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FISCAL CONSOLIDATION AND GROWTH EFFECTS OF THE EU FUNDING DURING 2021-2027 IN CENTRAL AND EASTERN EUROPE[2]

The study examines fiscal consolidation and growth effects of the EU funding for the program period 2021-2027 in Bulgaria and other EU Member States from Central and Eastern Europe (CEE). It illustrates that gradual fiscal consolidation is implemented, but might be a challenge for some CEE countries, while the growth effects of the EU funding for 2012-2027 will depend on the level of substitution between EU and domestic funding of the EU-related projects. As a result, under the partnership agreements for 2021-2027 and the national recovery and resilience plans the CEE countries are expected to reduce gradually fiscal deficit and debt towards Maastricht criteria, and to increase their annual GDP growth above the baseline scenario between 1% and 4% of GDP, reaching cumulative growth from 9 to 24% of GDP by 2027.
Keywords: Fiscal policy; Fiscal consolidation; European integration; Government policy
JEL: H68; F15; Q57

Introduction

The EU Annual Sustainable Growth Strategy 2021 states that improving the quality of public finances will contribute to increasing potential growth (European Commission, 2020). Following the objectives of the strategy for the EU 2021-2027 program period, the European Commission (EC) initiated NextGenerationEU (NGEU), additionally to the European Structural and Investment Funds (ESIF), focusing on financial support to the MS through the Recovery and Resilience Facility (RRF) to restore economic growth and fiscal sustainability.

With the unprecedented fiscal packages adopted by the EU Member States (MS) to deal with the COVID-19 consequences their fiscal deficits and debt have additionally worsened during the pandemic crisis. The EU Multiannual Financial Framework (MFF) for 2021-2027 and the MS National Recovery and Resilience Plan (NRRP) have become an imperative tool for fiscal consolidation and recovering economic growth. The aim of the EU funding from the

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RRF has been to address the economic and social consequences of the pandemic, as well as to make public finances and economies more resilient to external shocks, which necessitates an assessment of fiscal sustainability in the medium term.

This research is devoted to the important issue for Bulgaria and other CEE MS about the role of fiscal consolidation after the pandemic crisis and the effects of EU funding for 2021-2027 for restoring economic growth and support macroeconomic stability. The study has two main purposes. First, the study examines the fiscal consolidation effects of the EU funding in the CEE countries and conducts a comparative analysis of the Bulgarian fiscal deficit and debt developments with other CEE MS during the period 2021-2025. The analysis has been conducted in the context of the EU initiative in 2023 for changes in the fiscal and macroeconomic governance framework. Second, it assesses the expected growth effects of EU funding for the EU program period 2021-2027 in the CEE countries.

1. Fiscal Consolidation and Macroeconomic Governance of the EU Member States

The EU legislation regulates budgetary discipline in the process of planning and implementing national budgets in the MS by transposing the fiscal rules into their national legislations. Thus, supranational fiscal rules become part of national ones and coordinate the implementation of the priority of fiscal sustainability and macroeconomic stability through control over public spending in the MS reform programs and convergence programs.

National fiscal policies in the Economic and Monetary Union are coordinated through the Stability and Growth Pact (SGP). The SGP and its reformed variants are fundamental EU legal documents designed to ensure that budgetary discipline is maintained in the MS to avoid excessive deficits and public debt in order to support macroeconomic stability and economic growth in the medium term. However, from the time of the introduction of the Council Regulation (EC) 1466/97[3] as a preventive arm of the SGP until the financial crisis of 2008, frequent non-compliance by MS has been reported. In order to restore fiscal discipline, a number of initiatives were undertaken at the EU level during the period 2011-2013, including the signing of the Fiscal Compact, through the adoption of a new fiscal directive and five regulations (Six-pack)[4], requiring MS to develop their national budgetary framework and legislation to ensure strict budgetary rules and discipline. In more detail, the changes establish a second generation of fiscal rules (2011) that give flexibility to respond to economic shocks, avoid clauses in severe recessions and new cyclically-adjusting fiscal indicators to contribute to saving excess revenues in strong growth as buffers for bad times.

After the COVID-19 pandemic crisis, the EC introduced the NGEU initiative focused on financial support to MS through the RRF to restore and boost growth. At the same time, the EC proposed a reform of the fiscal and macroeconomic governance framework in the EU

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[3] Council Regulation (EC) 1466/97 on the strengthening of the surveillance of budgetary positions and the surveillance and coordination of economic policies (the preventive arm of the Stability and Growth Pact).

[4] Official website of the EC, http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=COM:2014:905:FIN.

with an emphasis on the predictability of public spending for debt sustainability and economic growth, to address issues related to the coordination and monitoring of EU economic policy over the next decade. On 26 April 2023, the EC presented legislative proposals to implement a comprehensive reform of the fiscal rules through a proposal to amend the Council Regulation (EC) 1466/97 on the strengthening of budgetary surveillance and the coordination of economic policies.[5]

The main criticism of the current framework is that it relies on unobserved statistical variables that are sensitive to cyclical business conditions and needs to be simplified (e.g., structural fiscal balance linked to a potential gap). Structural budget estimates and budget projections are subject to large revisions, in part due to uncertain estimates of the output gap, which lead to erroneous policy recommendations (Darvas et al., 2018). Some researches consider current quantitative fiscal rules as complex, opaque and difficult to implement (Claeys et al, 2016; Darvas et al., 2018). The current framework has also been criticized for including a complex set of interpretation provisions, including various flexibility clauses, which make the implementation of the framework complex and hinder transparency. Another criticism has been that fiscal rules do not always respond to the diversity of the MS macroeconomic situations and the uncertainty of debt projections regarding the size of future extra-budgetary liabilities, economic shocks, future interest rates and future growth rates (Blanchard et al., 2021). Taking into account the objectives of fiscal sustainability and combined with compliance with fiscal rules, countercyclical fiscal policy would have an undeniable positive effect in the long term on the economic development of emerging economies in the CEE, aimed at promoting economic growth and managing macroeconomic imbalances (Bobeva, 2016; Yotsov, 2013).

The goal of the reform is to facilitate effective monitoring of fiscal indicators and economic imbalances, anchored in a common framework that guarantees equal treatment and multilateral coordination of the MS policies. The framework should ensure stability in the face of changing economic conditions and global uncertainty by introducing robust and predictable rules for derogation in exceptional circumstances. It should also follow an integrated approach where monitoring tools complement each other in the context of the European Semester. The new framework includes four main elements:

- debt sustainability analysis – classification of countries by risk level, using a transparent methodology agreed between EC and MS;
- fiscal adjustment paths – to be implemented within a maximum period of 4 years, extendable to 7 years with justified clause;
- long-term objective – to achieve a 3% fiscal deficit and 60% public debt;
- medium-term objective – sustainable deficit and debt levels to be achieved within 4 to 7 years.

The framework also will not consider investments financed by EU funds. The structural deficit will be assessed within a 4-year period and an annual adjustment of 0.5% will be

[5] European Commission COM (2023) 240 final. Proposal to amend Regulation (EC) No. 1466/97 on the strengthening of supervision over the state of the budget and the coordination of economic policies.

required for MS to reach a deficit of 3%. The corrective mechanism in case of not non-compliance will be implemented with freezing EU funds and macroeconomic conditionality. The EC will make public the debt sustainability analysis, the multi-annual adjustment path, and the corresponding level of the structural primary balance at the end of the 4-year adjustment period.

