; and Chapter III.4 draws some conclusions.

⁽⁷¹⁾ Checherita-Westphal and Semeano (2020). The effect is stronger when debt is denominated in a foreign or shared currency (Lian, Presbitero and Wiriadinata, 2020).

⁽⁷²⁾ Daniel and Shiamptanis (2013). Governments have taken advantage of very low interest rates to lock-in debt funding at long maturities, but debt roll-overs will still be an issue if interest rates rise again in the future and may justify a partial frontload of the fiscal consolidation (Blanchard, 2019).

⁽⁷³⁾ Ciżkowicz, Rzońca and Trzeciakowski (2015).

⁽⁷⁴⁾ Ramey and Zubairy (2014), Miyamoto, Nguyen and Sergeyev (2018).

⁽⁷⁵⁾ For instance, a multiplier of 1.5 means that real GDP declines by 1.5% following a consolidation of 1 pp.

⁽⁷⁶⁾ Bohn (1998).

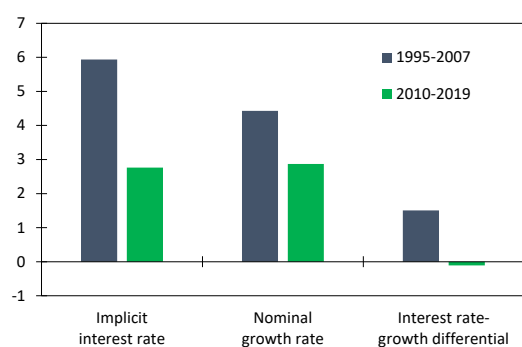
⁽⁷⁷⁾ Ghosh *et al.* (2013), Checherita-Westphal and Žďárek (2017), Everaert and Jansen (2018).

⁽⁷⁸⁾ Aldama and Creel (2019).

2. STYLISED FACTS ON DEBT DYNAMICS IN AN ENVIRONMENT OF NEGATIVE INTEREST RATE-GROWTH DIFFERENTIALS

The interest rate-growth differential has been on a long-lasting declining trend in most advanced economies, including in the EU (Graph III.2.1) ⁽⁷⁹⁾. Both implicit interest rates on government debt and nominal GDP growth rates have fallen since the early 1990s. However, implicit interest rates have decreased significantly faster than GDP growth rates – this explains most of the decline of the differential.

Graph III.2.1: Implicit interest rate and nominal growth rate (EU average, 1995-2019)



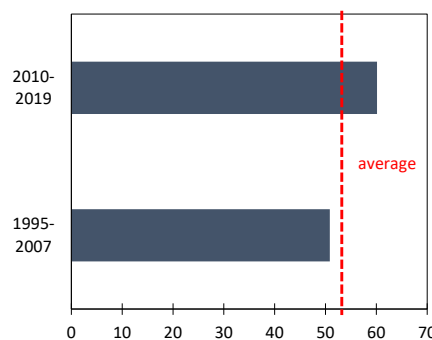
Note: The implicit interest rate on debt is equal to the ratio of interest expenditure to public debt. Figures are the GDP-weighted average of EU Member States. The sample only covers countries since EU membership. Source: Commission spring 2020 forecast.

Negative interest rate-growth differentials are not a recent phenomenon in the EU (Graph III.2.2). The past decade was characterised by exceptionally low differentials: Member States experienced negative differentials 60% of the time on average ⁽⁸⁰⁾. Periods of negative differentials have occurred before, albeit less frequently. Member States experienced negative differentials in around half of the years in the decade before the global financial crisis. The global financial crisis triggered a sharp reversal of negative differentials due to the significant decline in GDP, resulting in a period of significantly positive differentials.

⁽⁷⁹⁾ To assess the interest rate-growth differential we use a standard definition: we use the implicit average interest on debt as our measure of the interest rate and the nominal growth rate as our indicator for the growth rate. The implicit interest rate gradually adjusts to changes in both risk-free interest rates and risk premia, depending on the maturity structure of public debt. It is less volatile than current interest rates on public debt.

⁽⁸⁰⁾ Table III.A.1 in the Annex shows that almost all Member States had negative interest rate-growth differentials in 2019 except Greece and Italy.

Graph III.2.2: Frequency of negative interest rate-growth differential episodes (EU average, 1995-2019)

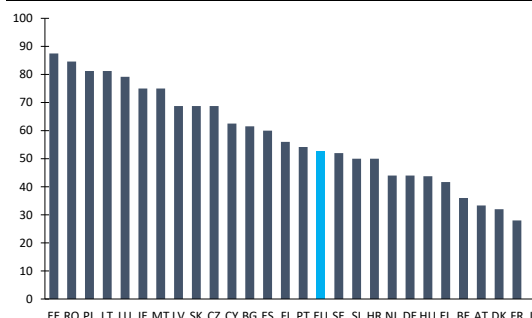


Note: Figures are the unweighted average frequency of negative differential episodes experienced by Member States. The sample only covers countries since EU membership.

Source: Commission spring 2020 forecast.

The frequency of negative interest rate-growth differential episodes differs across Member States, mainly due to wide disparities in economic growth rates and levels of public debt (Graphs III.2.3 and III.2.4). The frequency ranges from never (in Italy) to close to 90% of the time (in Estonia) (Graph III.2.3). Such episodes are typically associated with higher economic growth (Graph III.2.4a) and lower debt ratios (Graph III.2.4b) ⁽⁸¹⁾.

Graph III.2.3: Frequency of negative interest rate-growth differentials (1995-2019)

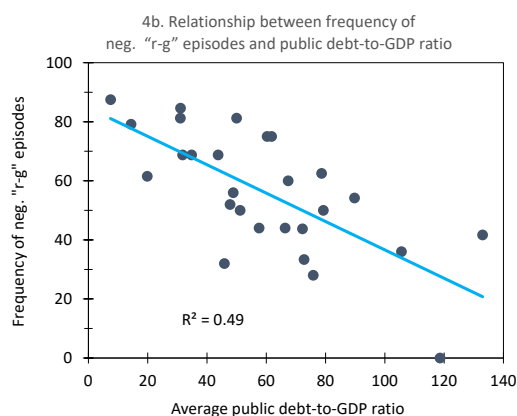
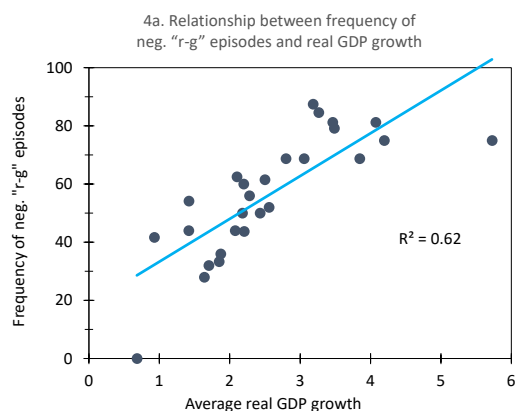


Note: Figures are the unweighted average frequency of negative differential episodes experienced by Member States. The sample only covers countries since EU membership.

Source: Commission spring 2020 forecast.

⁽⁸¹⁾ In contrast, differences in the level of the interest rate on public debt, which incorporates a risk premium, appears less important in explaining these differences across Member States (see Annex, Graph III.A.1).

Graph III.2.4: **Relationship of negative interest rate-growth differentials with economic growth and public debt (1995-2019)**



Note: 'r' refers to the implicit average interest rate on debt, equal to the ratio of interest expenditure to public debt, and 'g' refers to the growth rate of nominal GDP. The sample only covers countries since EU membership.

Source: Commission spring 2020 forecast.

While public debt declined in Member States on average in years of negative interest rate-growth differentials, it increased in years of positive differentials (Table III.2.1). In periods of negative differentials in the past two decades, it decreased on average by 1.7 pps. of GDP per year. This compares with an increase of almost 3 pps. of GDP in times of positive differentials.

The main reasons for the different debt dynamics in periods of negative and positive differentials can be summarised as follows (Table III.2.1) ⁽⁸²⁾:

⁽⁸²⁾ Stock-flow adjustments, which include financial transactions or statistical recording, correspond to factors

Table III.2.1: **Factors contributing to changes in public debt (EU Member States, 1995-2019, GDP pps.)**

	All periods	Positive "r-g"	Negative "r-g"	Difference
	(1)	(2)	(3)	(3)-(2)
Average change in public debt	0.4	2.9	-1.7	-4.6
Of which:				
Snowball effect	0.2	2	-1.3	-3.3
Cyclical deficit	0.2	1	-0.6	-1.6
Structural primary deficit	-0.5	-0.7	-0.3	0.4
Stock-flow adjustment	0.6	0.6	0.5	-0.1
Observations	537	249	288	
Average "r-g"	-0.5	3.1	-3.5	

Note: Figures are the unweighted average contributions to changes in public debt in the EU. The sample only covers countries since EU membership. A negative (positive) contribution from the cyclical deficit or the primary structural deficit corresponds to a surplus (deficit), which reduces (increases) debt.

Source: Commission spring 2020 forecast.

- **The key factor explaining stronger debt reduction were the automatic impact of growth exceeding interest rates and the favourable cyclical effects.** Two components reduced debt significantly in periods of negative differentials, but increased debt in periods of positive differentials:

- First (obviously), the automatic 'snowball effect', when nominal GDP increases at a faster rate than the implicit interest rate ⁽⁸³⁾. The more negative the differential and the higher the debt ratio, the faster the pace of debt reduction from the snowball effect; and
- Second, the cyclical component of the budget balance, which reflects the effect of automatic stabilisers. Since negative differentials tend to be associated with high economic growth, the contribution of this component is typically (more)

that affect the level of debt but not the primary balance. They contributed to an increase of debt by around 0.5 pp. per year, regardless of the sign of the differential.

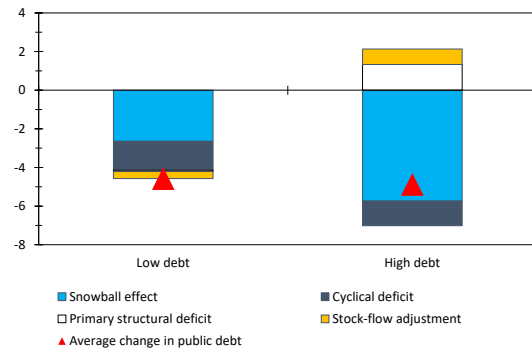
⁽⁸³⁾ Debt accumulates according to the following equation: $\Delta d_t = d_{t-1} \times \left[\frac{1+r_t}{1+g_t} - 1 \right] - pb_t - sfa_t$, where d_t is the public debt-to-GDP ratio, pb_t is the primary balance and sfa_t are stock-flow adjustments. The first term of the accumulation is the snowball effect, where the multiplicative term $\left[\frac{1+r_t}{1+g_t} - 1 \right]$ is equal, at the first order, to the interest rate-growth differential $r_t - g_t$.

debt-reducing when the differential is (more) negative ⁽⁸⁴⁾.

- **Discretionary fiscal policy has been less supportive of debt reduction in negative interest rate-growth differential episodes than in positive ones.** A small primary structural surplus contributed to lower debt-to-GDP ratios in both negative and positive differential episodes over 1995-2019. However, this effect was stronger in periods of positive differentials; and
- **The less supportive debt reductions of discretionary fiscal policy in negative differential episodes are mainly found in Member States with high debt** (Graph III.2.5). The debt reduction from the snowball effect was arithmetically stronger in Member States with higher public debt ratios than with lower ratios. However, in higher debt countries around 40% of the debt reduction from the snowball effect was offset by:
 - a looser discretionary fiscal policy, and
 - higher stock-flow adjustments.

As a consequence, the effect of negative differentials on the pace of debt reduction was broadly similar across countries, whether they had high or low debt levels.

Graph III.2.5: Contributions to changes in public debt in negative differentials episodes, minus in positive differentials episodes (EU Member States, 1995-2019, GDP pps.)



Note: Figures correspond to the unweighted average contributions to changes in public debt during negative differential episodes minus during positive differential episodes in the EU. The sample only covers countries since EU membership. High debt: public debt-to-GDP above 100%.

Source: Commission spring 2020 forecast.

⁽⁸⁴⁾ This shows the need to control for the economic cycle when assessing the impact of negative interest-rate-growth differentials on public debt developments.

3. THE EFFECTS OF NEGATIVE INTEREST RATE-GROWTH DIFFERENTIALS ON FISCAL POLICY – AN EMPIRICAL ASSESSMENT

This chapter empirically assesses the effects of different interest rate-growth regimes on fiscal policy. Following the stylised facts from Chapter III.2, we use panel regressions to identify a causal impact of interest-growth differentials on fiscal policy. We answer the following questions:

- do countries adjust their fiscal stances in negative differential episodes (Section III.3.1)?
- has the impact of negative differentials on the pace of debt reduction been sufficient to stabilise debt (Section III.3.2)?

We analyse whether variations in the interest rate-growth differential have an impact on the fiscal stance and affect the response of fiscal policy to increases in debt. First, we focus on discretionary fiscal policy, as measured by the structural primary balance as the dependent variable (Section III.3.1). We then focus on the pace of debt reduction using the change in public debt as the dependent variable (Section III.3.2). The sign of the fiscal policy response to increases in debt is also an important part of the analysis of debt dynamics (Box III.3.2).

The analysis extends a standard approach to assess the reaction of fiscal policy to the macroeconomic and fiscal environment ('fiscal reaction function', Box III.3.1). The empirical analysis is conducted in two steps using panel regressions:

- first, we estimate an extended version of the fiscal reaction function, accounting for interest rate-growth differentials. In this specification, we are particularly interested in how fiscal policy depends on past debt and the interest rate-growth differential; and
- secondly, we analyse with an interaction model how the impact of differentials varies with the level of debt. We take into account the fact that governments may react differently to variations in debt when it is already high ⁽⁸⁵⁾. Our panel

data regressions control for systematic differences across countries and common shocks. We use an instrumental variable approach to control for the possible correlation between the explanatory variables in our regression and the error term.

3.1. DO COUNTRIES ADJUST THEIR FISCAL STANCES IN NEGATIVE DIFFERENTIAL EPISODES?

In this section, we analyse the effects of interest rate-growth differentials on Member States' discretionary fiscal policy action. The key objective is to establish if and how Member States adjust their fiscal stance in periods of negative differentials, for instance by (partially) offsetting the stronger debt reduction stemming from the snowball effect. To that end, we estimate the effect that differentials have on discretionary fiscal policy. We extend a standard fiscal reaction function approach, where fiscal policy depends on the public debt level, the interest rate-growth differential, and the economic cycle (Box III.3.1) ⁽⁸⁶⁾. We also take account of the fact that the discretionary fiscal policy reaction may vary with the level of debt (non-linear specification).