The new framework also considers the effects of the RRF support on economic activity and other EU financing which will continue to provide significant fiscal support for aggregate demand. Medium-term fiscal plans and national reform programs of the MS should take this into account. The stability and convergence programs must demonstrate how the medium-term fiscal plans of MS ensure a gradual downward path of public deficit and debt to reasonable levels and sustainable growth through gradual consolidation, investment and reforms. In this regard, the EC approved a list of additional indicators in the Convergent Programs for the period until the action of the RRF in 2026.

2. Literature Review

Research mainly defends the thesis of the short-term effect of increased government spending during the crisis and the need for fiscal consolidation afterwards. The avoidance of large fiscal deficits and public debt is to ensure macroeconomic stability and growth in the medium term. In the period of economic recovery and expansion fiscal consolidation is vital to restore and boost growth. The impact of fiscal policy varies over the business cycle with multipliers that are larger in periods of crisis than in expansions of the economy.

Studies examine two approaches to fiscal consolidation. The first approach observes whether the fiscal consolidation episode achieves ex-post outcomes in line with ex-ante targets. The second approach focuses exclusively on ex-post achievement of a minimum threshold improvement in key macro-fiscal outcomes (i.e., fiscal balance and debt ratio) and assesses whether they are achieved over a specified time or long-lasting (Balasundharam et al., 2023).

In fiscal consolidation, what is being consolidated and optimised is essential (Blanchard, Leigh, 2013). Discretionary fiscal stimulus can contribute significantly to accelerating the growth of the economy in the short term (Rzonca, Cizkowicz, 2006). Fiscal consolidations are successful in reducing the budget deficit up to two years after the consolidation, and that fiscal restraint is large when it is outside the range of the period mean plus/minus one standard deviation (Purfield, 2003). Alesina et al. (1998) study the effects of fiscal consolidation and point out that not only fiscal adjustments but also their composition matters. Fiscal announcements and credibility reduce uncertainty surrounding public debt (Caldas-Montes et al., 2019).

High-income OECD countries are more likely to succeed in their consolidation efforts relative to emerging markets, because higher income is often associated with stronger institutions and thus a greater capacity to design and implement fiscal reforms (Adam, Bevan, 2003; Heylen, Everaert, 2000). Studies provide evidence that governments with a parliamentary majority and facing no imminent elections are more likely to succeed in fiscal consolidations (Baldacci et al., 2004); Clements et al., 2022). Institutional characteristics also

affect the size of multipliers. They are different for existing and new policies, due to the difficulty of structural reforms and the different effectiveness of institutions in implementing them (Dobreva, 2017).

Alesina et al. (1998) indicate that the 1.5% reduction in the primary budget deficit as a tightening of fiscal policy, noting that such policy can either succeed or fail. According to their research, such a policy is successful if one of the following two conditions is met: the primary deficit is reduced by 2 percentage points (p.p.), or the debt-to-GDP ratio is 5 p.p. lower three years after the fiscal tightening year. Alesina and Perotti (1997) note that successful fiscal consolidation is associated with a reduction in the rate of public sector wage growth, current expenditures, and subsidies, while unsuccessful fiscal consolidation is associated with a reduction in investment spending. Successful consolidation implies no increase in taxes on employee compensation (wages and social security). Alesina and Ardagna (2009) studying a set of fiscal consolidations conclude that a clear income policy is the basis of successful fiscal consolidation. Some studies argue that fiscal consolidation can be an anti-cyclical tool in the stabilization policy of the state, the need to form a fiscal reserve to be formed in a period of economic revival and to finance aggregate demand during a crisis, avoiding growing budget deficits and public debt (Manliev, 2012).

A study on Bulgaria's fiscal measures to increase demand during crisis defends that the basis of the macroeconomic policy after the crisis should be fiscal and monetary measures together to participate in the counter-cyclical strategy for overcoming the economic consequences of COVID-19 (Tsvetkov, Georgieva, 2021). Another research for Bulgaria, Lithuania and Estonia assesses the revenue and expenditure's fiscal multipliers (Georgieva, 2021). Estimates show that fiscal multipliers are typically small in small economies and spending multipliers are larger and therefore more effective than tax multipliers. The authors argued that for Bulgaria and Lithuania, the increase in government consumption would have a relatively strong effect on GDP.

Logos (2001) argues that the effects of the EU funding on economic activity are not only on demand in the short term, but also on supply in the long term, resulting in economic growth and investment. The effects are created at the time of the improvement of the productivity of the economy, but are revealed at a later stage, after the completion of the programs with the EU funding. They have a long-term aspect and their influence is provoked by improving the productivity of a number of sectors through investments in physical and human capital. On the other hand, in the absorption of EU funding during an economic boom, increased demand may lead to economic activity exceeding potential economic growth and thus to overheating of the economy.

According to Cappelen et al. (2003), EU funding helps increase economic growth and equalize productivity and incomes in the EU MS, but poorer regions are hampered by their unfavourable industrial structure, the dominant role of agriculture as the main sector, and by the lack of funds directed to research and development. Checherita et al. (2009) emphasize that while the EU net transfers contribute to reducing household income disparities at the regional level, they also hinder economic development.

The social costs of the inefficiency in the management of the EU funding and the problems in the process of their absorption for the government administration and the beneficiaries

further reduce their impact on the convergence process (Nozharov, 2016; Kaneva, 2015). According to other studies, both EU funds and foreign investments contribute to economic development and growth (Christova-Balkanska, 2016). Some studies put into discussion many fundamental problems of European integration and cohesion, including the concept of convergence and the ultimate goal of this process (Rangelova et al., 2021). Under the pressure of international competition, there have been new challenges to the role of the EU in the global economy in recent decades, as evidenced by changes in the structure of EU foreign trade relations with third countries (Panusheff, 2016).

3. Data and Evaluation Methodology

The study uses the EC data for expenditures from the EU funding (ESIF and NGEU), national contribution to the EU budget, and GNI till 2022 for each CEE country.[6] To assess the impact on the fiscal position of European funding we use the following equation:

FB adj = Rev (EU funding) – National Co-financing – Contribution to EU budget

where:

Rev (EU funding) is Revenues from the EU funding (% of GDP), of which funds from NextGenerationEU (NGEU)

National Co-financing – National resources allocated to the EU projects

Contribution to EU budget – Annual MS payments from the national budgets to the EU budget (% of GDP)

FB adj – Adjustment of the fiscal balance (FB) as % of GDP (improvement (+)/deterioration (-)

We use the reported data for 2021 and 2022 to assess the fiscal consolidation effect for the whole of 2021-2027, assuming that the absorption rate of the ESIF and NGEU during the remaining period of 2023-2027 will be the average absorption rate for 2021 and 2022, and the final year for absorption of the NGEU resources will be 2026.

Contribution to the EU budget is calculated using the EC data about GNI of the CEE MS and VAT contributions and adjustments for the previous period and the new contribution on plastic packaging waste not recycling. The structure of the EU funding and contributions to the EU budget for the previous period determines the dynamics of contributions and absorption. The EU funding to MS is usually lower at the beginning of the program period and increases gradually as it progresses. However, the projects for the previous program period finish at the beginning of the new one, which is also taken into account in our assessment. National co-financing is assumed to be 20% of the total budget for EU projects.

Our estimates on the generation of the additional GDP in Bulgaria and other CEE MS above the baseline scenario are based on the modified methodology of Rosenberg and Sierhej

[6] Official site of the EC, https://commission.europa.eu/strategy-and-policy/eu-budget/long-term-eu-budget/2021-2027/spending-and-revenue_en.

(2007) for a "crowding out" effect of European financing and “augmenting” effect of domestic spending on aggregated demand. The methodology uses the formula: $D = \alpha (T + NC) - C$, where: D: impact on aggregate demand of EU funding (ESIF and under NGEU); α: substitution between European and domestic funding; T: transfers from ESIF and NGEU, NC: national co-financing; C: Contribution to the EU budget.

The “crowding out” factor of EU funding for the CEE countries, denoted by α, depends on the different degrees of substitution of the EU funding with national domestic funding and varies between 0.55 (with a "crowding-out" effect of 45%) and 0.65 (with a "crowding out" effect of 35%). Implementing the principle of "additionality" through national funds, its contribution to aggregate demand can reach 100%, and then the coefficient α will be 1, which implies a maximum impact on aggregate demand.

For our assessment, we used the data published by the EC for the EU resources provided under the partnership agreements from the ESIF and the NRRP from the RRF for each CEE MS. The estimates were made separately for each of them with the above-described coefficients. The estimates use the utilization rate of the EU absorption rates as a share in GNI under the ESIF for the previous program periods, as well as ESIF and NGEU reported by the EC for the first two years of the 2021-2027 period. Then, the average absorption rate is used for the remaining budgeted resources for the 2023-2027 period in the partnership agreements and NRRF.

4. Results Analysis

The ESIF reform for the 2014-2020 programming period aimed to maximize the ESIF's contribution to sustainable, smart and inclusive growth in the EU through the Europe 2020 strategy. The EU Sustainable Growth Strategy from 2021 has been a continuation of those efforts and for restoring growth after the COVID-19 pandemic crisis. The experience gained during the previous programming periods by the CEE countries has been considered a prerequisite for the successful planning and implementation of EU programs for the EU 2021-2027 program period.

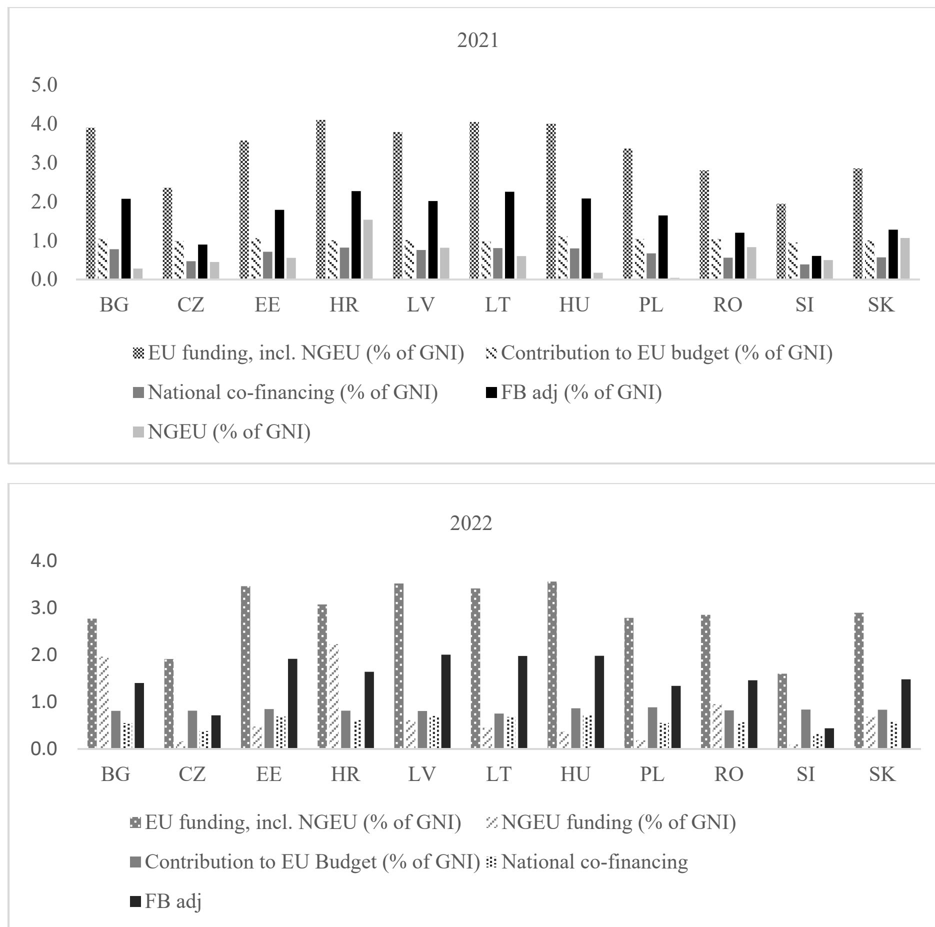
4.1 Fiscal consolidation effects of EU funding during 2021-2027 in the CEE Member States

During the years of EU membership, Bulgaria, together with other CEE MS, has been a net recipient of EU funding and benefited from the changes to a decentralized system of management and control of the ESIF. The reform aimed to achieve a strategic shift towards a more operational, less bureaucratic and better-targeted approach to managing the EU funds in relation to the economic and social challenges that the EU is facing as a result of the expansion and deepening of integration (Houbenova-Delisivkova, 2007, 2017).

As can be seen from our estimates presented in the below figure, in the CEE MS EU funding with the new NGEU financial instruments contributes to fiscal revenues between 0.7% and 4.1% of GNI for 2021 and 2022. It is due to the different levels of absorption of EU resources budgeted for the CEE MS. The best absorption of the EU funding is reported by the Baltic

countries, Croatia, Bulgaria and Hungary, where the reported share of the EU funding by the EC is around 4% of GDP for 2021.[7] The increased EU funding is mainly due to the final payments of the EU-related projects for the 2014-2020 program period. In 2022, these countries, apart from Bulgaria, continue to absorb significant EU resources, including from NGEU, which have had a positive effect on their fiscal consolidation process.

Figure 1. CEE countries: Absorption of EU funding and annual national contributions to the EU for 2021 and 2022



Source: Own calculations, European Commission's data for 2021-2022.

[7] Official site of European Commission, https://commission.europa.eu/strategy-and-policy/eu-budget/long-term-eu-budget/2021-2027/spending-and-revenue_en.

Assuming that the absorption rate of the ESIF and NGEU during the remaining period 2023 - 2027 will be around the average absorption rate for 2021 and 2022, and the final year for absorption of the NGEU resources is 2026, our assessment for the fiscal balance adjustment is between 0.6% of GNI for Slovenia, around 1% of GNI for Czechia, Romania and Slovakia, and around 2% of GNI for Bulgaria, Croatia, Baltic countries, Hungary and Poland. At the same time, the national contribution to the EU budget of all MS is kept at about 1% of the GNI, of which the new contribution on plastic packaging waste not recycling constitutes to 0.04-0.05% of GNI.