We rely on economic data. We use economic data in real time taken from the autumn forecast vintages in the Commission's AMECO database. The data cover the period 2000-2020 for up to 27 Member States and the United Kingdom. They allow us to take account of the fact that policymakers make budgetary decisions on the basis of contemporaneous macroeconomic and fiscal forecasts ⁽⁸⁷⁾.

⁽⁸⁵⁾ We use a quadratic specification (Ghosh *et al.*, 2013; Checherita-Westphal and Žd'árek, 2017; Everaert and Jansen, 2018).

⁽⁸⁶⁾ The results are robust to the addition of additional control variables (current account balance, inflation, distance to MTO, trade openness). We limit the number of reported coefficients for simplicity.

⁽⁸⁷⁾ Using *ex post* data to estimate fiscal responsiveness introduces an endogeneity bias as it is likely that forecast errors of fiscal policy (which show up in the residual) and the left-hand side are correlated (Cimadomo, 2012). See Annex (Tables III.A.2 and III.A.3) for a description of the real-time variables.

Box III.3.1: Empirical framework

This box describes the empirical approach used to estimate the impact of varying interest rate-growth differentials on fiscal policy. We focus on the impact of the sign and size of the differential on two key fiscal policy variables (*fp*):

- (i) the structural primary balance (Section III.3.1); and
- (ii) the change in public debt (Section III.3.2).

Baseline specification: extended fiscal reaction function

We extend a standard fiscal reaction function approach for the empirical specifications. As a first step, we analyse the impact of the economic cycle, the debt level and the differential on the fiscal policy indicator of interest (*fp*):

$$fp_{i,t} = \alpha fp_{i,t-1} + \rho_1 d_{i,t-1} + \rho_2 (r_{i,t} - g_{i,t}) + \gamma cycle_{i,t} + \theta_t + \phi_i + \epsilon_{i,t}, \quad (1)$$

We measure the impact of the economic cycle by using the change of the output gap. The specification includes year θ_t and country fixed effects ϕ_i to capture systematic differences across countries and years, while ϵ_{it} represents an error term which is assumed to be uncorrelated with the other control variables ⁽¹⁾.

Some studies have looked for evidence that fiscal policy becomes less responsive at higher levels of debt ('fiscal fatigue') ⁽²⁾. We therefore extend the previous specification by allowing for a quadratic effect of lagged debt on fiscal policy, as follows:

$$fp_{i,t} = \alpha fp_{i,t-1} + \rho_{11} d_{i,t-1} + \rho_{12} d_{i,t-1}^2 + \rho_2 (r_{i,t} - g_{i,t}) + \gamma cycle_{i,t} + \theta_t + \phi_i + \epsilon_{i,t}, \quad (2)$$

A negative coefficient on the squared level of lagged debt means that the response of fiscal policy to debt is weaker at higher levels.

Interacted specification

As a second step, we analyse how the impact of interest rate-growth differentials varies with the level of debt. As a consequence, we estimate the following interaction model:

$$fp_{i,t} = \alpha fp_{i,t-1} + \rho_{11} d_{i,t-1} + \rho_{12} d_{i,t-1}^2 + \rho_2 (r_{i,t} - g_{i,t}) + (\rho_{31} d_{i,t-1} + \rho_{32} d_{i,t-1}^2) \cdot (r_{i,t} - g_{i,t}) + \gamma cycle_{i,t} + \theta_t + \phi_i + \epsilon_{i,t}, \quad (3)$$

where we interact the level of the interest rate-growth differential with the terms associated with the level of debt. The added interaction term allows us to establish whether the impact of interest rate-growth differentials on fiscal policy varies with respect to the level of debt, and whether the fiscal policy responsiveness to the level of debt differs under different differential regimes.

⁽¹⁾ Looking at changes in debt, we assume that all drivers of debt depend only on the lagged level of debt, the differential, and additional controls. We also simplify our specifications and rely on a static estimator, where the persistence parameter α is assumed to be equal to zero. In theory, past changes in debt are correlated with past levels of debt and omitting them could bias the results; however, in practice we found that the persistence parameter is not significant and other parameters are not affected by the inclusion of past changes in debt on the right-hand side. In all other cases, we rely on dynamic panel estimation.

⁽²⁾ (Ghosh *et al.* 2013; Checherita-Westphal and Ždárěk 2017; Everaert and Jansen 2018).

(Continued on the next page)

Box (continued)

Estimation techniques:

Since fiscal policy can influence the level of the output gap or the differential, we use an instrumental variable (IV) estimator in which we instrument the variation of the output gap and the level of the differential by their levels in past periods⁽³⁾. We compute robust standard errors to deal with heteroscedasticity, serial correlation and cross-sectional dependence. When using real-time data, we also use past forecast errors as additional instruments and report the results of the over-identification test.

⁽³⁾ 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 in FE estimators, whereby the mean lagged dependent variable on the right hand side is correlated with the error term. The asymptotic properties of GMM estimators are negatively affected by the dimensions of country-panel data which suffer more from a small-N rather than a small-T problem. Celasun and Kang (2006) recommend the use of GMM estimators to test the cyclical sensitivity of fiscal policy variables and FE (LSDV) estimators for intertemporal sustainability tests and regime testing. Overall, we prefer using an IV-FE estimator to deal with the reverse-causality problem.

Our evidence shows that discretionary fiscal policy is persistent and pro-cyclical, and tightens following a debt increase (Table III.3.1).

The findings from panel regressions show:

- There is a strong path dependency in the level of the structural primary balance, as shown by the large and significant coefficient associated with its past level.
- Discretionary fiscal policy is pro-cyclical, as shown by the negative coefficient on the output gap variation: when the economic situation improves, the structural primary balance deteriorates.
- Importantly, public debt has a positive impact on the level of the structural primary balance, but the level of the interest rate-growth differential in isolation does not have a significant impact for the EU on average.⁸⁸

Member States with higher debt tend to deliver lower fiscal efforts when interest rate-growth differentials decrease (Table III.3.1, interacted specification). A decrease in the interest rate-growth differentials appears to lead to a significantly stronger loosening of the structural primary balance at higher levels of debt, as shown

by the positive and significant coefficient associated with the interacted quadratic terms. This empirical result confirms the descriptive findings (Chapter III.2) that expansionary discretionary fiscal policy offsets part of the debt reduction during negative differential episodes, in particular in highly indebted Member States.

⁽⁸⁸⁾ In this Chapter, the term significant refers to statistical significance as defined in the note of the regression tables (Table III.3.1).

Table III.3.1: Regression results: drivers of structural primary balance

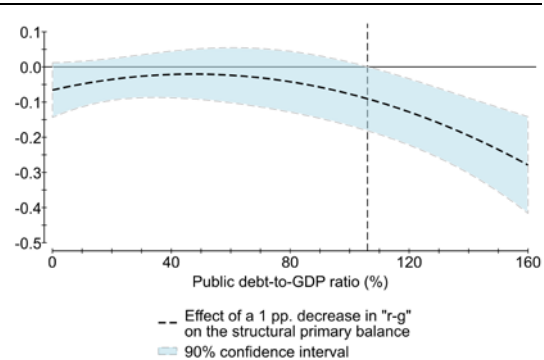
	Structural primary balance		
	(1)	(2)	(3)
Lagged dependent variable	0.810*** (0.027)	0.810*** (0.027)	0.805*** (0.028)
Lagged debt - 60%	0.014*** (0.003)	0.013*** (0.003)	0.015*** (0.004)
(Lagged debt - 60%) ²		0.002 (0.003)	0 (0.004)
"r-g"	0.011 (0.028)	0.011 (0.028)	-0.036 (0.042)
"r-g" x (lagged debt - 60%)			-0.013 (0.060)
"r-g" x (lagged debt - 60%) ²			0.203** (0.089)
Output gap change	-0.187* (0.106)	-0.215** (0.097)	-0.221** (0.097)
Observations	455	455	455
R-squared	0.83	0.83	0.83
Country-fixed effect	Yes	Yes	Yes
Time-fixed effect	Yes	Yes	Yes
Lagged debt Wald F	19.31	10.21	9.501
Lagged debt Wald F p-value	0.00	0.00	0.00
Negative "r-g" x Lagged debt Wald F			3.09
Negative "r-g" x Lagged debt Wald F p-value			0.05
Hansen J	0.16	0.41	0.13
Hansen J (p-value)	0.69	0.52	0.72
Kleibergen-Paap LM	27.64	34.55	37.69
Kleibergen-Paap F	12.47	20.91	15.42
Cragg-Donald F	31.90	47.74	33.53

Note: 'r' refers to the implicit average interest rate on debt, equal to the ratio of interest expenditure to public debt, and 'g' refers to the growth rate of nominal GDP. 'r-g' refers to the difference between the interest and growth rates. Results are obtained using 2SLS estimates. The regression model is based on data for 27 Member States and the UK for 2000-2019. p-values in parenthesis. ***, ** and * denote statistical significance at 1%, 5% and 10% respectively.

Source: Commission autumn 2000-2019 forecast vintages.

High-debt Member States are particularly likely to loosen fiscal effort in episodes of negative differentials. We find evidence for a non-linear effect of lower differentials on the structural primary balance. Higher debt levels tend to cause a stronger loosening of discretionary fiscal policy in times of negative differentials (Graph III.3.1). The total effect of differentials on the structural primary balance is not significant for Member States with debt ratios below 100% of GDP but becomes significantly negative and large for those with higher debt ratios. According to our estimates, Member States with debt equal to 120% of GDP react to a 1 pp. decrease in the differential by reducing their structural primary balance by 0.15 pp.

Graph III.3.1: Effect of more negative interest rate-growth differentials on the structural primary balance (GDP pps.)



Note: The graph shows the impact of a 1 pp. decrease in the interest rate-growth differential on the structural primary balance. Results are obtained using 2SLS estimates on a quadratic specification. The y-axis shows the impact on the structural primary balance. Neg. (pos.) values of the structural primary balance correspond to a deficit (surplus).

Source: Commission autumn 2000-2019 forecast vintages.

Summing up, while negative differentials support debt reduction, this effect is partly offset by a reduced fiscal effort, especially in highly indebted Member States. Negative or lower differentials affect the trade-off between the short-term gains from a more expansionary fiscal policy and the medium-term costs of higher public debt by reducing the risks associated with the latter.

3.2. HAS THE PACE OF DEBT REDUCTION BEEN SUFFICIENT TO STABILISE DEBT IN NEGATIVE DIFFERENTIAL EPISODES?

In this section, we analyse the effects of negative interest rate-growth differentials on the pace of debt reduction. As shown in the stylised facts, negative differentials arithmetically reduce debt accumulation thanks to favourable snowball and cyclical effects. However, the previous section shows that Member States with high debt tend to reduce their fiscal effort in periods of negative interest rate-growth differential, which means that lower differentials have a less than one-for-one impact on debt reduction. We use a panel regression framework to assess the main drivers of debt in negative differential episodes. We follow the estimation approach of Chapter III.3.1 but use the change in debt as the dependent variable (Box III.3.1). We rely on *ex post* annual data from the Commission's 2020 spring forecast, which

allow us to analyse the effect of all drivers of public debt on its actual trajectory ⁽⁸⁹⁾.

Our evidence shows that debt reduction is faster in episodes of negative differentials in the EU on average (Table III.3.2). We find that debt tends to fall more in times of lower differentials, as shown by the positive coefficient associated with the differential in the baseline specifications. A 1 pp. decrease in the differential is associated with an average decrease in debt of 0.3 pp. of GDP. This is broadly in line with the stylised facts (Table III.2.1).

Table III.3.2: Regression results – drivers of change in public debt

	Change in public debt		
	(1)	(2)	(3)
Lagged debt - 60%	-0.071*** (0.023)	-0.072** (0.028)	-0.083*** (0.027)
(Lagged debt - 60%) ²		0.003 (0.024)	-0.008 (0.021)
"r-g"	0.274*** (0.080)	0.274*** (0.081)	0.641*** (0.197)
"r-g" x (lagged debt - 60%)			0.786*** (0.285)
"r-g" x (lagged debt - 60%) ²			-1.135** (0.572)
Output gap change	-0.03 (0.453)	-0.049 (0.387)	0.107 (0.393)
Observations	543	543	543
R-squared	0.10	0.10	0.18
Country-fixed effect	Yes	Yes	Yes
Time-fixed effect	Yes	Yes	Yes
Lagged debt Wald F	9.29	4.82	6.93
Lagged debt Wald F p-value	0.00	0.01	0.00
Negative "r-g" x Lagged debt Wald F			5.28
Negative "r-g" x Lagged debt Wald F p-value			0.01
Kleibergen-Paap LM	31.45	34.63	36.22
Kleibergen-Paap F	44.39	62.58	72.96
Cragg-Donald F	92.42	129.80	141.40

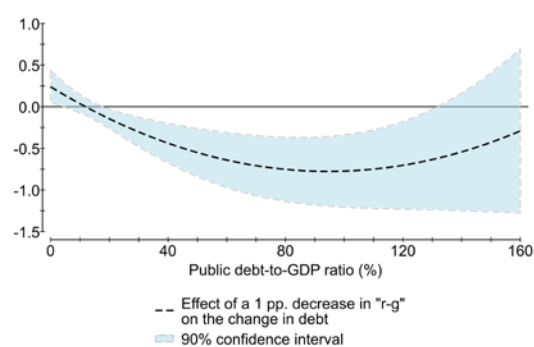
Note: 'r' refers to the implicit average interest rate on debt, equal to the ratio of interest expenditure to public debt, and 'g' refers to the growth rate of nominal GDP. 'r-g' refers to the difference between the interest and growth rates. Results are obtained using 2SLS estimates. The regression model is based on 1995-2019 data for 27 Member States and the UK. p-values in parenthesis. ***, ** and * denote statistical significance at 1%, 5% and 10% respectively.

Source: Commission spring 2020 forecast.

However, high-debt countries show a smaller debt reduction than low-debt countries in periods of negative interest rate-growth differentials (Graph III.3.2). We find that the effect of differentials on debt variation grows with the debt level when debt is low (as shown by the positive coefficient of the linear interacted term in Table III.3.1). However, this relationship disappears when debt is high (as shown by the negative coefficient of the quadratic interacted

term). The debt-reducing effect becomes smaller as debt rises beyond 100% of GDP and insignificant when it exceeds 120%. This suggests that the snowball effect is not the only factor to react to a fall in the differential and that other factors, such as a change in the fiscal stance (Section III.3.1), diminish the overall effect of lower differentials on the pace of debt reduction in highly indebted Member States.