Table 1. Average EU funding-GDP ratio for the period 2021-2027

	BG	CZ	EE	HR	LV	LT	HU	PL	RO	SI	SK
(1) EU funding, incl. NGEU (% of GNI)	3.4	2.2	3.6	3.6	3.7	3.7	3.8	3.1	2.9	1.8	2.9
(1.1) NGEU (% of GNI)	1.2	0.4	0.6	1.9	0.7	0.6	0.3	0.1	0.9	0.3	0.9
(2) Contribution to EU budget (% of GNI)	0.9	0.9	1.0	0.9	0.9	0.9	1.0	1.0	0.9	0.9	0.9
(3) National co-financing (% of GNI)	0.7	0.5	0.7	0.7	0.8	0.8	0.8	0.7	0.6	0.4	0.6
(4) FB adj (% of GNI) = 1-2-3	1.8	0.8	1.9	2.0	2.0	2.2	2.1	1.5	1.4	0.5	1.4

Source: Own calculations, European Commission's data for 2021-2022

4.2 Fiscal deficit in the CEE Member States during 2021-2025

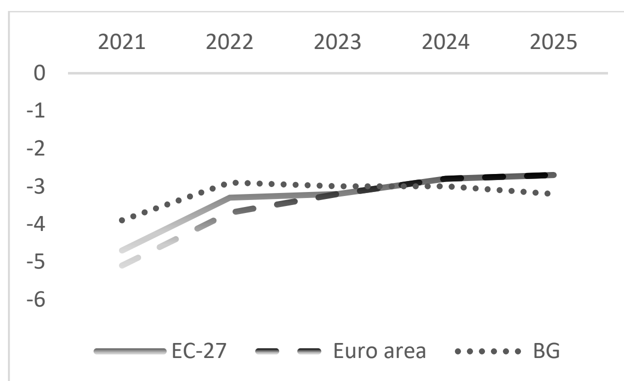
After the COVID-19 pandemic crisis and the new reality of the war in Ukraine fiscal consolidation in Bulgaria and other CEE MS has been implemented at a slower pace than after the 2008 global economic and financial crisis. All CEE MS introduced temporary fiscal support to businesses and households during the pandemic and energy crisis, worsening their fiscal stance. In our view, directing government support to those who need it most, including for offsetting high energy prices, helped to limit fiscal costs. A study by Anil et al. (2022) argues that compensating the bottom 20% of households in EU MS for the energy price spike in 2021-2022 is estimated to cost of 0.4% of GDP on average, although with significant differences between EU MS. The study's conclusion is that providing as a lump sum half of the compensation for the bottom quintile to the next two quintiles, covering the 20th to 60th percentiles of the consumption distribution, would double the average cost to 0.8% of GDP.

All EU MS are moving to a new stage of development of their economies after COVID-19, the new global reality, and the new fiscal instruments under the EU MFF for 2021-2027. In 2021-2022, economic activity was noticeably recovering, despite the war in Ukraine and EU economic sanctions against Russia, which initially worsened the outlook for 2023.

Bulgaria's fiscal deficit widened to 3.7% for 2020 (from a 2.1% surplus in 2019), exceeding the target of 3% of GDP mainly due to the above-discussed temporary measures related to the prevention of the spread of COVID-19 in the country. The deficit increased to 3.9% in

2021. After that, it was improved in 2022, reaching 2.9% of GDP.[8] The total (net) budgetary cost of energy-related measures is estimated to be 0.8% of GDP for 2023. The fiscal deficit is expected to stay at 3% of GDP in 2024 to boost growth, which could however have negative effects in the medium term.[9]

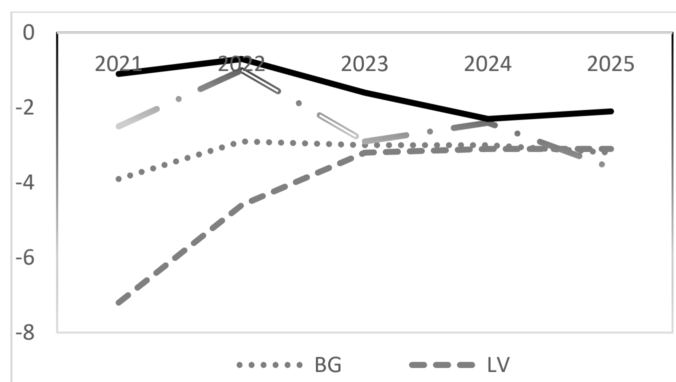
***Figure 2. Fiscal deficit of Bulgaria and EU-27 for 2021-2025 (%* of GDP)**



Source: Eurostat, Fiscal Notification (Autumn 2023), EC Forecast (Autumn 2023).

Baltic countries have similar developments and their fiscal stance is adjacent to Bulgaria, but in terms of their policies after the pandemic crisis and high energy prices, all of them have specifics that have an impact not only on growth, but also on the fiscal deficit.

Figure 3. Fiscal deficit of Bulgaria compared to Baltic countries, 2021-2025 (% of GDP)



Source: Eurostat, Fiscal Notification (Autumn 2023), EC Forecast (Autumn 2023).

[8] Eurostat. (2023). Provision of deficit and debt data for 2022 – second notification. Press release 118/2023 – 23 October 2023.

[9] EC Automn forecast, https://economy-finance.ec.europa.eu/economic-surveillance-eu-economies/bulgaria/economic-forecast-bulgaria_en.

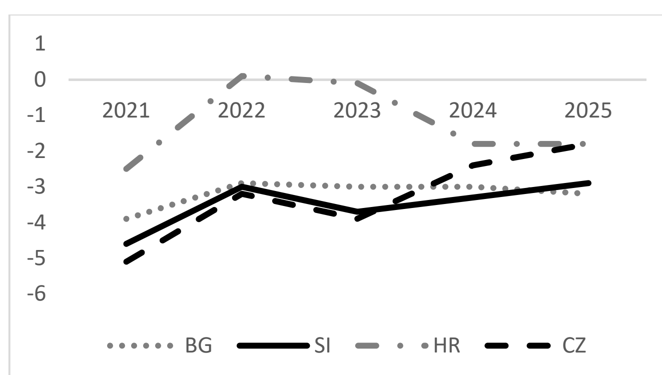
The fiscal deficit of **Estonia** was 2.5% of GDP in 2021 well below the reference level of 3% of GDP, then further consolidation was implemented in 2022 reaching an improvement of 1.5 p.p. However, the latest forecast predicts the fiscal deficit of Estonia to rise to 3.6% in 2025 due to the policy of government to cut personal income taxation and the economic growth which cannot overcome it.

Lithuania is performing with the best fiscal stance among the CEE MS and the country is projected to keep its fiscal deficit quite below the reference level of 3% of GDP during the 2021-2025 period. Similar to Bulgaria, the fiscal deficit is mostly due to an increase in expenditure on social benefits, intermediate consumption, public wages, and public investment more than the increase in tax and social security contributions revenues. Deficit developments in 2024 are expected to be positively affected by the phasing out of the temporary fiscal measures aimed at mitigating high energy prices. The net budgetary cost of these measures is projected at 0.4% of GDP in 2023 and 0.1% of GDP in 2024.

Latvia also plans to continue implementing fiscal consolidation measures, improving tax collection and reducing its deficit to 4.6% of GDP in 2022 and 3.1% of GDP in 2025. The impact of the phasing-out of energy-related measures by the end-2023, however, will be then offset by additional expenditure measures foreseen for 2024. The revenue will increase by the introduction of corporate income tax advance payments from the financial sector, an increase in the rates for a number of excise products and additional dividend payments from SOE are expected to yield a moderate increase in revenue. However, public wage increases (teachers, sectoral ministries and institutions), additional financing to healthcare and education, supplementary payments to pensioners and targeted support for the sharp increase in mortgage interest rates, development of technical infrastructure of the external border will worsen the fiscal stance.

While the fiscal deficit of Bulgaria has been forecasted to be around the reference level of 3% of GDP for the period 2023-2025, **Slovenia, Croatia and Czechia** are more ambitious in their efforts for fiscal consolidation by 2025.

Figure 4. Fiscal deficit of Bulgaria compared to Slovenia, Croatia and Czechia, 2021-2025 (% of GDP)



Source: Eurostat, Fiscal Notification (Autumn 2023), EC Forecast (Autumn 2023).

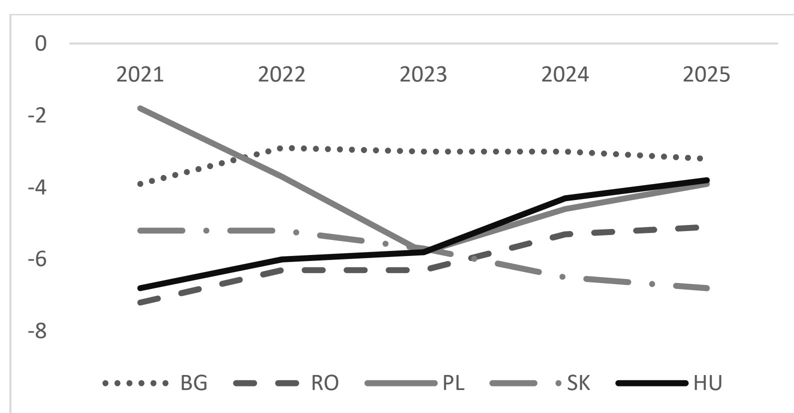
Slovenia's fiscal deficit is projected to peak in 2023 – due to weaker growth and one-off expenditure for reconstruction after the summer floods, and then decrease to 2.9% in 2025. Gross fixed capital formation is set to reach 6% of GDP in 2023 as the final absorption year of the MFF 2014-2020. Revenues from taxes on production are expected to remain weak due to lower GDP growth in 2023. Measures to mitigate the economic and social impact of high energy prices and expenditure for reconstruction after floods, estimated at 0.9% of GDP, will increase the deficit to 3.7% of GDP in 2023 and then improve to 1.8 of GDP in the 2024-2025 period.

Croatia has been undertaking strong fiscal consolidation measures after the pandemic, supported by continued strong economic activity and high inflation, and achieved a surplus of 0.1% of GDP in 2022. However, they are expected to be more than offset by high increases in wages and social benefits and then the deficit to increase slightly to 1.8% in the 2024-2025 period, still quite below the reference level of 3% of GDP.

In **Czechia** the budget deficit is set to rise in 2023 driven by expenditures, increasing faster than GDP. It is a result of the automatic indexation of pensions to inflation, and measures to mitigate the impact of high energy prices, which net budgetary cost is estimated at 1.2% of GDP in 2023. Public investment is also expected to peak in 2023 due to the completion of projects financed by EU funds in the programming period 2014-2020. Afterwards, the country plans to take consolidation measures and reduce the deficit to 1.8% of GDP in 2025.

Romania, Poland and Slovakia increased substantially their one-off business and household supported measures during the pandemic and the 2022 energy crisis, performing with the highest deficit among the CEE MS. As seen on the graph Hungary, Poland and Romania have undertaken financial consolidation measures to move towards the EU reference level of 3% of GDP, while Slovakia will continue to worsen its fiscal deficit to 6.8% in 2025.

Figure 5. Fiscal deficit of Bulgaria compared to Romania, Poland and Slovakia, 2021-2025 (% of GDP)



Source: Eurostat, Fiscal Notification (Autumn 2023), EC Forecast (Autumn 2023).

Romania's general government deficit is among the highest in the CEE MS around 6% during the period 2022-2025. The government spending on personnel and goods and services and slower revenue growth due to weaker economic activity. Public investment as a share of GDP is expected to rise significantly, reflecting ambitious targets for both nationally and EU-funded investment projects. The cost of measures to mitigate the impact of high energy prices is estimated at 0.3% of GDP in 2023. A fiscal consolidation package amounting to about 1.2% of GDP includes spending cuts, generated through measures to streamline public administration and tighter eligibility conditions for public servants to benefit from holiday vouchers and food allowances, and new measures in revenues amounting to 0.9% of GDP.

In **Poland** the fiscal deficit in 2023 is estimated to increase to 5.8% of GDP due to the expenditure on defence, higher salaries in the public sector, health care and extraordinary subsidies to farmers, and high indexation of pensions. In the period 2024-2025, the expectations are for most energy-related measures (to 0.4% of GDP) to be phased out and the revenue to pick up as a result of economic recovery, which will reduce the deficit to 3.9% of GDP. As in Bulgaria the high deficits in the EU terms also relate to timing of payment and deliveries of military investments.

In **Slovakia,** the substantial increase in fiscal deficit to 6.8% of GDP in 2025 is a consequence of the newly approved social expenditure measures, such as the increase in pensioner's care allowance, changes in the assessment of disability pensions and an allowance for people working in social services.

Hungary's budget deficit is driven mostly by higher spending on interest and pensions due to high-interest rates and inflation, as well as energy measures. On the other hand, due to the expected cuts in capital expenditure, and the postponed recapitalisation of the central bank the deficit is expected to be reduced from 6.8% in 2021 to 3.8% in 2025.

4.3 Public Debt Developments of the CEE Member States

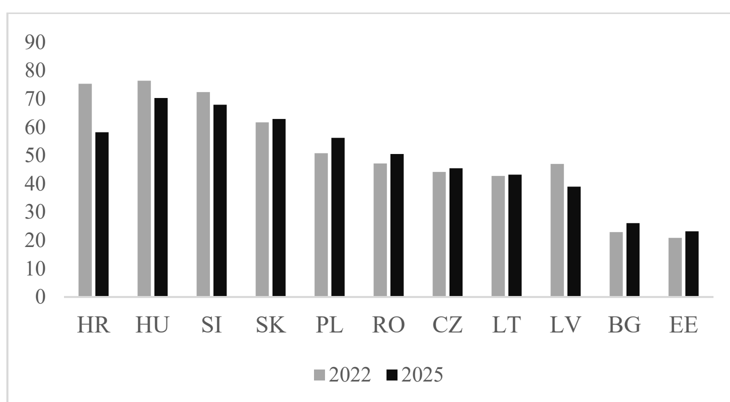
The nominal growth and phasing out of one-off fiscal measures to cope with the pandemic and high energy prices are expected to decrease the debt-to-GDP ratio in CEE countries, which are higher than the reference level of 60% in 2022, such as Croatia, Hungary and Slovenia. This decrease is expected to be supported by strong GDP growth. Poland's high deficits related to the timing of payment and deliveries of military investments led to a slight increase in the debt-to-GDP ratio in 2025. Slovakia's high fiscal deficit projected for 2025 will also increase by 1 p.p. the public debt, staying at 63% of GDP. Public debt of other CEE MS, including Bulgaria, is expected to increase slightly by 2025, but will be well below the reference level.

Estonia and Bulgaria are the CEE countries with the lowest government debt projections for the period 2022-2025. Bulgaria's consolidated government debt-to-GDP ratio for 2022 amounted to 22.9%, but the projections are to increase to 26-27% in 2025 due to the persistent fiscal deficits for the period 2023-2025.[10] Although Bulgaria's government debt remains low

[10] See also Economic Research Institute of the Bulgarian Academy of Sciences. Annual report for 2023. Economic development and policies in Bulgaria: Assessments and expectations.

compared to other EU MS, consistent fiscal consolidation is needed to avoid passing the debt burden to future generations amid adverse demographic trends in the country.