Graph III.3.2: Effect of more negative interest rate-growth differentials on the change in debt (GDP pps.)



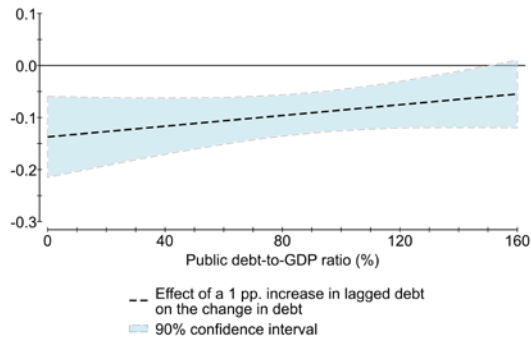
Note: The graph shows the impact of a 1 pp. decrease in the interest rate-growth differential on the change in debt. Results are obtained using 2SLS estimates on a quadratic specification. The y-axis shows the impact on the change in debt. Neg. (pos.) values of the change in debt correspond to a decrease (increase) in debt.

Source: Commission spring 2020 forecast.

Debt reduction is easier to achieve in negative interest rate-growth differential episodes, but less so in highly-indebted Member States (Table III.3.2, Graph III.3.3). Following a debt increase, debt tends to decrease, as indicated by the negative coefficient on the lagged debt level in all specifications. However, we find that in periods of negative differentials, the reaction of the change in debt to past increases becomes smaller (in absolute value) and it is no longer significant for Member States with very high debt.

⁽⁸⁹⁾ See Annex (Table III.A.2) for a description of the variables.

Graph III.3.3: **Effect of higher public debt on change in debt when interest rate-growth differential is negative (GDP pps.)**



Note: The graph shows the impact of a 1 pp. increase of public debt on the change in debt when the interest-rate-growth differential is negative. Results are obtained using 2SLS estimates based on a quadratic specification.

Source: Commission spring 2020 forecast.

Moreover, our findings show that following a large shock it takes between 16-20 years to return to the pre-shock debt level. This is rather long compared to the average economic/financial cycle⁽⁹⁰⁾.

Summing up, while negative differentials make it easier to ensure that public debt ratios reduce, these favourable effects are partly offset by a lack of fiscal adjustment when debt is high.

When debt is high, positive differentials impose a stronger constraint on fiscal policy. This means that fiscal policy must react strongly to ensure sustainable public finances. Negative differentials relax this constraint, and our evidence shows that fiscal policy in Member States with high debt becomes less responsive. This implies that following large shocks to debt, debt remains high and vulnerable to sudden reversals.

⁽⁹⁰⁾ All other things equal, the relationship between debt variation and the demeaned level of lagged debt can be simplified as $\Delta d_t = \rho d_{t-1}$, which can be rewritten as $d_t = (1 + \rho)^t d_0$. This implies that after an initial shock d_0 , all other things equal, debt falls to $\frac{d_0}{2}$ when $t_{1/2} = -\frac{\ln(2)}{\ln(1+\rho)}$. Table III.3.2 reports estimates of ρ between -0.083 and -0.071 depending on the specifications, for Member States with debt around 60% of GDP, which yields half-life durations $t_{1/2}$ between 8 and 9.5 years.

Box III.3.2: Assessing debt dynamics with varying interest rate-growth differentials – a conceptual framework

This box introduces the conceptual framework that underpins our analysis of debt dynamics with varying interest rate-growth differentials.

The academic literature identifies two conditions under which public debt is sustainable:

- *the debt-stabilising (DS) condition* – this requires that the debt-to-GDP ratio is stationary, i.e. following a large shock, it reverts back to its mean long-term value. Therefore, temporary shocks should not have permanent effects; and
- *the no-Ponzi game (NPG) condition* – this requires that any initial increase in the public debt-to-GDP ratio no greater than the sum of future expected and discounted real primary surpluses-to-GDP.

In this box, we derive empirically testable hypotheses under which public debt respects these conditions.

We start with a very stylised model in the spirit of Blanchard (2019) ⁽¹⁾, in which the change in the debt-to-GDP ratio Δd_t depends on the following components ⁽²⁾:

$$\Delta d_t = (r_t - g_t)d_{t-1} + x_t, \quad (1)$$

where the debt change depends on:

- the ‘snowball effect’, which includes the interest-rate growth differential $r_t - g_t$; and
- other factors x_t , including discretionary fiscal policy, that are assumed to be unrelated to past debt developments.

In this simple framework, debt dynamics depend exclusively on the sign of differential. Debt converges back to its long-term-level (i.e. it is sustainable according to the DS condition) if the relationship between the change in debt and the past level of debt is negative. In the simple model, this condition is met if the average differential $\bar{r} - \bar{g}$ is negative, i.e.:

$$\text{Average differential} = \bar{r} - \bar{g} < 0 \Leftrightarrow \text{DS condition is met}$$

However, there are good reasons to assume that a country’s discretionary fiscal policy is related to past debt developments. Insights from the literature on the fiscal reaction function reveal that governments do react to the level of debt by adjusting their budget balances ⁽³⁾. This empirical behaviour finds a strong prescriptive formulation in the EU fiscal framework, which requires Member States under the preventive arm of the stability and growth pact (all other things being equal) to make a larger fiscal adjustment when

⁽¹⁾ We do not discuss the effects of public debt on welfare, which is an important part of the overlapping generations (OLG) framework by Blanchard (2019).

⁽²⁾ The correct debt accumulation equation is $\Delta d_t = d_{t-1} \times \left[\frac{1+r_t}{1+g_t} - 1 \right] - pb_t - sfa_t$, where pb_t is the primary balance and sfa_t are stock-flow adjustments, which we ignore in the remainder of the model.

⁽³⁾ Bohn (1998), Aldama and Creel (2019), Ghosh et al. (2013), Checherita-Westphal and Žďárek (2017), Everaert and Jansen (2018).

(Continued on the next page)

Box (continued)

debt is higher and economic conditions are favourable. This positive reaction of primary balances to the level of debt ensures that fiscal policy also meets the NPG condition⁽⁴⁾.

Moreover, there are also reasons to believe that a country's fiscal policy reacts to the level of the differential itself. Governments may care about the level of the headline deficit, and their annual financing needs, rather than the level of debt *per se*. Lower differentials relax financial constraints and governments may directly adjust their discretionary fiscal policy, or (less directly) their response to increases in debt.

We therefore extend the model to take these factors into account. We use the level of the structural primary balance psb_t ⁽⁵⁾ as an indicator of discretionary fiscal policy. The fiscal reaction depends on the following factors⁽⁶⁾:

$$psb_t = (\rho_1 + \rho_3(r_t - g_t)) d_{t-1} + \rho_2(r_t - g_t) + \delta cycle_t + v_t, \quad (2)$$

where $\rho_1 + \rho_3(r_t - g_t)$ measures the responsiveness of fiscal policy to the level of debt, i.e. how strongly the structural primary balance reacts to an increase in debt. We allow the differential to affect the responsiveness of fiscal policy with slope ρ_3 , and to impact the level of the structural primary balance directly with slope ρ_2 . In addition, discretionary fiscal policy depends on the economic cycle and is subject to shocks v ⁽⁷⁾. Plugging equation (2) into (1) and rearranging, the change in debt in the extended model depends on:

$$\Delta d_t = ((1 - \rho_3)(r_t - g_t) - \rho_1) d_{t-1} - (\delta + \epsilon) cycle_t + \xi_t, \quad (3)$$

where $(1 - \rho_3)(r_t - g_t) - \rho_1$ governs the degree to which debt responds to past increases, which depends on the interest rate-growth differential and the discretionary fiscal policy responsiveness parameters ρ_1 and ρ_3 . In addition, $(\delta + \epsilon)z_t$ is the cumulative effect of the business cycle on the primary balance through automatic stabilisers and discretionary fiscal policy⁽⁸⁾.

In this extended framework, debt dynamic depend not only on the sign but also the size of the interest rate-growth differential, and on the fiscal policy reaction to public debt. The role of governments' behaviour means that negative differentials do not necessarily translate into sustainable debt. Rather, the 'corrected' debt-stabilising condition depends on the sign and size of the differential and the reaction of discretionary fiscal policy to past debt levels. This implies that debt sustainability listed above is met under the following condition:

$$\text{Average 'corrected' differential} = (1 - \rho_3)(\bar{r} - \bar{g}) - \rho_1 < 0 \Leftrightarrow \text{DS condition is met.}$$

If the degree to which the fiscal policy responsiveness to debt varies with the differential ρ_3 is larger than 1, a decrease in the differential leads to an increase in the 'corrected' differential and a worsening of debt sustainability.

⁽⁴⁾ If the NPG condition is met, any increase in debt must be met by a future increase in primary balances. If the differential is positive, the NPG condition is necessary for the DS condition to be met. This is not the case when the differential is negative.

⁽⁵⁾ The structural primary balance is defined as the difference between the primary balance pb_t and the cyclical balance. The cyclical balance is the product of the elasticity of the budget balance to the output gap ϵ and the level of the output gap z_t : $psb_t = pb_t - \epsilon z_t$

⁽⁶⁾ The parameters of the fiscal reaction function match those that we estimate in Section III.3.1.

⁽⁷⁾ In this framework, the NPG condition is met if the degree of fiscal responsiveness to debt is positive $\rho_1 + \rho_3(r_t - g_t) > 0$

⁽⁸⁾ γ is a constant that relates the long-term levels of the structural primary balance, debt and the interest rate-growth differential.

4. CONCLUSIONS

In this part, we analysed the impact of negative interest rate-growth differentials on fiscal policy. The key findings can be summarised as follows:

- *Member States have experienced negative differentials in about half of the years in the past two decades.* The frequency of negative differential episodes differs across Member States, ranging from never in Italy to almost 90% in Estonia. Countries with higher economic growth and lower public debt ratios tend to experience negative differentials more often;
- *Public debt ratios in the EU have declined on average by 1.7 pps. of GDP per year in periods of negative differentials,* as compared with increases of almost 3 pps. of GDP per year in periods of positive differentials;
- *While negative differentials support debt reduction, this effect tends to be partly offset by a reduced fiscal effort, especially in highly indebted Member States.* Debt reduction is easier to achieve in negative interest rate growth differential episodes, but less so in highly- indebted Member States;

The current environment of negative interest rate-growth differentials help Member States to reduce debt in the short term. Low or negative differentials reduce the pressure on public debt accumulation stemming from the snowball effect. However, as it reaches high levels, discretionary fiscal policy tends to react to the negative differential environment by delivering a smaller effort.

The analysis shows that, following a debt shock, smaller fiscal efforts, especially in high-debt Member States, tend to partly offset debt reduction during negative interest rate growth episodes. This may have adverse implications for two reasons:

- *There is uncertainty on the long-term sign and size of the interest-growth differential.* In particular, the COVID-19 crisis makes the future dynamics of the differential highly uncertain. On the one hand, the level of the interest rates may change. On the other hand,

investment and reforms could support potential growth;

- *Many countries will emerge from the crisis with significantly higher public debt.*

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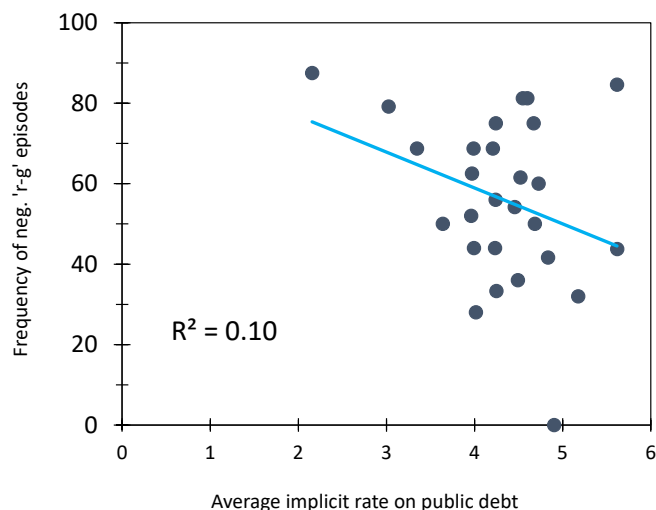
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ANNEX

Graph III.A.1: Relationship between implicit interest rate and frequency of 'r-g' episodes



Note: 'r' refers to the implicit interest rate on debt and 'g' refers to the nominal GDP growth rate. The sample covers countries since EU membership.
Source: Commission spring 2020 forecast.

Table III.A.1: Occurrences of negative interest rate-growth differential episodes (1995-2019)

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	1995-2019	
BE																										36	
DK																											32
DE																											44
IE																											72
EL																											40
ES																											60
FR																											28
IT																											0
LU																											76
NL																											44
AT																											32
PT																											52
FI																											56
SE																											52
BG																											32
CZ																											44
EE																											56
HR																											12
CY																											40
LV																											44
LT																											52
HU																											28
MT																											48
PL																											52
RO																											44
SI																											32
SK																											44
EU																											28

Share	14	14	43	43	29	64	29	29	29	71	54	96	92	38	4	42	46	19	27	41	74	74	96	96	93
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Note: Blue squares indicate negative 'r-g' episodes, 'r' refers to the implicit average interest rate on debt, equal to the ratio of interest expenditure to public debt, and 'g' refers to the growth rate of nominal GDP. Grey squares correspond to missing data or years before EU accession.
Source: Commission spring 2020 forecast.

Table III.A.2: Summary statistics, ex-post data (1995-2019)

	N	Mean	Std. dev.	1 st perc.	99 th perc.
Public debt	537	61.9	34.1	6.1	176.2
Change in public debt	537	0.4	5.2	-10.1	19.1
Primary deficit	537	-0.4	3.3	-6.8	9.5
Primary structural deficit	537	-0.5	2.7	-7.7	7.3
Public investment	537	3.7	1	1.9	6.2
Cyclical deficit	537	0.2	2.2	-3.3	8.9
Stock-flow adjustment	537	0.6	3.1	-6.8	10.3
Implicit interest rate on debt	537	4.3	1.7	0.7	9.2
Nominal GDP growth	537	4.8	5	-7.6	23.1
Interest rate-growth differential	537	-0.5	5.1	-17.5	13.1
Real GDP growth	537	2.5	3.4	-7.5	10.8

Source: Commission spring 2020 forecast.

Table III.A.3: Summary statistics, real time data (2000-2019)

	N	Mean	Std. dev.	1 st perc.	99 th perc.
Change in public debt	458	0.28	3.53	-8.30	35.43
Primary deficit	458	-0.27	2.54	-7.38	11.33
Primary structural deficit	436	-0.75	2.32	-6.89	8.20
Public Investment	448	3.27	1.20	0.98	7.21
Cyclical deficit	436	0.41	1.02	-7.74	6.17
Stock-flow adjustment	458	0.35	1.75	-5.70	24.09
Implicit interest rate on debt	458	4.20	1.51	0.50	8.74
Nominal GDP growth	458	4.55	2.98	-8.75	18.47
Real GDP growth	458	2.29	1.83	-4.23	9.50

Source: Commission autumn 2000-2019 forecast vintages.

Part IV

Does media visibility make EU fiscal rules more effective?

Please cite this as follows:

European Commission (2021). Does media visibility make EU fiscal rules more effective?, Report on Public Finances in EMU 2020, Institutional Paper 147, 26 February 2021, 81-112.

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KEY FINDINGS

This part assesses the impact of media reporting on fiscal rules on the effectiveness of EU fiscal rules.

This part explores the impact of media visibility on the effectiveness of EU fiscal rules in EU Member States, using for the first time a large media database maintained by the Commission.

- Media visibility can contribute to more effective fiscal rules, since it can improve transparency, contribute to a more informed debate and act as an informal enforcement device for non-compliance, through reputational damage.
- Some international organisations take media visibility into account when assessing the strength of fiscal frameworks. However, the strength of media visibility has been based on expert judgement, which can provide a subjective and incomplete picture.
- We use a comprehensive media database, covering 27 EU Member States and the UK in 2004-2020. We analyse the media sources using a text mining approach, which has been applied frequently to assess the effects of media visibility on financial markets.

Media reporting on fiscal rules appears to be more frequent in countries with well-developed fiscal institutions, but also during bad economic times or when the Commission releases its key fiscal policy news.

- We monitored several million articles in EU Member States published over the past 16 years. We found, on average, about 20 articles a day on fiscal rules in the EU and 10 articles a day on fiscal councils.
- Nationwide and influential media appear to report relatively more frequently on fiscal rules than regional media. References to fiscal rules in the media refer either to the need to keep public debt under control or to support growth and avoid austerity-related inequality, reflecting different views regarding the main objective of fiscal rules: fiscal sustainability vs. macroeconomic stabilisation.
- Media visibility of fiscal rules differs between countries. We find that media reporting on fiscal rules is higher in countries with well-designed institutions and close to the release of key fiscal policy news by the Commission, such as the publication of the Draft Budgetary Plan (DBP). Media reporting is also more frequent in bad economic times, which could help explain the phenomenon of ‘higher deficit bias in good times’. Poorer media visibility means less pressure to build buffers when economic conditions are more favourable.

New empirical evidence suggests that media visibility can contribute to more effective fiscal rules and better compliance with them.

- New evidence from panel regressions shows that media visibility has contributed to the effectiveness of EU fiscal rules, as measured by a stronger numerical compliance with these rules.
- Media from nationwide sources appear more effective than regional media.
- The creation of fiscal councils appears to have fostered the reporting on fiscal rules.

1. INTRODUCTION

The Commission’s review of the fiscal governance framework shows that the fiscal architecture could be made more effective by fostering national ownership and improving compliance with fiscal rules. The Commission’s recent review identifies some well-recognised challenges with the fiscal framework and its implementation (Chapter II.2) ⁽⁹¹⁾. The Commission finds that the fiscal governance framework could be improved, *inter alia*, by promoting national ownership and reducing the political costs of enforcement and compliance.

The discussion on the effectiveness of fiscal frameworks has focused on the design of fiscal rules and institutions. There is ample evidence showing that a rules-based fiscal policy is superior to a discretionary approach. The key argument, which stems mainly from the field of political economy, is that discretionary fiscal policy is frequently time inconsistent ⁽⁹²⁾. Evidence shows that the introduction of sound fiscal rules can lead, *inter alia*, to lower fiscal deficits ⁽⁹³⁾, reduced procyclicality ⁽⁹⁴⁾, lower sovereign interest rate spreads ⁽⁹⁵⁾, lower output volatility ⁽⁹⁶⁾ or create more fiscal space ⁽⁹⁷⁾. Similarly, a sound institutional setup can have positive effects. In particular, independent fiscal institutions can increase the accountability and fiscal transparency ⁽⁹⁸⁾, but also increase the scrutiny and visibility of fiscal rules and therefore strengthen their enforceability ⁽⁹⁹⁾. In a similar vein, the media is often also considered to play an important role vis-à-vis fiscal policies.

There are three main reasons why media visibility can also contribute to more effective fiscal rules.

- *First, media visibility can raise the awareness of and increase the transparency of fiscal rules* ⁽¹⁰⁰⁾.

⁽⁹¹⁾ European Commission (2020a), European Commission (2020b).

⁽⁹²⁾ Taylor, (2000): 27, Cassette et al. (2012): 81, Kydland and Prescott (1977): 482.

⁽⁹³⁾ Heinemann et al., 2016, for a meta-analysis.

⁽⁹⁴⁾ European Commission (2018 / 2019).

⁽⁹⁵⁾ Heinemann et al. (2014).

⁽⁹⁶⁾ Fatás and Mihov (2006).

⁽⁹⁷⁾ Nerlich and Reuter (2015).

⁽⁹⁸⁾ Debrun et al. (2008).

⁽⁹⁹⁾ Jankovics and Sherwood (2017), Debrun and Kinda, (2017), European Commission PFR (2018).

⁽¹⁰⁰⁾ European Commission, (2006): 138; IMF (2007): 92. European Commission (2009): 6, Beetsma and Debrun (2018): 57.

For instance, media can help policymakers or independent institutions disseminate the reasoning and evidence behind the fiscal policy stance to a broader audience ⁽¹⁰¹⁾. More transparency is important, since incomplete information can reduce the corrective function of fiscal rules. More transparency also reduces the uncertainty among citizens about the government’s fiscal position, which, in turn, can help facilitate citizens’ support for sustainable fiscal policy.

- *Second, media visibility can facilitate an independent assessment of fiscal policy and contribute to a more informed debate about fiscal rules and fiscal policy.* Evidence shows that fiscal rules that receive considerable media attention do spark a fair amount of public debate at national level ⁽¹⁰²⁾. Strong media visibility of IFIs is shown to alleviate the ‘opportunistic debt bias’ ⁽¹⁰³⁾. It can also reinforce the IFIs’ legal and financial independence ⁽¹⁰⁴⁾.
- *Third, the media can act as a reputation-based enforcement device.* Reporting on non-compliance with fiscal rules can shed light on fiscally irresponsible behaviour and imply reputational damage for governments ⁽¹⁰⁵⁾. Evidence shows that this can push policymakers to publicly account ⁽¹⁰⁶⁾ for breaches of the rules of the SGP ⁽¹⁰⁷⁾. Evidence also shows that media visibility of fiscal rules reduces so-called ‘political budget cycles’ and helps to mitigate the deficit bias by means of reputational damage to governments ⁽¹⁰⁸⁾.

⁽¹⁰¹⁾ Beetsma et al. (2017): 4, IMF (2007): para. 255-256, Wolfinger et al. (2018).

⁽¹⁰²⁾ Debrun et al. (2008): 309, European Commission (2006): 153.

⁽¹⁰³⁾ See Beetsma et al. (2017): 4. The ‘opportunistic deficit bias’ occurs when incumbent policy makers spend additional public funds while they are still in office, to appear more competent to the public during the elections. The underlying notion is that the public would see the policy maker as more active and competent when he/she is seen to spend funds on things that benefit the electorate directly.

⁽¹⁰⁴⁾ Debrun et al. (2017a): 401, IMF (2013): 12/26, Beetsma and Debrun (2018): 57.

⁽¹⁰⁵⁾ Eyraud et al. (2018); Meyer (2004).

⁽¹⁰⁶⁾ In this sense, the media could also be seen as a democratic accountability mechanism for policymakers.

⁽¹⁰⁷⁾ Meyer (2004); Vliegenthart et al. (2016).

⁽¹⁰⁸⁾ Ademmer and Dreher (2016)

Nevertheless, the role of the media in fostering the effectiveness of fiscal rules has not received much attention. It is true that media visibility has been taken into account in the indicators used by the IMF and the Commission to measure the design strength of fiscal councils and national fiscal rules, respectively (Box 1.1.) ⁽¹⁰⁹⁾. Specifically, these indicators assess the extent to which national media are covering fiscal rules or fiscal councils and whether media visibility seems to launch a public debate. However, only one paper has used the Commission's indicators to empirically analyse the impact of media visibility on national fiscal rules, without finding significant results ⁽¹¹⁰⁾. To the best of our knowledge, no paper has assessed the impact of media visibility on the effectiveness of EU fiscal rules.

A key reason for the limited assessment of media visibility on the effectiveness of fiscal rules is a lack of high-quality media data with a large coverage. Media visibility of fiscal rules has so far been based on expert judgement. This can lead to non-representative results, since the opinions of different experts may differ or may change over time. In the absence of a readily available alternative indicator, the Commission therefore eventually decided to discontinue the media visibility dimension in its fiscal rules design strength index.

To the best of our knowledge, media visibility of fiscal rules has not yet been assessed based on a thorough assessment of media sources. By contrast, there is extensive literature on the impact of media visibility in the field of financial markets. In particular, several studies find that central bank communication can have a significant effect on financial markets, notably on bond spreads and exchange rates ⁽¹¹¹⁾.

Against this background, this part assesses the impact of media visibility on the numerical compliance with EU fiscal rules using a large media-database maintained coverage based on the media monitoring activity regularly performed by the Commission. We use data from

the Commission's Europe Media Monitor (EMM). The EMM has been developed and maintained by the Text and Data Mining Unit in the Directorate for Competences of the Commission's Joint Research Centre (JRC) in Ispra. The system currently monitors almost 11,000 sources to explore around 300,000 articles published on the internet per day.

The key objectives of this part are twofold.

First, we develop a quantitative indicator for the media visibility of fiscal rules in EU countries over the past two decades. For this purpose, we explore aggregated metadata from the automated analysis of almost 300 million of articles processed by the EMM database system in 27 Member States and the UK over 2004 to 2019. This is the first time we are exploring the EMM aggregated database metadata for such a large sample. We used a text mining approach to analyse data from this large amount of media sources, allowing us to take in both negative and positive reporting on fiscal rules. This approach has been frequently employed to assess the impact of media visibility on financial markets.

Second, we assess, using an empirical analysis, whether media visibility has had an impact on the effectiveness of EU fiscal rules. We use panel regressions to try to identify the impact of media visibility on the effectiveness of EU fiscal rules in Member States over the past 16 years. We assess the effectiveness of EU fiscal rules using an indicator measuring numerical compliance with these rules.

This part is structured as follows: Chapter 2 reviews the relevant literature that assesses the impact of media visibility on financial markets and economic policy-making. Chapter 3 introduces the database and methodology to identify the relevant articles and build the indicator of media visibility of fiscal rules. Chapter 4 presents some stylised facts based on this novel media visibility indicator. Chapter 5 tries to identify a causal relationship between media visibility and the effectiveness of fiscal rules with a regression framework. Finally, Chapter 6 presents conclusions.

⁽¹⁰⁹⁾ European Commission (2010), IMF fiscal council database, European Commission national fiscal rules database

⁽¹¹⁰⁾ Reuter (2019).

⁽¹¹¹⁾ Ehrmann and Fratzscher (2007), Milani and Threadwell (2012), Mohl and Sondermann (2007), Gade et al. (2013).

Box IV.1.1: Media visibility matters for fiscal rules' strength indicators

This box presents two indicators for the strength of fiscal frameworks, which explicitly take media visibility into account.

A. *European Commission fiscal rules strength index*

The Commission considered media visibility as an important dimension in its index measuring the strength of national fiscal rules. The index was measured across five categories (Deroose et al., 2005; European Commission, 2006: 163-164; European Commission, 2009: 91):

- statutory base of the rule;
- nature of the body in charge of monitoring respect of the rule;
- nature of the body in charge of enforcement of the rule;
- enforcement mechanisms of the rule;
- media visibility of the rule.

Media visibility was measured based on expert judgement. The scores for media visibility came from an annual questionnaire answered by government officials from EU Member States. The score is assessed on an interval from 1 to 3, as follows: (3) the media closely monitors rule observance, and non-compliance is likely to trigger public debate; (2) there is media interest in rule compliance, but non-compliance is unlikely to invoke public debate; (1) there is no or modest interest from the media on fiscal rules. This numerical system allows tracking of trends in media visibility over time.

The media visibility dimension of the index was discontinued in 2017. A review of the overall methodology underpinning this index found a high degree of variation in the scores that the experts gave to the media visibility of fiscal rules over time. As a result, and for lack of an alternative readily available measure, the media visibility dimension was discontinued in 2017.

B. *IMF Fiscal Council index*

The IMF's index measuring the strength of fiscal councils takes media visibility into account. The composite indicator is based on the following five categories (Debrun et al., 2013: 12, 26; Debrun et al., 2017b: 8):

- legal independence;
- safeguards on the fiscal council's budget;
- fiscal rules monitoring;
- media impact;
- forecast assessment.

Media visibility is measured based on expert judgement. The impact of media is assessed by IMF staff based on several factors such as the number of publications by fiscal councils, media references to the reports, and, for EU Member States, the authorities' own assessment, as reflected in the IMF's Fiscal Institutions Database. The assessment is binary, being one if there is a high media impact and otherwise zero.

2. LITERATURE REVIEW

This chapter reviews the economic literature assessing the impact of media visibility on financial markets and economic policy-making (see Table IV.2.1 for a summary).

Main scope

There is a rich literature showing that media visibility can have a significant impact on financial markets⁽¹¹²⁾. A large part of the literature focuses on central bank communication and its effects on macro-financial indicators such as the euro exchange rate⁽¹¹³⁾, asset prices⁽¹¹⁴⁾, stock markets⁽¹¹⁵⁾, bond yield spreads⁽¹¹⁶⁾, credit default swaps⁽¹¹⁷⁾ and unemployment rates⁽¹¹⁸⁾. The general finding is that statements of central bankers can indeed have a significant effect on financial markets. In the aftermath of the European sovereign debt crisis, several studies have also assessed the impact of political communication. Authors assessed the extent to which statements by key policy-makers on fiscal consolidation measures, country bailouts or defaults had an impact on bond markets. The general finding is that communication by policy-makers can affect bond yields at least during times of deep crisis⁽¹¹⁹⁾. More recently, this type of research has been extended beyond the crisis times, allowing for a comparison between deep crises and better economic times⁽¹²⁰⁾.