Figure 6. Public debt to GDP ratio in the CEE MS, 2022 and 2025

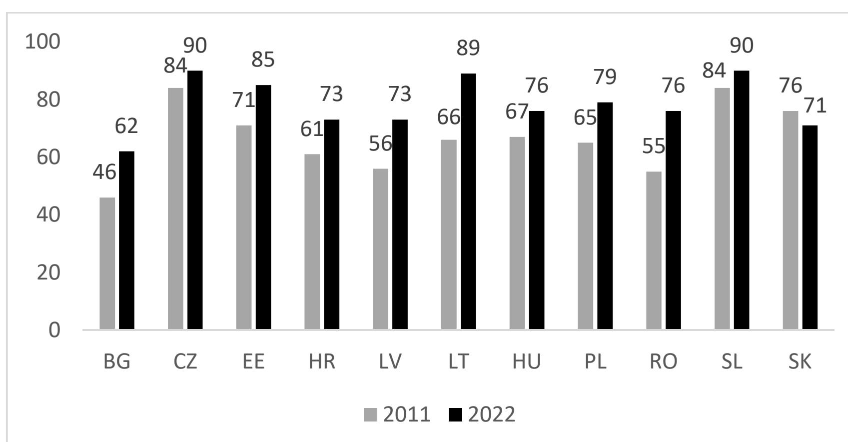


Source: Eurostat, Fiscal Notification (Autumn 2023), EC Forecast (Autumn 2023).

4.4. Growth effects of EU funding for 2021-2027

Until 2022, EU funds have contributed significantly to bringing CEE MS to the EU average GDP per capita (in PPPs). For the last decade, some CEE MS increased their GDP per capita by more than 14 p.p. Slovenia and Czechia are approaching the EU average GDP per capita (in PPPs). On the other hand, Bulgaria with an increase of 16 p.p. is among the countries which increased their GDP per capita more in the last decade (Lithuania – 23 p.p., Romania – 21 p.p., Estonia – 14 p.p.).

Figure 7. CEE Member States: GFP per capita (in PPPs) of the EU average

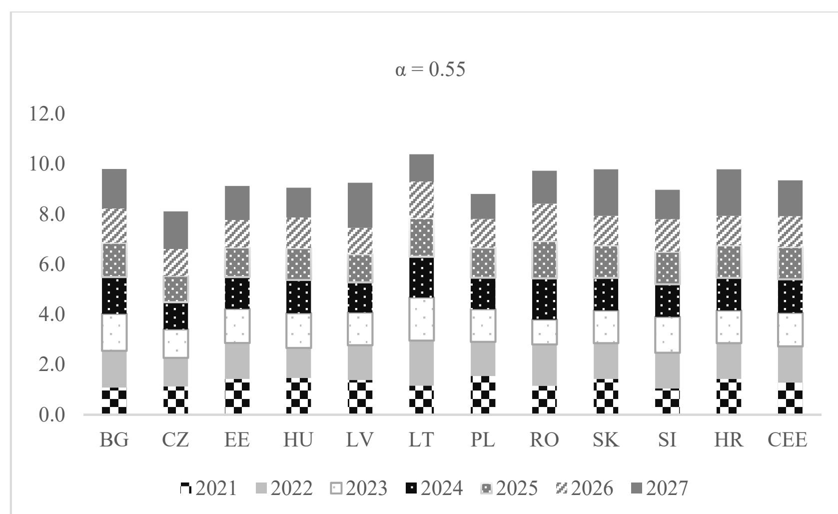


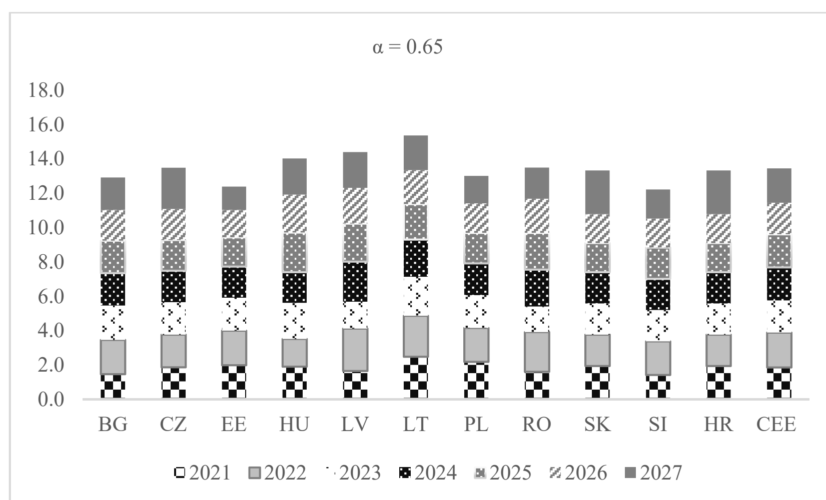
Source: Eurostat.

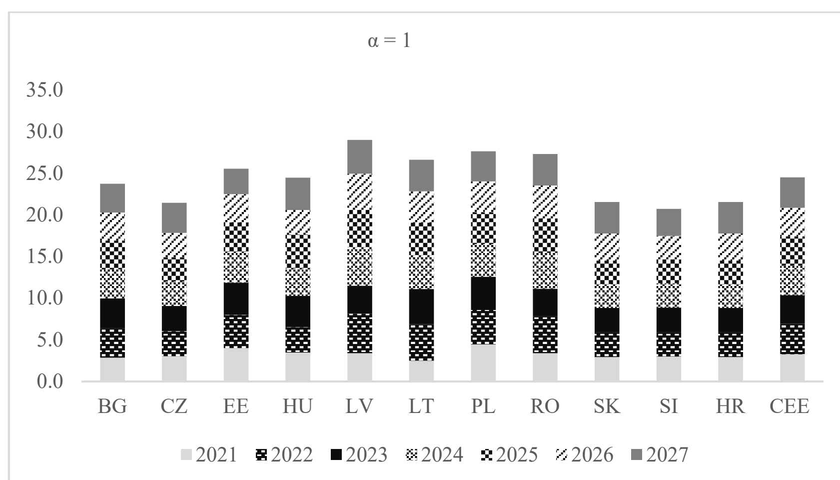
Our assessment for each CEE country is based on the budgeted ESIF under the partnership agreements and NRRP for 2021-2027 and specifics of the CEE MS. The assessment took into account that in the period 2022-2023 the impact is higher due to the final payments for the 2014-2020 program period. When calibrating the data, using the described methodology for the 2021-2027 program period, our estimates with the three "crowding-out " coefficients α=0.55, α=0.65, and α=1 for additional GDP growth above the baseline scenario showed 1% to 4% per year. The growth effects are almost equal during the period 2021-2027, using different substitution coefficients, while for the first two program periods of EU membership, it was between 0.5% and 0.7% in the first years, and 1.5% - 3% in the last years of the period (Paliova 2022). Allard et al. (2008) assessed the impact of the EU funds for the CEE in one group, with respect to EU-15 as donor countries, using the Global Integrated Monetary and Fiscal Model (GIMF) of the International Monetary Fund. Their simulations showed around 3% of GDP's higher annual growth from the baseline scenario. Varga and Veld (2010) used the EC's QUEST III model, assessing the cumulative effects of cohesion policy on GDP compared to the non-cohesion baseline for program spending over the program periods, and their estimates showed annual growth of 2%-4% and cumulative GDP effects of 44.9% above the baseline scenario for CEE MS by 2025. Gáková et al (2009) used the HERMIN model for 12 MS and concluded that with full absorption of the originally planned EU funds it is expected between 2.3% and 3.9% additional annual GDP growth above the baseline scenario.