The literature also concludes that media visibility can influence economic policymaking. Case studies show that media coverage can influence policymakers' stances on EU fiscal policy in the context of the Stability and Growth Pact. For example, German policymakers have stated that strong controversy in the national press regarding an early warning by the Commission in 2002 about Germany's state finances facilitated the creation of a stability pact between the German

federal government and Laender authorities⁽¹²¹⁾. Moreover, empirical studies show that members of parliament more often ask parliamentary questions about economic or fiscal policies if these topics receive more attention in the media⁽¹²²⁾. Similarly, political parties appear to adjust their agenda to topics, which receive a lot of media attention⁽¹²³⁾. These findings suggest that media visibility can help increase democratic accountability.

Role of events and economic cycle

The impact of media visibility is often assessed around specific events. Many studies analyse the intensity of the debate around specific events, for instance election dates⁽¹²⁴⁾ or important policy announcements. For instance, the 'whatever it takes' speech by former ECB President Draghi in London was found to have had a substantial impact on financial markets in the euro area⁽¹²⁵⁾.

The economic cycle appears to influence media reporting. Some studies assess the impact of media visibility over a longer period. This helps control for other relevant factors, such as the economic cycle. Evidence shows that there is indeed a higher amount of news on fiscal policy during economic downturns⁽¹²⁶⁾, but also that the content of the economic policy debate changes in times of economic crisis⁽¹²⁷⁾.

Country coverage

Most studies compare the impact of media visibility across several countries. Studies that focus on financial markets during the Great Recession of 2008 and 2009 usually compare the media impact in fiscally vulnerable and non-vulnerable Member States⁽¹²⁸⁾. Some studies also compare the euro area experience with the US, in

⁽¹¹²⁾ Tetlock (2007); Garcia, (2013); Caporale et al. (2018).

⁽¹¹³⁾ Ehrmann et al. (2014).

⁽¹¹⁴⁾ Ehrmann and Fratzscher (2007).

⁽¹¹⁵⁾ Hauptenthal and Neuenkirch (2016).

⁽¹¹⁶⁾ Hansen and McMahon (2015).

⁽¹¹⁷⁾ Buechel (2013); Apergis et al. (2016).

⁽¹¹⁸⁾ Fraccaroli et al. (2020).

⁽¹¹⁹⁾ Beetsma et al. (2013); Gade et al. (2013); Mohl and Sondermann (2013).

⁽¹²⁰⁾ Caporale et al. (2018); Erlwein-Sayer (2018); Diaz Kalan et al. (2018); Wolfinger et al. (2018); Afonso et al. (2019).

⁽¹²¹⁾ Meyer (2004).

⁽¹²²⁾ Vliegenthart et al. (2016).

⁽¹²³⁾ van der Pas et al. (2017).

⁽¹²⁴⁾ O' Malley et al. (2014); Bernhagen and Brandenburg, (2015).

⁽¹²⁵⁾ Saka et al. (2015). See Draghi's speech:

<https://www.ecb.europa.eu/press/key/date/2012/html/sp120726.en.html>

⁽¹²⁶⁾ Ahmad et al. (2015).

⁽¹²⁷⁾ As suggested in Fraccaroli et al. (2020).

⁽¹²⁸⁾ Dergiades et al. (2014); Mohl and Sondermann (2013).

particular regarding the impact of central bank communication on financial markets.

Types of media source

The literature has assessed different types of media source. The impact of media visibility has been assessed in diverse media outlets (e.g. in print media, TV or radio news) and also in terms of direct communication from policymakers or central bank officials (e.g. interviews or official press releases by central bank officials). Many studies use a selection of media sources, such as newspapers or newswire agency reports from a given country due to a specific focus or lack of data availability⁽¹²⁹⁾. However, this type of limited selection arguably only mirrors part of the debate in any given country and can therefore lead to biased results⁽¹³⁰⁾.

A key challenge in the literature is the availability of media data. Some studies that employ direct news data rely on news databases, such as Lexis-Nexis⁽¹³¹⁾ or Factiva⁽¹³²⁾. The benefit of using such a database is that it potentially allows for collection of news data from different media sources on a daily basis. A downside is that this information is not always publicly available and requires a paid subscription.

Tonality of media articles

Some studies investigate the impact of the tonality of the discussion. Studies confirm that ‘good’ news tends to positively affect financial markets, whereas ‘bad’ news usually affects these markets negatively⁽¹³³⁾. Some studies give this tonality a more context-specific financial interpretation, for example through the use of ‘contractionary versus expansionary’ budgetary

policies or ‘dovish’ versus ‘hawkish’ statements⁽¹³⁴⁾.

The choice of methodology

Studies assessing the impact of media visibility typically analyse large amounts of news media using text mining techniques. Text mining can be used to search (or ‘mine’) large amounts of text. The key objective is to gather and analyse large quantities of relevant information, such as newspapers, which can then be used for empirical analyses⁽¹³⁵⁾.

Three main approaches have been used to analyse the content or tone of news. After selecting or mining the relevant news, the approaches used to analyse the content or tone of news are of three types.

Expert judgement approach: This approach puts an expert in the field in charge of analysing the data. The expert assesses the collected data and codes each article by hand⁽¹³⁶⁾. Expert judgement can ensure a high-quality assessment if experts are carefully selected. At the same time, there is a risk of partial or subjective assessment, which can hamper a sound comparison across experts or time. The use of expert judgement also appears challenging if the amount of text is too large.

Lexicon approach (also rule-based dictionary or bag-of-words approach): This approach requires first defining a specific set of keywords or lexicon⁽¹³⁷⁾. The lexicon approach identifies a media source as relevant if it contains at least one keyword⁽¹³⁸⁾. It can also be used to analyse the content of news, for instance by assigning keywords to either a ‘positive’ or ‘negative’ category and assessing the tone of an article⁽¹³⁹⁾. The lexicon approach is the most widely used

⁽¹²⁹⁾ As done by for example Barnes and Hicks (2017).

⁽¹³⁰⁾ Buechel (2013): 415.

⁽¹³¹⁾ Van der Pas et al. (2017); Van Elsas et al. (2020).

⁽¹³²⁾ Buechel (2013); Ehrmann et al. (2014); Apergis et al. (2016).

⁽¹³³⁾ For example, leading to lower or high bond yield spreads and lower or higher Euro exchange rate. See Beetsma et al. (2013); Mohl and Sondermann (2013); Gade et al. (2013); Ehrmann et al., (2014); Wolfinger et al. (2018).

⁽¹³⁴⁾ Peterson and Sattler (2018), Buechel (2013), Afonso et al. (2019) respectively.

⁽¹³⁵⁾ Other names for this type of approach are text sentiment analysis, natural language processing or computational language analysis, also see Hotho et al. (2005).

⁽¹³⁶⁾ Wolfinger et al. (2018).

⁽¹³⁷⁾ Fraccaroli et al. (2020).

⁽¹³⁸⁾ Tetlock (2007); Loughran and McDonald (2011).

⁽¹³⁹⁾ Beetsma et al (2013), Gade et al. (2013), Ehrmann et al. (2014), Falagiarda and Gregory (2015), Apergis et al. (2016), Conrad and Zumbach (2016), Wolfinger et al. (2018). Alternatively, Buechel (2013) speaks of ‘dovish’ versus ‘hawkish’ statements.

approach in the economic literature on text mining. While this approach allows a large amount of media news to be analysed, it can be challenging to set up a useful list of keywords and assess the tone of news.

Machine learning approach: This approach selects the relevant news with the help of a search engine using a probability model ⁽¹⁴⁰⁾. The search engine constructs the model based on a sample of similar articles that are selected by an expert and entered into the system beforehand. The system will then ‘learn’ to identify articles that it deems to be similar enough to those that the expert has pre-selected. In a way, this approach mimics the capacity of a human expert to learn new things along the way, but with the near unlimited calculating power and memory of a computer ⁽¹⁴¹⁾. As such, this approach can be used to classify large amounts of data and find the optimal model when working with many different variables. It therefore allows predictions of outcomes for different complex policy choices. For example, machine learning is used to construct different indicators that predict compliance with the fiscal rules of the SGP in different financial scenarios ⁽¹⁴²⁾, and also for the construction of new economic and financial variables ⁽¹⁴³⁾.

⁽¹⁴⁰⁾ Liu (2010).

⁽¹⁴¹⁾ Shapiro et al. (2019).

⁽¹⁴²⁾ Baret and Papadimitriou (2019). Another use of machine learning comes from Athey (2018), who looks at its applications in the field of macroeconomics.

⁽¹⁴³⁾ Soroka et al. (2014); Tobback et al. (2018).

Table IV.2.1: Impact of media visibility on financial markets and politics – a literature overview

Impact of media visibility on financial markets							
Paper	Context		Media qualifiers				
Authors	Impact of media on ...	Period ⁽¹⁾ and country coverage	Topic of the media	Source	Special features	Method ⁽²⁾	Main result of media
Ehrmann and Fratzscher (2007)	Asset prices	1997-2004 Euro area, UK, USA	Central bank speeches on monetary policy	1 newswire agency	Tighter vs. looser monetary policies	EJ	For ECB and Fed, policy predictability and market responsiveness are good
Tetlock (2007)	Stock investor sentiment	1984-1999 USA	Debt, stock and bond markets	Daily columns in 1 newspaper	Positive vs. negative news	ML, EJ	Media is a solid proxy for asset values and near-future market volatility
Beetsma et al. (2013)	Interest rates, public debt	2007-2012 GIIPS, six EU countries	General macro-economic and financial news	Euro-intelligence newsletter	Good vs bad news (budget tightening or loosening)	Lex	More (bad) news drives up domestic interest rates in countries in crisis
Buechel (2013)	CDS and bond yields	2009-2011 *data varies GIIPS, DE, FR, ECB.	Commitment to support/save GIIPS countries	Statements by high-ranking officials	Dovish vs. hawkish statements	Lex	Communications by larger EU countries and EU institutions affect bond spreads the most
Mohl and Sondermann (2013)	Bond yields	2010-2011 EU countries	Statements by officials on EFSF, bailouts, restructuring	4 newswire agencies	Comparing statements on fiscal policies / measures	Lex	Political communications during financial crisis mattered
Gade et al. (2013)	Bond yields	2009-2011 EMU countries	Communication on deficit, debt, Euro crisis	4 newswire agencies	Positive vs. negative news	Lex	Only certain types of communications have an effect on bond spreads
Dergiades et al. (2014)	Bond yields	2010-2013 GIIPS, FR, NL	European sovereign debt crisis	Social media + Google searches	Employs search engine data	Lex	Abnormal stock returns are driven by negative news on GIIPS
Ehrmann et al. (2014)	Euro area exchange rate	2009-2011 EMU countries	National / ECB / EU monetary measures	1 newswire agency	Controversy + negative vs. positive tone	Lex, EJ	Policy announcements affect exchange rate more than macro-economy
Apergis et al. (2016)	Credit defaults swaps	2009-2012 GIIPS, BE, DE, FR, NL, UK	European sovereign debt crisis	Newswire messages	Counting words (not articles)	Lex	Negative announcements cause negative bond yield spill-overs to other countries
Hauptenthal and Neuenkirch (2016)	Stock investor sentiment	2015 EL, DE, EMU	Grexit, sovereign debt crisis.	1 newswire agency	Positive vs. negative news + different spokespersons	Lex, EJ	News on Grexit directly led to raise or fall of stock returns (depending on tone of the news)
Peterson and Sattler (2018)	Investor confidence	2000-2016 GIIPS countries	Statements by presidents and finance ministers	1 newswire agency	Expansionary / contractionary policy statements	Lex	Political polarisation affects market confidence in finance minister announcements
Wolfinger et al. (2018)	Bond yields	2007-2016 12 (non-) EMU countries	EU, Euro area, country-specific economic issues	TV news	Protagonists, tonality, topic and source	Lex, EJ	More news on Eurozone reduces yield spreads, especially country-specific good news
Afonso et al. (2019)	Bond yields	1999-2016 *data varies 10 euro-area countries	Macro-economic, fiscal, monetary policies	ECB announcements	Type of announcements: interest rate or monetary policy	EJ	The effects of ECB/EC announcement differ when looking at effects on bond yields spreads
Shapiro et al. (2019)	Macro-economic/ consumer sentiment	1980-2015 *monthly USA	General financial and economic topics	16 major newspapers	Coded on a positive - negative scale	Lex, ML, EJ	Daily news sentiment index accurately predicts the next day's consumer sentiment
Fraccaroli et al. (2020)	Price stability, unemployment	1999-2019 Euro area, UK, USA	Price stability, monetary, unemployment hearings.	Parliament hearings of central bank officials	Intensity over time + hawkish vs. dovish sentiment	Lex	Central bank hearings focus on relevant policies, bad tone associated with rise in unemployment

(Continued on the next page)

Table (continued)

Impact of media visibility on politics							
Paper	Context		Media qualifiers				
Authors	Impact of news on ...	Period ⁽¹⁾ and country coverage	Topic of the media	Source	Special features	Method ⁽²⁾	Main result of media
Meyer (2004)	Policy-makers support for the SGP	Two weeks in 2001-2002 DE, IE	EU fiscal rules	2 newspapers in each country	Pro-EU or nationalistic frame	EJ	Recommendations were given considerable media attention and induced governments to justify themselves
O'Malley et al. (2014)	Election results	Three weeks in 2002 + 2007 + 2011 IE	Political parties, elections and economic policies	4 newspapers	Politically driven or economic policy driven	Lex, EJ	In elections during crises, media and voters focus more on (economic) policy messages
Vliegert-hart et al. (2016)	Attention for issue in parliament	1995-2011 *monthly Eight EU countries	Political, economic and financial topics	Newspaper articles, radio shows	News articles coded by hand and linked to one political topic	Lex, EJ	The effect of media is stronger in single-party governments. Media affects political agenda more than vice versa
Barnes and Hicks (2017)	Support for austerity measures	2010-2015 UK	Fiscal consolidation	2 newspapers	Correspondence with macro / fiscal, austerity, or debt.	Lex	Support for austerity directly associates with what newspaper people get their news from

Notes: (1) This is daily data, unless otherwise indicated in this column with a *- symbol. (2) EJ = expert judgement, ML = machine learning, Lex = lexicon approach, bag-of-words approach.

Source: Commission services.

3. BUILDING A MEDIA VISIBILITY INDICATOR

This chapter presents the dataset and the methodology used to identify relevant media articles on fiscal rules.

Database

We use a large dataset to analyse the reporting on fiscal rules and fiscal councils in the media.

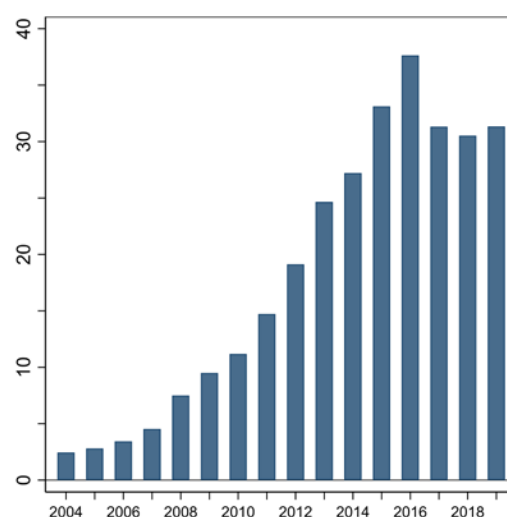
We use the metadata data created by from the Commission's Europe Media Monitor (Box IV.3.1). The EMM, started in 2002 as a scientific research project to support the Commission in its media monitoring activities, it was developed and is maintained by the Text and Data Mining Unit in the Directorate for Competences of the European Commission's Joint Research Centre in Ispra. The main purpose of the EMM is to provide monitoring of a large (but selected) set of electronic media, to categorise articles and apply language technology tools for several purposes, such as extracting quotes or applying sentiment analysis. The system currently monitors almost 11,000 sources to explore around 300,000 articles a day published on the Internet.

Our sample size clearly exceeds current practices. While the existing indicators on media visibility are based on the judgement of a small number of experts (Box IV.1.1), we set-up an indicator based on a very large sample. We collect daily data from sources in all 27 Member States and the United Kingdom. The dataset consists of metadata extracted from news sources on a daily basis over 2004-2019 period. Overall, the database of media coverage is unbalanced, in the sense that it gets richer over time.

We collect and analyse articles from different media sources. We collect media articles from a large number of publicly available media sources and from newswire agency reports. From this data, we identify articles from national and regional newspapers as well as from the five most-read nationwide newspapers by country ⁽¹⁴⁴⁾.

To identify relevant articles on fiscal rules, we analyse aggregated metadata from the EMM dataset from almost 300 million news items from the EMM database (Graph IV.3.1). After filtering the dataset for relevant geographical coverage and sources, we obtain news items corresponding to almost 300 million news items (Graph IV.3.1). This corresponds to about 50,000 articles in the EU on average per day over the past 16 years. The number of articles per year has increased over time, which reflects the fact that the EMM started as a rather small database and has steadily evolved over time (Box IV.3.1).

Graph IV.3.1: Total number of news items from the EMM database (in millions, EU, 2004-2019)

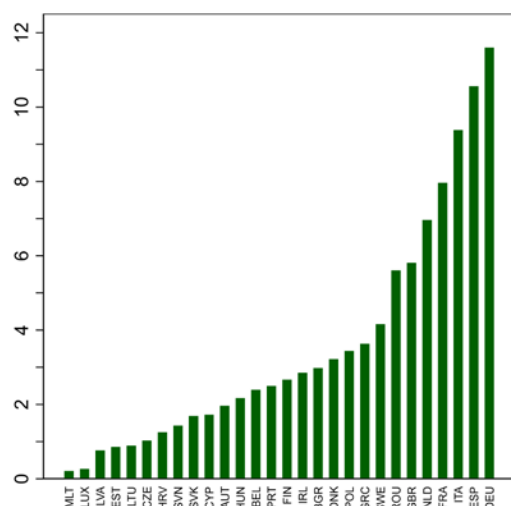


Source: Commission services based on Europe Media Monitor database.

The distribution of articles across Member States broadly corresponds to the population share of EU countries (Graph IV.3.2). We find the highest number of articles in high-population countries (DE, ES, IT and FR) and the smallest numbers in low-population countries (MT, LU). Overall, the selection broadly corresponds to the population share of Member States, indicating that the database dataset covers a solid representation of media presence in EU countries.

⁽¹⁴⁴⁾We use the methodology of the JRC to classify media sources into the following categories: national, which consists of influential media (e.g., *FAZ*, *Le Monde*, *Trouw*) and popular media (e.g., *Bild*, *Libération*, *Telegraaf*) and regional media sources (e.g., *Stuttgarter Zeitung*, *La Provence*, *Gelderlander*).

Graph IV.3.2: **Distribution of news items across countries (in % of total number of articles)**



Source: Commission services based on Europe Media Monitor database.

Methodology used

The media visibility indicator corresponds to the ratio of articles on fiscal rules divided by the total number of articles in the dataset. This is a straightforward indicator of frequency. Its statistical significance is guaranteed by the diversity and very large size of the dataset, as mentioned earlier. Since the amount of data and sources available in the monitored by EMM database has changed over time, we define our main indicator as the share of articles divided by the total number of media sources per day.

We apply a text mining approach to find the number of occurrences of keywords related to fiscal rules in a large amount of media sources. Due to the sheer amount of articles, a thorough assessment of each article based on expert judgement lies beyond the realm of possibility. We therefore apply state of the art text mining techniques ⁽¹⁴⁵⁾. These have been frequently

⁽¹⁴⁵⁾ ECFIN analysts, in cooperation with JRC analysts, also considered using a machine learning approach, mainly to more easily identify different emotions or sentiments in the news articles on a large scale. However, machine learning is still a relatively new approach compared to using a carefully constructed lexicon. Although scholars are starting to use machine learning for fiscal policy analysis (Baret and Papadimitrou, 2019), the reliability of this method is not yet rigorously tested in relation to financial news sentiment.

applied in the literature to assess central bank communication (Chapter IV.2).

We identify relevant articles on fiscal rules using a lexicon approach. We employ a lexicon approach to select relevant news media articles on fiscal rules. In doing so, we identify a total of 23 keywords representing articles on fiscal rules (Annex A.1). We use a relatively comprehensive lexicon to avoid missing an important dimension of the discussion on fiscal rules. Some of the keywords are intentionally technical, since they rule out the possibility of identifying false positive hits. Overall, we verified the strength of our keywords by conducting several careful sample checks. We revised or deleted keywords that gave no or little relevant results.

We also search for articles on independent fiscal institutions (IFIs). As explained above, media visibility is key for independent institutions, since it can both reinforce the IFI's legal and financial independence and alleviate the 'opportunistic debt bias' ⁽¹⁴⁶⁾. Therefore, it is relevant to see how well the reporting on fiscal rules by fiscal councils is covered in the media. Therefore, we search for articles containing at least once the word strings 'fiscal council', 'independent fiscal institution' or the name of one of the independent fiscal institutions, including the 'European Fiscal Board'.

To allow for the largest possible coverage of keywords in the media, we translated our keywords into 22 EU official languages ⁽¹⁴⁷⁾. This allows us to assess all major media outlets in the Member States, not just the English language sources. The translation of keywords was checked by fiscal experts and native speakers from the European Commission.

⁽¹⁴⁶⁾ The 'opportunistic debt bias' occurs when incumbent policy makers spend additional public funds when they are in office in an effort to appear more competent to the public.

⁽¹⁴⁷⁾ The following official languages are not included in our search: Irish/Gaelic, Luxembourgish and Maltese. We instead looked at the official language(s) that media use the most frequently at the national level. For Luxembourg, this is German and French. For Ireland and Malta this is English (Special Eurobarometer 386). Minority languages (such as Basque, Catalan, Galician and Scottish Gaelic) have also not been included.

Our lexicon approach is robust to grammatical cases and spelling. For the main list of EU fiscal rule keywords, we account for this in all languages by using ‘wildcards’, which are characters that could stand for letters and therefore account for different spellings or cases ⁽¹⁴⁸⁾. We also adjusted for the capitalisation of letters, allowing us to include both capitalised and non-capitalised words ⁽¹⁴⁹⁾.

⁽¹⁴⁸⁾For instance, we use *program%* to cover articles on program, programs, programme and programmes. This is also called ‘stemming’ and is a common practice in lexicon-based text mining, see Hotho et al. (2005): 25.

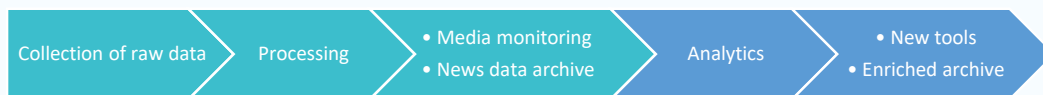
⁽¹⁴⁹⁾We did so by using solely non-capitalised letters in the EMM syntax, allowing the EMM system to pick up both capitalised and non-capitalised versions of the words.

Box IV.3.1: Europe Media Monitor

The European Commission’s Joint Research Centre created the Europe Media Monitor (EMM) to provide scientific advice and support to decision-makers in all phases of the policy cycle⁽¹⁾. This technology allows for near real-time media monitoring. Altogether, the existing EMM system analyses about 300,000 news articles per day from about 11,000 sources worldwide in 100 languages. The automated analysis classifies the content according to more than 6,000 topics and extracts names of locations, people and organisations mentioned. It also identifies quotes and tries to capture predominant sentiment expressed and emotions triggered in each document. Interactive tools display results, allowing media analysts and policy officers to receive updates.

Graph 1 shows the media monitoring process (first three parts of the workflow): news articles are continuously identified from a selection of web sites, and the central engine processes the content combining text-mining techniques with linguistic resources and domain knowledge from the experts that contribute to the configuration of the system.

Graph 1: Euro Media Monitor data processing process



Source: Commission services.

The knowledge, raw data and metadata extracted from the news are stored in a separate archive, even when analysts are not performing media monitoring tasks at the time. This historical archive is a by-product of the media monitoring activities, which explains many of its characteristics. For example, the selection of sources and topics is the result of the many collaborations between JRC and groups of analysts worldwide over the past 15 years. Nevertheless, the archive can provide further insights (last two phases of the workflow) based on statistical analysis, network analysis using co-occurrence of entities, etc. Over the years, all EMM systems combined have processed about one billion news articles in total.

This study uses the metadata of the EMM system and includes results from the analysis of publicly accessible websites and licensed content such as newswires. The system has processed 900 million articles since the start of data collection in May 2002. During the first years, the number of active sources slowly grew to 1,800. Since 2011, the number of sources has been increasing at a pace of 700 new sources a year, reaching around 8,800 active sources in 2020.⁽²⁾

The EMM archive also has broad language coverage, with around 100 languages including 22 of the 24 EU official languages. These EU languages are all among the 35 most frequent languages in terms of number of articles, with the following ones in the top ten: English (19.7%), Spanish (10.2%), German (7.4%), Italian (6.2%), French (5.7%), Greek (3.5%), and Portuguese (3.4%).

Over time, the amount of articles extracted from news agencies and other paid news providers has steadily increased. Since 2010, thanks to the long-term collaboration on media monitoring between the JRC and DG COMM, the knowledge derived from publicly available content has been extended with metadata extracted from news agencies and other providers for 2.9% of the articles. The number of news agencies has

⁽¹⁾ See Steinberger et al. (2013). Also see <https://emm.newsbrief.eu/overview.html>.

⁽²⁾ In this document, a source is considered active if it produces at least one news article a week. In this example, we counted 8,800 sources a week: most (~7,500) are producing articles every day.

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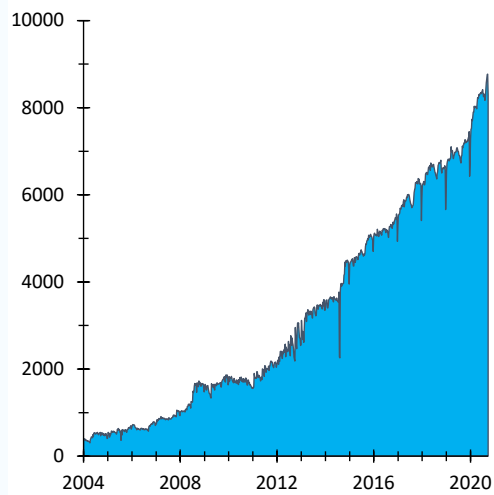
Box (continued)

varied over time, reaching 11 providers in mid-2010. Only a fraction (1.6%) of the overall reporting focuses on EU-related matters.

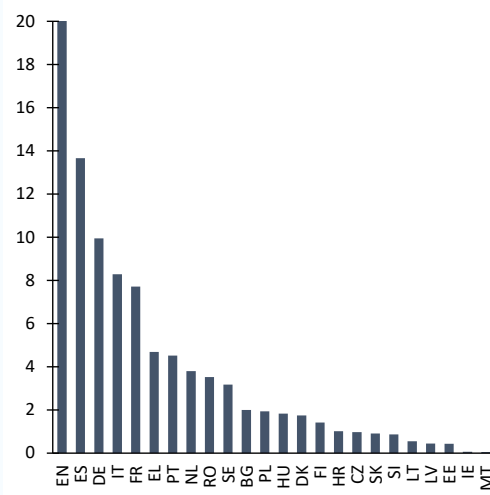
The findings from the EMM metadata are to a certain extent limited due to two elements:

- the analysis of media-derived information was carried out using solely data collected from the pool of news media outlets and other web sources being monitored by EMM. It does not reflect a full coverage of electronic media landscape.
- the accuracy of the automatically extracted information from news articles shows is not perfect due to the complexity of processing natural language.

Graph 2: Active sources over time



Graph 3: News coverage: language distribution



Source: Commission services.

4. STYLISTED FACTS ON MEDIA VISIBILITY

This chapter presents some stylised facts of our media visibility indicator.

There are considerable differences concerning the use of relevant keywords in the media.

Graph IV.4.1 is a word cloud, which shows the frequency of occurrences of a fiscal-rule-related keyword, proportionate to the size of the letter. As described in the previous chapter, we consider an article to discuss fiscal rules if the extracted metadata contains at least one keyword of our lexicon. We find that our keywords are used to differing degrees. The keywords ‘Stability and Growth Pact’ and ‘fiscal rule’ come up the most, closely followed by ‘stability program’, ‘draft budgetary plan’ and ‘excessive deficit procedure’. By contrast, more technical keywords occur less frequently.