The estimates showed a cumulative GDP average growth for the CEE of 10% (α=0.55), 14% (α=0.65), and 24% (α=1). Our estimates are close to the ones we estimated for the previous program periods 2007-2013 and 2024-2020 (Paliova, 2022; Paliova, Houbenova-Delisivkova, 2022). The main difference is the impact of EU funding on aggregate GDP demand at the beginning of the period 2021-2027.

Figure 8. Commutative growth effects of European financing by countries of CEE for the period 2021-2027 (% above baseline)







Note: The graph represents the average additional growth from EU funding for the three "crowding-out" coefficients α=0.55 and α=0.65, α=1.
Source: Own estimates, European Commission, Eurostat (2022).

For **Bulgaria,** the EU funding under the NRRP and the Partnership Agreement for 2021-2027 adds €16.7 billion (24.6% of GNI for 2022) to the public resources during 2021-2027. The EU funding is divided between the programs financed by the ESIF (€10.9 bn) under the MFF for 2021-2027 and the RRF under the NGEU initiative (€5.7 bn).[11] In 2022 Bulgaria received the first tranche of EUR 1.3 billion from the RRM later than other CEE MS due to the latest approval of its NRRP. In 2023 Bulgaria submitted a payment request for the second

[11] In 2023 the resources have been decreased from the initial amount of 6.3 billion (RRF funding) approved by the EC in the NRRP (version April 2022) due to better performance of GDP growth.

tranche of €724 million. Bulgaria took a number of measures to improve the administrative capacity of the managing authorities and beneficiaries, to facilitate and speed up the procedures, to carry out prior control over the participation documentation for all EU-funded projects and harmonize the public procurement forms, as well as adopted a Law on the EU Funds Management. Despite project delays, at the end of the 2014-2020 EU program period and the initial stage of implementation of investment projects for the new 2021-2027 period also had an impact on the growing revenues from the EU grants. On the other hand, non-implementation of some EU projects of the 2014-2020 period within the specified period by the end of 2023 becomes a fiscal risk for the next budgets as the national resources for their finalization will be needed.

The assessment of the Bulgarian government through the SIBILA model is for the cumulative impact of the EU funding on GDP over the baseline scenario for the period 2014 -2020 of 9.6% of GDP by the end of 2021, and of 8.7% by 2025 (Ministry of Finance, 2023). Taking into account improvements in the capacity of absorption of public administration involved in the EU-related projects and their beneficiaries, as well as the substantial EU funding as a share in GNI, our assessment of the impact of the EU funding on the growth of Bulgaria during 2021-2027, depending on the crowding-out coefficients is for additional growth of 1.1%-3.5% and cumulative growth from 9.8% to 23.7% by end-2027.

Czechia introduced a national cost-benefit analysis model and risk control system to speed up the implementation of major infrastructure projects and managed to triple funding in one year. Czechia's EU funding for cohesion and public investments worth €29.8 billion (12.5% of GNI for 2022) for the period 2021-2027, of which €21.4 billion under the partnership agreement 2021-2027. The NRRP has been amended in 2023, increasing to €8.4 bn grants from the NGEU. The country will not use loans from the RRF. Our assessment for the impact on the growth of Czechia during 2021-2027 is for additional annual growth above the baseline scenario of 1.1% – 3.6%, and cumulative growth effect from 8.1% to 21.4%.

Estonia introduced a procedurally simplified and fast enforcement system. Estonia's EU budget totals €4.6 billion (14.6% of GNI for 2022), of which €3.5 billion under the partnership agreement and €1.1 billion grants from the RRF. The country will not use loans under the RRF. Our assessment of the impact on the growth of Estonia during 2021-2027 is for 1.1% – 3.6% for additional annual growth above the baseline scenario and cumulative growth effect from 9.1% to 25.5%.

Hungary's investment strategy with EU funding worth €27.8 billion (18% of GNI for 2022) for the period 2021-2027, of which €22 billion under the partnership agreement and €5.8 bn grants from the NGEU. The country will not use loans under the RRF. Hungary improved its absorption concentrating its efforts on the implementation of the New Development Plan and the redistribution between the various programs. The plan refers to the creation of less stringent eligibility criteria, by increasing support and grant amounts from the state budget and reducing growth expectations for the period after the implementation of the programs. The deadline for payment has been reduced from 60 to 15 days. The estimate for the impact on growth during 2021-2027 is for additional annual growth above the baseline scenario of 1.2% – 4.1%, and cumulative growth effect from 9.1 to 24.5%.

The total EU funding for **Latvia** for the period 2021-2027 amounts to €6.4 billion (19.5% of GNI for 2022), of which €1.8 billion grants from the NGEU. The country will not use loans from the RRF. Latvia has increased the efficiency of institutions by promoting a client-oriented approach and reducing administrative and financial burdens on beneficiaries, facilitating application procedures through legislative changes. Our assessment of the impact on the growth of Latvia during 2021-2027 is 1.1% – 3.8% for additional annual growth above the baseline scenario.

Lithuania's EU funding for 2021-2027 amounts to €10.3 billion (18.5% of GNI for 2022), of which €3.9 billion under the amended NRRP in 2023, of which €1.6 billion loans. The EC disbursed the first payment of €542 million. Lithuania achieved the best EU absorption and is the best performer among CEE countries in its work with the European Regional Development Fund. Our assessment of the impact on growth of Lithuania during 2021-2027, depending on the crowding-out coefficients is for additional growth above the baseline scenario of 1.1% - 4.4%, and cumulative growth effect from 10.4 to 26.6%.

Poland is with EU funding of €100.4 billion (17.5% of GNI for 2022) among the CEE MS for the period 2021-2027, of which €76.5 billion is for cohesion policies under the partnership agreement. The country relies on €23.9 billion from the RRF, of which €11.5 billion loans. In the previous program periods, Poland contracted major infrastructure projects in a timely manner, but there have been delays in payments following the pace of implementation of various projects. To speed up the procedures of the Ministry of Regional Development, the management of EU funds and the coordination of activities has been assigned to the relevant ministers, municipalities and socio-economic partners. Our assessment for the impact on growth during 2021-2027 is for additional annual growth above the baseline scenario of 1.2% – 4.4%, and cumulative growth effect from 8.8% to 27.6%.

Romania's EU funding for 2021-2027 amounts to €60.7 billion (25.3% of GNI for 2022), of which €31.5 billion under the partnership agreement and €29.2 billion from the RRF. The NRRP has been approved by the EC in 2021 as an important step towards the EU disbursement of €14.2 billion in grants and €15 billion in loans. Romania already received two tranches €1.8 billion grants and €0.8 bn loans in 2022, and a payment request for €3.22 billion has already been provided. Our estimate for the impact on the growth of Romania during 2021-2027 is for additional growth above the baseline scenario of 1%- 4%, and a cumulative growth effect from 9.7% to 27.3%.