Graph IV.4.1: Word cloud fiscal rules keywords



Source: Commission services based on Europe Media Monitor database.

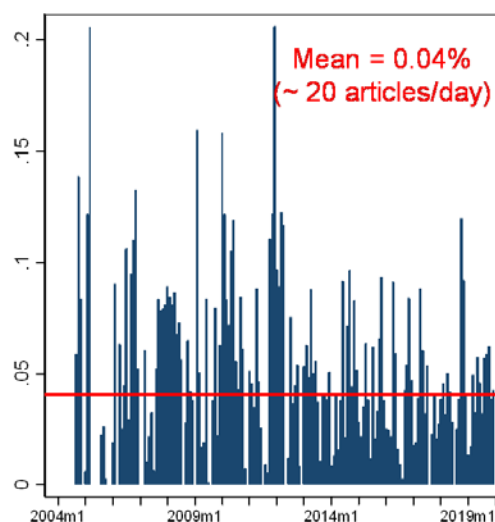
Articles on fiscal rules have received considerable attention in the media (Graph IV.4.2, Table IV.4.1). We identify almost 120,000 articles in our dataset covering metadata from about 290 million articles. This corresponds to around 0.04% of the total amount of articles or an average of about 20 articles a day in the EU over the past 16 years.

Fiscal councils have become more visible in the media over time (Graph IV.4.3, Table IV.4.1).

The reporting on fiscal councils appears to have increased over time. This can be explained by the larger number of fiscal councils being established in the past decade. In total, we find more than 55,000 articles on fiscal councils. This corresponds

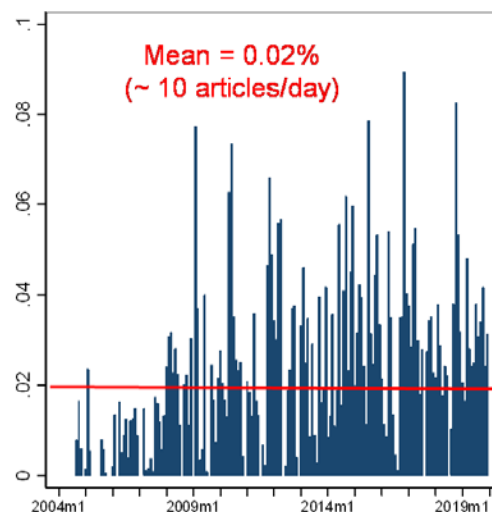
to about 0.02% of the total amount of articles or an average of 10 articles a day.

Graph IV.4.2: Media visibility over time - fiscal rules (in % of total articles, EU)



Source: Commission services based on Europe Media Monitor database.

Graph IV.4.3: Media visibility over time - fiscal councils (in % of total articles, EU)



Source: Commission services based on Europe Media Monitor database.

Reporting on fiscal rules and fiscal councils happens more frequently in nationwide than in regional media outlets (Table IV.4.1). We find that national media outlets, on average, report relatively more on fiscal rules than big regional media outlets. A plausible explanation is that

regional media tend to focus more on local news, whereas national media more frequently report on national and international events.

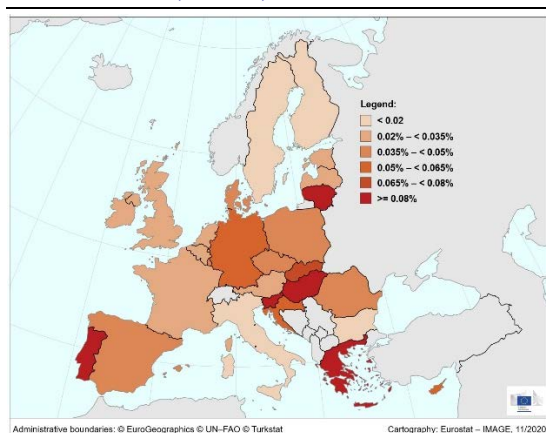
Table IV.4.1: Number of articles on fiscal rules and fiscal councils

	Total articles		Articles on fiscal rules		Articles on Fiscal Councils	
	Total (in mio.)	Total (in articles)	Share (in %)	Total (in articles)	Share (in %)	Total (in articles)
Full sample	289.8	119,813	0.041	55,383	0.019	
- National media	209.7	92,294	0.044	43,045	0.021	
- Regional media	80.1	27,519	0.034	12,338	0.015	
Top 5 newspapers	39.2	16,698	0.043	8,344	0.021	

Source: Commission services based on Europe Media Monitor database.

The intensity of the reporting on fiscal rules differs strongly across Member States (Graph IV.4.4). It does not appear to follow a clear geographical pattern. It appears relatively strong in some southern (PT, EL) and eastern (LT, HU, SI) European countries.

Graph IV.4.4: Heat map for the intensity of the discussion on fiscal rules (2004-2019)



Note: The intensity of the discussion on fiscal rules is calculated as the average share of articles on fiscal rules per news item per day.

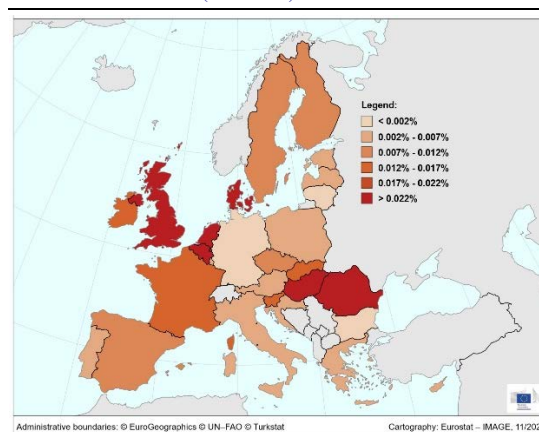
Source: Commission services based on Europe Media Monitor database.

Media visibility of fiscal councils appears to be highest in countries with a long tradition of IFIs, captured by their seniority (Graph IV.4.5). The media visibility of fiscal councils tends to be most intense in the Netherlands, Belgium, the United Kingdom and Denmark. These countries all have well-developed IFIs that were created before the EU initiatives to incorporate and broaden the role of IFIs in fiscal governance at EU level ⁽¹⁵⁰⁾.

⁽¹⁵⁰⁾ Also see the fiscal council database by the IMF, available through: <https://www.imf.org/external/np/fad/council/>

This finding is in line with the assumption that the visibility and effectiveness of fiscal councils does not take effect immediately, but slowly increases over time.

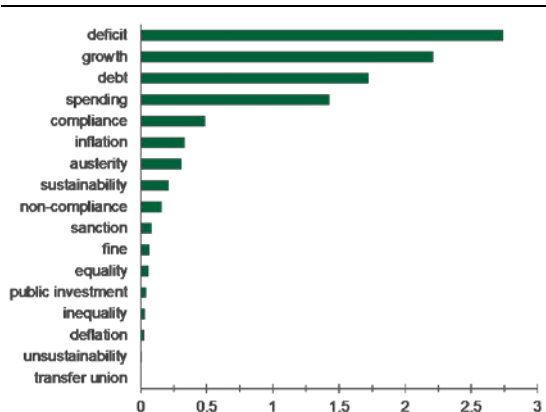
Graph IV.4.5: Heat map for the intensity of the discussion on fiscal councils (2004-2019)



Source: Commission services based on Europe Media Monitor database.

The media reporting appears to reflect different views and perspectives regarding the main objective of fiscal rules (Graph IV.4.6). We analysed what other words are used in articles on fiscal rules. We find that many articles discuss the sustainability dimension of fiscal rules. This is shown by the use of keywords such as debt, sustainability, compliance with rules or fines. At the same time, many articles appear to reflect upon the stabilisation dimension using words such as growth or public investment. A significant share of articles put the discussion on fiscal rules in the broader context of inequality.

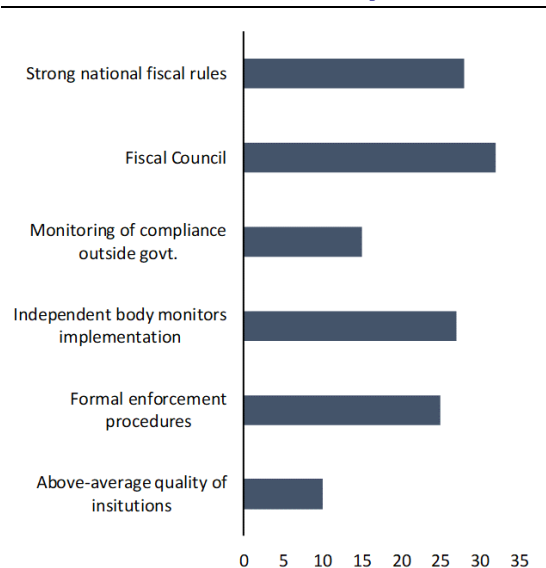
Graph IV.4.6: Key words used in articles on fiscal rules (average occurrence per article)



Source: Commission services based on Europe Media Monitor database.

The media visibility of fiscal rules appears higher in countries with sound fiscal institutions (Graph IV.4.7). The results show that the number of articles on fiscal rules increases in countries after they establish a fiscal council (+30%) as well as in countries with a strong design of national fiscal rules (+26%), IFIs monitoring compliance (+26%) and strong formal enforcement procedures (+24%).

Graph IV.4.7: Increase in news articles on fiscal rules for institutional factors (in % compared with non-event)

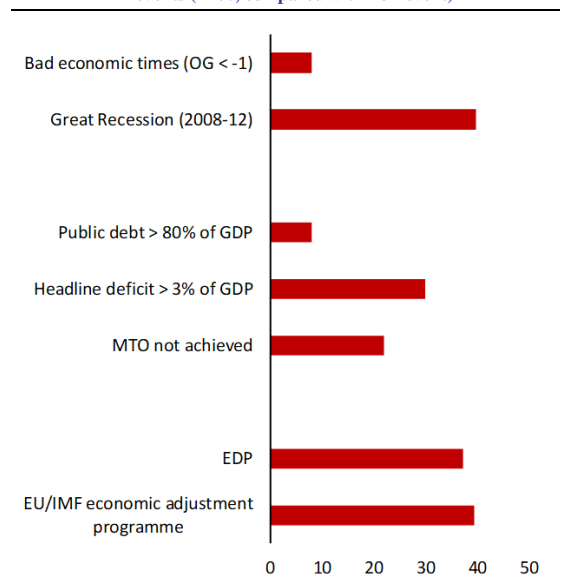


Note: Strong national fiscal rules defined as countries based on the fiscal rules strength index (European Commission), existence of fiscal council, monitoring of compliance outside government, independent body monitoring implementation and formal enforcement procedures (all from IMF); quality of institutions (World Bank) above average.

Source: Commission services based on Europe Media Monitor database.

The reporting on fiscal rules tends to be also more frequent during bad economic times (Graph IV.4.8). Our results show that media visibility increases during challenging fiscal and economic times. In particular, we identify more articles on fiscal rules during the Great Recession of 2008-2012 (+40%), EU/IMF economic adjustment programmes (+40%) or excessive deficit procedures (+38%).

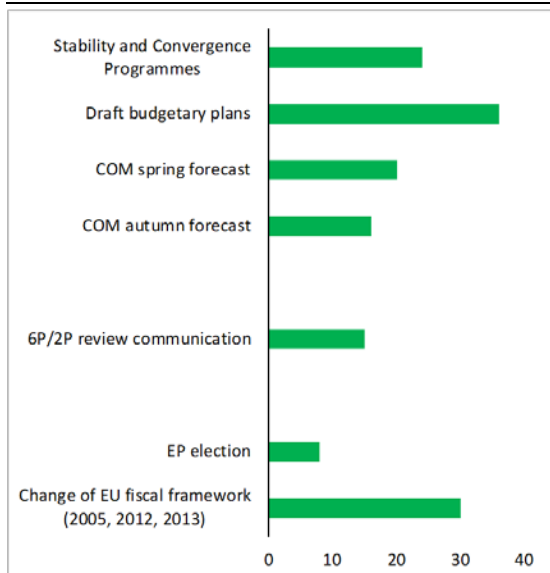
Graph IV.4.8: Increase in news articles on fiscal rules for economic events (in %, compared with non-event)



Source: Commission services based on Europe Media Monitor database.

The amount of news articles on fiscal rules increases considerably around the release of fiscal documents by the European Commission (Graph IV.4.9). The results demonstrate that there is more reporting around the time of release of the Draft Budgetary Plans (+35%), the Commission assessment of the Stability and Convergence Programmes (+25%) and the European Commission spring forecasts (+20%). Furthermore, around European Parliament elections we only see a relatively small rise in the intensity of reporting on fiscal rules (+8%).

Graph IV.4.9: Increase in news articles on fiscal rules for fiscal EC releases (in % compared to non-event)



Source: Commission services based on Europe Media Monitor database.

5. EMPIRICAL ANALYSIS

This chapter tries to identify a causal relationship between media visibility and the effectiveness of EU fiscal rules. The key objective is to assess the impact of media visibility on the effectiveness of fiscal rules using an empirical analysis.

For this purpose, we use a panel regression approach for EU Member States and the UK in 2004-2019, including our media visibility indicator. We measure the effectiveness of EU fiscal rules using an indicator for numerical compliance. We identify media visibility of fiscal rules using our new indicator presented in the previous chapter. We also control for the relevant drivers of compliance with fiscal rules in line with the literature. The analysis is based –as far as possible– on real-time data from past Commission AMECO data vintages, to better capture the information available to policy-makers at that time. More technical details on the regression approach are explained in Box IV.5.1.

5.1. KEY VARIABLES

How to measure the effectiveness of EU fiscal rules?

We assess the effectiveness of fiscal rules using an indicator of numerical compliance with EU fiscal rules. The compliance indicators measure the annual deviation in per cent of GDP of each EU fiscal rule: the debt, deficit, expenditure and balanced budget rules. A negative value indicates a shortfall vis-a-vis the target or reference value implied by our definition of the rule, while a positive value refers to an outcome exceeding the target or the reference value. We would like to stress that our numerical compliance indicator does not have official or legal status. The official assessment of compliance can be seen as supplementing the numerical indicators with judgements in the form of ‘overall assessment’, where relevant factors are considered in a non-mechanical way. Nevertheless, the numerical compliance indicator still represents the key rationale of EU fiscal rules as set out in primary

and secondary EU legislation and it is used in the related literature ⁽¹⁵¹⁾.

The numerical compliance indicators are defined as follows ⁽¹⁵²⁾:

Structural balance rule ⁽¹⁵³⁾: a negative (positive) sign means that the country’s fiscal effort, as measured by the change in the structural balance, falls below (exceeds) the pure matrix requirements ⁽¹⁵⁴⁾ or that the country is below its medium-term objective (MTO).