Slovenia has established strong coordination and quality interagency institutions that organize meetings with potential candidates and advise smaller companies. Slovenia’s cohesion investment policy worth €5.1 billion (9.7% of GNI for 2022) for the period 2021-2027. The NRRP will rely on €1.8 bn from the RRF, of which €0.7 billion loans. Slovenia relies less than other CEE countries on EU funding as a share in GNI for boosting growth, and our assessment is for 1% – 3.3% additional annual growth above the baseline scenario, and a cumulative growth effect from 9% to 20.7%.

Slovakia relies on €19.2 billion (19.8% of GNI for 2022) for the 2021-2027 period, of which €6.4 billion grants from the NDEU. The country will not use loans under the RRF. During the previous program, the authorities have taken additional measures to improve administrative capacity and to stimulate EU-related projects, which can help the country not

only to implement gradual fiscal consolidation, but also to stimulate growth. Our assessment of the impact on annual growth during 2021-2027 is for 1.2% – 3.8%, and cumulative growth effect from 9.8% to 21.5%.

Croatia joined the EU in 2013, and similar to other CEE MS showed difficulties in the implementation of the EU projects during its first EU program period 2014-2020 with a low absorption rate of 65%. Gaining experience with the EU projects, for the 2021-2027 period the country relies on €15.3 billion (26.7% of GNI), of which €6.3 bn grants from the RRF. Our assessment of the impact on growth during 2021-2027 is for 1.2% – 3.8% additional annual growth above the baseline scenario, depending on the substitution coefficient. The country is not included in the early assessments of the CEE MS due to its later EU accession. A study by Lejour et al. (2009) suggests that from the EU accession GDP of Croatia could rise by an additional 8% in a program period. The EC estimates that Croatia's NRRP could help to raise the national economy by 1.5% in 2021, an additional 2.5% in each of the next four years, and by 2.9% in 2026.[12]

Table 2. Effects of EU funding on aggregate demand, 2021-2027

α=0.55	BG	CZ	EE	HU	LV	LT	PL	RO	SK	SI	HR	CEE
2021	1.1	1.1	1.4	1.5	1.4	1.2	1.5	1.2	1.4	1.0	1.4	1.3
2022	1.5	1.1	1.4	1.2	1.4	1.8	1.4	1.7	1.4	1.4	1.4	1.4
2023	1.5	1.1	1.4	1.4	1.3	1.7	1.3	1.0	1.3	1.4	1.3	1.3
2024	1.5	1.1	1.3	1.3	1.2	1.6	1.3	1.7	1.3	1.3	1.3	1.3
2025	1.4	1.1	1.2	1.3	1.1	1.5	1.2	1.5	1.3	1.3	1.3	1.3
2026	1.4	1.1	1.1	1.2	1.0	1.5	1.1	1.5	1.2	1.3	1.2	1.2
2027	1.6	1.5	1.4	1.2	1.8	1.1	1.0	1.3	1.9	1.2	1.9	1.4

α=0.65	BG	CZ	EE	HU	LV	LT	PL	RO	SK	SI	HR	CEE
2021	1.5	1.9	2.0	1.9	1.7	2.5	2.2	1.6	2.0	1.4	2.0	1.9
2022	2.0	1.9	2.0	1.6	2.5	2.4	2.0	2.3	1.8	2.0	1.8	2.0
2023	2.0	1.9	1.9	2.1	1.6	2.3	1.9	1.5	1.8	1.8	1.8	1.9
2024	1.9	1.8	1.8	1.8	2.3	2.2	1.9	2.1	1.8	1.8	1.8	1.9
2025	1.9	1.8	1.7	2.3	2.2	2.1	1.8	2.1	1.7	1.8	1.7	1.9
2026	1.8	1.8	1.6	2.2	2.1	2.0	1.7	2.0	1.7	1.7	1.7	1.8
2027	1.9	2.4	1.4	2.1	2.1	2.0	1.6	1.8	2.5	1.7	2.5	2.0

α=1	BG	CZ	EE	HU	LV	LT	PL	RO	SK	SI	HR	CEE
2021	2.8	3.0	4.0	3.5	3.4	2.5	4.4	3.4	2.9	3.0	2.9	3.2
2022	3.6	3.0	4.0	3.0	4.8	4.4	4.1	4.5	3.0	2.9	3.0	3.7
2023	3.6	3.0	3.9	3.8	3.4	4.2	4.0	3.3	2.9	3.0	2.9	3.4
2024	3.5	2.9	3.7	3.3	4.6	4.1	3.9	4.3	2.9	2.9	2.9	3.5
2025	3.5	2.9	3.5	4.1	4.5	3.9	3.8	4.1	2.8	2.9	2.8	3.5
2026	3.4	2.9	3.4	2.9	4.3	3.8	3.7	4.0	3.3	2.8	3.3	3.4
2027	3.5	3.6	3.1	3.9	4.1	3.8	3.6	3.8	3.8	3.3	3.8	3.6

Source: Own calculations

[12] Official site of the Government of Croatia, https://vlada.gov.hr/news/thanks-to-it-s-eu-membership-croatia-has-30-billion-at-it-s-disposal-in-this-decade-to-invest-in-economic-growth/32499.

From eleven CEE in our analysis only four use loans under the NRRP and as a share in their RRF resources they are 51% for Romania, 48% for Poland, 40% for Lithuania, and 39% for Slovenia. Theoretically, Canova and Pappa (2021) estimate the cumulative multipliers if only EU grants are used to finance public expenditure and when grants and loans are used. The profile of multipliers for R&D (R&D shock multipliers) and human capital (HD shock multipliers) is lower in the second case, because the taxes, through which the loans must be paid in the future, have a negative effect on the supply of labour and the accumulation of capital. Thus, countries that use only the grant part of the RRF, including Bulgaria, are in a better position to recover, as the multipliers are larger and the government debt is not to jeopardize the recovery of growth at some future date. Moreover, the EU capital transfer investments are expected to effectively increase potential growth to the extent that capital formation increases with the technological improvements from their absorption.

Conclusion

With the new EU initiatives for the 2021-2027 programming period, the CEE countries are going to attract vast EU resources, which should assist in their efforts for fiscal consolidation and sustainable growth. It is necessary to review the structure of public expenditures and redirect expenditures to more public investments, using the European funding under the NRRP and the Partnership Agreement of Bulgaria for 2021-2027. The effective implementation of planned public investments to accelerate growth must be ensured.

The experience gained during the previous program periods is considered a prerequisite for the successful planning and implementation of EU projects and programs for the 2021-2027 program period and our assessment is for gradual fiscal consolidation and annual growth effects from EU funding between 1% and 4% above the baseline scenario for the CEE MS, and cumulative growth between 9 and 24% of GDP, depending on the substitution between European and domestic funding.

Fiscal consolidation is carried out gradually in all CEE MS to stimulate public and private investments and restore growth. Some CEE MS need more efforts as the EC forecast for 2025 shows a still fiscal deficit of 1p.p. to 4 p.p. above the reference level of GDP (Hungary, Poland, Romania, Slovakia). Other CEE MS, including Bulgaria, need to return to the fiscal balance to build up buffers for bad times.

Public policies must be implemented in compliance with the rule for achieving the medium-term budgetary objective for a balanced fiscal balance under the 2023 fiscal and macroeconomic framework. The public finance "spending rule" (limiting fixed current expenditure as a percentage of GDP to a certain level for each country) should build up buffers in good times and stabilize economies in downturns by implementing structural reforms for an ecological transition and support public investment in a sustainable manner.

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