Expenditure rule: a negative (positive) sign means that the annual 10-year average rate of nominal potential growth falls below (exceeds) the growth rate of net expenditure growth. We measure potential growth and net expenditure growth rate in line with the EU expenditure benchmark ⁽¹⁵⁵⁾.

Headline deficit rule: a negative (positive) sign means that the headline balance is worse than (better than) a deficit of 3% of GDP.

Debt rule: for countries with a debt-to-GDP ratio above 60%, a negative (positive) sign means the actual debt-to-GDP ratio is greater than (lower than) the one required by the (backward-looking) 1/20 debt reduction rule. For countries with debt-to-GDP ratio 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 of the SGP.

Our compliance indicators depart from the simplifying assumptions used in the literature in two respects. First, 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

⁽¹⁵¹⁾ See, e.g., Reuters (2019), Larch and Santacroce (2020).

⁽¹⁵²⁾ For a broadly similar definition see Larch and Santacroce (2020).

⁽¹⁵³⁾ 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 following the so-called matrix.

⁽¹⁵⁴⁾ The matrix of requirements was introduced in 2015 to modulate the requested fiscal adjustment across the economic cycle and the level of debt (Vade Mecum, 2019).

⁽¹⁵⁵⁾ PFR (2019), Vade Mecum (2019).

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). Second, we assess the numerical compliance with EU fiscal rules in *real time* using AMECO data from past Commission spring forecast reports. This ensures that our assessment is not biased by *ex post* revisions, which were not known to policymakers at that given point in time ⁽¹⁵⁶⁾.

What are the key control variables?

Our variable of interest is the media visibility of fiscal rules. We use the indicator of media visibility as presented in Chapter IV.3. Since most of the other variables used in our analysis are only available on an annual basis, we also annualise our media visibility indicator.

We control for a wide range of relevant independent variables (Box IV.5.1). The literature has identified several drivers of compliance with fiscal rules ⁽¹⁵⁷⁾. These drivers relate in particular to (i) the design of fiscal rules and institutions, (ii) the macroeconomic conditions, in particular the economic cycle and (iii) political economy factors (see Box 3 for a detailed description).

5.2. MAIN FINDINGS

The key findings of our regression approach can be summarised as follows (Table IV.5.1):

Compliance seems to be path dependent. The results show that compliance with the EU fiscal rules in the previous years has an impact on compliance. This holds irrespective of the EU fiscal rule considered.

Economic cycle matters. We find that numerical compliance with the structural balance and expenditure rule deteriorates if the economic conditions improve. This points to the procyclicality of the fiscal effort, which has been shown in previous studies ⁽¹⁵⁸⁾. An improving

economic situation does not have an impact on the deficit and debt rules, probably as the looser fiscal effort offsets the favourable cyclical effect.

Fiscal rules improve compliance. A better design of national fiscal rules –as classified in the Commission’s fiscal rules strength index– fosters compliance with EU fiscal rules. This potentially means that increased national ownership of fiscal rules, through an overall more robustly built national fiscal framework, is supportive of compliance with EU rules.

Existence of an EU/IMF adjustment programme. Our evidence shows that the economic adjustment programmes improved compliance with the expenditure and deficit rule.

Political economy plays a role. We find that election years are associated with a looser compliance with the expenditure and structural balance rules, but not with the deficit and debt rules. One explanation could be that governments try to stimulate the economy in election years with expansionary fiscal policy, but within their respective fiscal space (thus not breaching the deficit rule). This reduces compliance with the structural balance and expenditure rules. At the same time, economic stimulus may facilitate immediate compliance with the nominal rules.

Table IV.5.1: **Regression results**

	Dependent variable: Deviation from ...			
	structural balance rule	expenditure rule	deficit rule	debt rule
	(1)	(2)	(3)	(4)
Dependent variable (t-1)	0.186** (2.252)	0.221*** (2.961)	0.594*** (6.733)	0.883*** (11.086)
Change in output gap (t-1)	-0.200*** (-2.710)	-0.706*** (-4.118)	0.069 (1.272)	0.425 (1.507)
Implicit interest rate (t-1)	-0.159 (-1.231)	0.413 (1.168)	-0.371** (-1.999)	0.500** (2.052)
EU/IMF adjustment programme (t-1)	1.369*** (3.497)	3.331*** (4.544)	1.181 (1.260)	-2.004 (-1.420)
Fiscal rules strength index (t-1)	0.134* (1.729)	0.103* (1.906)	0.084* (1.945)	0.086 (1.469)
Election year (t-1)	-0.003* (-1.993)	-0.015** (-2.249)	-0.004 (-0.981)	0.007 (1.257)
Media visibility top-5 news (t-1)	2.566** (2.210)	3.692* (1.898)	1.126* (1.862)	1.125 (0.379)
Observations	380	392	392	391
Number of countries	28	28	28	28
Wald country dummies (p-value)	0	0	0	0
Long-term impact media (size)	3.153	4.738	2.774	9.61
Long-term impact media (p-value)	0.039	0.071	0.076	0.054
Hansen (p-value)	0.586	0.442	0.878	0.559
Number of instruments	32	32	32	32

Note: Panel estimations using the FD-GMM estimator, where lagged dependent variable, output gap and media variable are treated as endogenous.

Source: Commission services.

⁽¹⁵⁶⁾ Cimadomo (2012).

⁽¹⁵⁷⁾ Reuter (2019), Larch and Santacroce (2020), Larch et al. (2020), Thygesen et al. (2019), De Jong & Gilbert, (2020).

⁽¹⁵⁸⁾ PFR (2019).

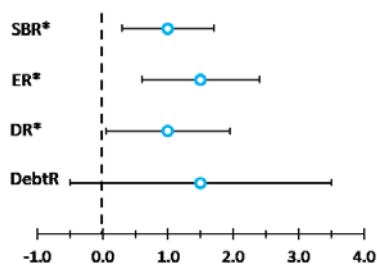
Most importantly, we find that media visibility tends to foster numerical compliance with EU fiscal rules (Table IV.5.1). Our evidence shows that a higher degree of media visibility tends to increase the numerical compliance with fiscal rules. This finding holds for all fiscal rules apart from the debt rule. Note that these findings cannot be explained by country-specific effects, since the specification includes country-fixed effects. We also try to address the challenge of reverse causality by including internal instruments in the GMM specification.

Our findings are robust to a range of sensitivity tests. We conduct a range of robustness checks cutting across several dimensions. We find that our main findings are robust to (i) modifications of the dependent variables, (ii) sets of independent variables, (iii) the use of datasets (real-time vs. *ex post*) and (iv) estimation techniques (GMM vs. LSDVc estimator).

Media visibility from nationwide media sources appears to be more important than from regional sources. We assess the impact of media visibility on different media sources. We find that media visibility of fiscal rules in nationwide media sources appears to have a significant impact on compliance. By contrast, we cannot find any significant impact of media reporting from regional sources.

The media visibility of fiscal councils appears to have also fostered compliance with EU fiscal rules (Graph IV.5.1). We find evidence that the media visibility of fiscal councils also fosters compliance with EU fiscal rules.

Graph IV.5.1: Impact of media visibility of fiscal councils on compliance with fiscal rules



Note: SBR, ER, DR, DebtR refer to the structural balance, expenditure, deficit and debt rule. The chart shows the impact of media visibility of fiscal councils since their existence, which were derived from an interaction model as described in Box IV.5.1. Blue circles show the size of its impact, while the whiskers point to the confidence band at 90%. * means significant at the 10% level.
Source: Commission services.

Box IV.5.1: Empirical specification

This box describes the annual panel regression approach used to assess the impact of media visibility on the effectiveness of EU fiscal rules ⁽¹⁾. The analysis concentrates on up to 28 EU Member States (i) and 16 years (t), covering the period 2004 to 2019. We primarily use real-time data from past Commission spring forecast vintages ⁽²⁾.

The specification looks as follows:

$$compliance_{i,t-1}^{SF,t} = \beta_1 compliance_{i,t-2}^{SF,t} + \beta_2 media_{i,t-2} + \beta_3 X_{i,t-1} + \theta_t + \vartheta_i + u_{i,t} \quad (1)$$

where the dependent variable corresponds to the numerical compliance with the EU fiscal rules, i.e. the numerical deviation from the fiscal target or reference value. We distinguish between compliance with the four types of EU rules, i.e. structural balance, expenditure, deficit and debt rule (see description in the main text). A positive coefficient corresponds to an over-achievement of the fiscal rule, while a negative coefficient means an under-achievement.

We include a set of relevant independent variables to prevent an omitted variable bias. They are referred to by the economic literature as relevant determinants of fiscal performance. The expected sign with respect to compliance is shown in brackets, while +/- corresponds to a fostering/weakening compliance ⁽³⁾:

- **Persistence (+):** Experience in the fiscal surveillance framework points to some degree of path dependency.
- **Economic cycle (+/-):** Evidence shows procyclicality of fiscal effort, but also for rules that constrain stock variables rather than flow variables (Reuter, 2019), higher compliance of nominal rules when growth and inflation rise (Larch & Santacrose, 2020).
- **Fiscal rules and institutions (+):** A stronger national fiscal framework tends to improve compliance with rules. Evidence shows that countries in excessive deficit procedure appear to improve compliance with fiscal rules (Thygesen et al, 2019). Compliance is supposed to be higher in countries with a long tradition of monitoring by fiscal councils (Reuter, 2019).
- **Political economy channel:** Compliance appears to be weaker in election years or if there is less fragmentation or decentralisation (Reuter, 2019).
- **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.

We use an interaction model to test if the impact of media visibility has become stronger since the setting up of fiscal councils:

$$compliance_{i,t-1}^{SF,t} = \beta_1 compliance_{i,t-2}^{SF,t} + \beta_2 media_{i,t-2} + \beta_3 fiscal\ council_{i,t} \cdot media_{i,t} + \beta_4 fiscal\ council_{i,t} + \beta_5 X_{i,t-1} + \theta_t + \vartheta_i + u_{i,t} \quad (2)$$

⁽¹⁾ A similar set-up is chosen as in European Commission (2020C).

⁽²⁾ Cimadomo (2012, 2016).

⁽³⁾ Note that most papers assess the impact of the explanatory variables on the level of the cyclically-adjusted budget balance not the fiscal effort; see in particular Checherita-Westphal and Zdarek (2017), Golinelli and Momigliano (2006).

(Continued on the next page)

Box (continued)

where the fiscal council variable is a dummy variable, equal to 1 if a fiscal council exists. From equation (2) we can derive the marginal effect: it measures how a change of the media visibility impacts compliance with fiscal rules since the fiscal council came into existence:

$$\frac{\partial \text{compliance}}{\partial \text{media}} = \beta_2 + \beta_3 \text{fiscal council}_{i,t} \quad (3)$$

In the interaction model the impact on compliance is depending on the dummy variable ‘fiscal council’. The marginal effect is defined as $\beta_2 + \beta_3$ if the dummy variable is equal to 1 and it simplifies to β_2 in if the dummy is 0 (⁴).

(⁴) For the specification and interpretation of interaction terms see Brambor et al. (2006), Braumoeller (2004).

6. CONCLUSIONS

Media visibility can help strengthen the effectiveness of fiscal rules. In particular, media visibility of fiscal rules can foster transparency, contribute to a more informed debate and act as a reputational enforcement device. The Commission and the IMF consider media visibility to be an important dimension in their indicators measuring the strength of the fiscal framework.

However, a high-quality assessment of media visibility of fiscal rules has not been hitherto available. Media visibility of fiscal rules has so far only been assessed based on surveys from a limited number of experts. This made it harder to specify the intensity or nature of the discussion on EU fiscal rules in a Member State. By contrast, there are much more sophisticated assessments of media visibility in the field of central bank communication.

We create a new, consistent and objective indicator for the intensity of the reporting on fiscal rules. We explore for the first time a large sample of the Europe Media Monitor, a large Commission monitoring platform. This allows us to assess the media visibility of fiscal rules and fiscal councils in 27 Member States and the United Kingdom between 2004 and 2020. We use a text mining approach on about 300 million articles for news on fiscal rules. In total, we identify about 120,000 articles on fiscal rules, corresponding to about 20 articles in the EU on average per day. Our numerical indicator allows us to measure the intensity of media coverage more closely, without recourse to judgement.

We find that media visibility of fiscal rules is higher in countries with well-developed independent fiscal institutions, during bad economic times and close to the release of key fiscal policy news by the Commission. First, media reporting increased by up to 30% in countries with well-developed fiscal institutions, such as the existence of fiscal councils. Second, we find that the media covers news on fiscal rules more in bad economic times. The cyclical impact of media visibility could complement the usual explanations for ‘higher deficit bias in good times’. Poorer media visibility exercises lower pressure to build buffers where economic conditions are more favourable. Third, we find that there was a marked increase in news close to Commission releases of

important fiscal policy news, such as the stability and convergence programmes, the ‘six-pack’ / ‘two-pack’ review, economic forecasts and draft budgetary plans.

We find that the effect of media visibility on numerical compliance with fiscal rules is facilitated by long-standing fiscal councils. We find that Member States with a longer tradition of independent monitoring and visible fiscal councils see a more lively discussion on fiscal rules. This finding seems to be in line with earlier evidence by the IMF that the visibility and monitoring strength of fiscal councils slowly increases over time.

New empirical evidence suggests that media visibility can contribute to more effective fiscal rules and higher compliance with them. New evidence from panel regressions shows that media visibility has fostered the numerical compliance with EU fiscal rules. Media from nationwide sources appears more effective than regional media. The creation of fiscal councils appears to have fostered the debate on fiscal rules.

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Graph IV.A.1: Used keywords

Keywords fiscal rules	Keywords Fiscal Councils
<p>balanced budget rule convergence program corrective arm debt reduction benchmark debt rule deficit rule draft budgetary plan excessive deficit procedure expenditure rule fiscal country-specific recommendation fiscal governance fiscal rule fiscal surveillance general escape clause medium-term budgetary objective national fiscal framework preventive arm revenue rule schwarze null significant deviation procedure stability and convergence program stability and growth pact stability program</p>	<p><i>Name national fiscal council **</i> european fiscal board fiscal council independent fiscal institution</p> <p>Keywords context words</p> <p>austerity compliance debt deficit deflation equality fine growth inequality inflation non-compliance public investment sanction spending sustainability transfer union unsustainability</p>

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