# MONETARY POLICIES IN RESPONSE TO COVID-19 CRISIS IN THE BALKANS. CHALLENGES TO CENTRAL BANKS

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***Abstract:*** *In the Balkan countries (Bulgaria, Romania and Serbia) the coronavirus pandemic has had serious economic and social repercussions. While in Bulgaria there are a number of formal, legal constraints to pursuing expansionary fiscal and monetary policies, as well as those stemming from the participation of the Bulgarian lev in the exchange rate mechanism 2 and the EU Banking Union, in Romania and Serbia the government and the central bank dispose of more policy tools and opportunities to react to crises. This is evidenced by the applied monetary easing strategies, including quantitative easing as well as other unconventional monetary policy and liquidity measures during the pandemic. In this regard the aim of the paper is to demonstrate to what extent the type of monetary regime determines the scope and nature of reactions in the event of a shock and crisis associated with systemic uncertainty and the possibilities for economic recovery in the three Balkan states.*

***Key word:*** *monetary policy, fiscal policy, central banks, Covid-19, Balkans, monetary regimes, crisis*

***JEL codes:*** ***H12, H50, E42, E52, E58***

## Introduction

COVID-19 has had a disruptive economic impact in 2020 causing a severe global recession, significant increases in unemployment, income inequality, state budget deficits and public debt-to-GDP ratios in the developed and developing countries. How long its impact will persist remains unclear (Emmerling et al. 2021). Moreover, the Russia-Ukraine war, which has started in February 2022, has been among the major drivers of soaring energy and food prices and inflation and has further worsened economic performance and prospects in Europe and in the world (IMF 2022). During the coronavirus pandemic, the economic policy response (fiscal,

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monetary and regulatory) encompassed various compensatory mechanisms across countries[3]. Similarly to the global financial crisis from 2008, the Covid-19 crisis has led to a remarkable state intervention in the economy through massive fiscal policy measures and further expansion of the lender of last resort of the major central banks. Big central banks has acted as classic lender of last resort (Bagehot concept), buyer of last resort (QE) and third and perhaps the most radical step was that some of the biggest central banks became a lender of last resort even to nonfinancial firms and companies (Bernanke et al. 2022).

During the pandemic, central banks' stimulative monetary policy of low and negative interest rates (in the eurozone) included direct purchases of government debt to finance fiscal stimulus, which in turn led to a strong increase in their balance sheets. Central banks provided unlimited liquidity to commercial banks, at a subsidised cost and at a significant reduction in the quality of the collateral. Supervisory and regulatory policies in the banking sector included temporary reductions in the risk weights of certain exposures, and a uniform framework for temporary moratoria (private or public) on bank loan payments was established in the European Union (EU) (English, Forbes & Ubide (eds) 2021). Central banks aimed to limit the economic consequences of lockdowns and stabilizing the economy. Administrative restrictions and containment measures during the pandemic determined the central banks' monetary policy measures and interventions (Brzoza-Brzezina et al. 2021)

In the Balkan countries (Bulgaria, Romania and Serbia), whose economies are highly open and integrated into the European economy, the coronavirus pandemic has had serious economic and social repercussions. The fiscal and monetary policies have been mobilized to combat the crisis, with various instruments being applied within the existing local constraints and conditions. While in Bulgaria there are a number of formal, legal constraints to pursuing expansionary fiscal and monetary policies, as well as those stemming from the participation of the Bulgarian lev in the exchange rate mechanism 2 (ERM2) and the EU Banking Union[4], in Romania and Serbia the government and the central bank have more policy tools and opportunities to react to crises. This is evidenced by the applied monetary easing strategies, including quantitative easing as well as other unconventional monetary policy and liquidity measures during the pandemic. In this regard the aim of the chapter is to demonstrate to what extent the type of monetary regime determines the scope and nature of reactions in the event of a shock and crisis associated with systemic uncertainty and the possibilities for economic recovery in the three Balkan states.

The first part of the paper discusses the theoretical framework of monetary regimes applied in the Balkan countries and an explanation of their relation and/or dependence on the EU and in particular on the European Central Bank's (ECB) monetary policy. The second part focuses on the fiscal, monetary and macro prudential policy measures implemented during the pandemic. The third part explores the impact of monetary policies on the price stability and economic

[3] See Bighelli, Lalinsky & Vanhala 2022 and also Deb et al. 2021

[4] As of 10 July 2020, the Bulgarian lev has been included in the ERM2 at the existing fixed exchange rate within the Currency board (1 euro = 1.95583 levs). On 1 October 2020, Bulgaria became member of the EU Banking Union.

recovery. We draw conclusions on the role of monetary regimes for economic recovery and stabilisation.

## 1. Theoretical framework for understanding monetary regimes in the Balkan countries during Covid-19 crisis

First, we focus on the theoretical and legal characteristics of the different types of monetary regimes implemented in Bulgaria, Romania and Serbia. Unlike the other Central and Eastern European countries, Bulgaria implemented floating exchange rate and independent monetary policy in the beginning of the transition (after 1989). After a period of banking crisis, hyperinflation and loss of foreign reserves, under the pressure of the International Monetary Fund (IMF), it introduced currency board in July 1997. The currency board is a monetary regime based on rules that bring discipline in macroeconomic policy through market discipline and capital movement. It relies on two main effects: discipline effect (legal constraints on monetary policy) and the credibility effect stemming from the fixed exchange rate (1 euro = 1.95583 levs) and the coverage of monetary base. It maintains 100% foreign exchange coverage for the total amount of the Bulgarian National Bank (BNB) monetary liabilities (banknotes, coins and deposits). These are government deposits and commercial banks' reserves. Hence, no monetary policy is carried out (Nenovsky & Rizopoulos 2003). The currency board constraints do not allow the government to rely on money issuance in order to finance budget deficits and it enforces prudent and conservative fiscal policy. Strict fiscal limitations apply to all the economic agents who have to bear the costs from their action alone (Marinova 2016). Under the currency board regime the BNB can perform a strictly limited function of lender of last resort. It is allowed to refinance private banks only in case of a systemic risk and the amount of extended loans should not exceed the deposit (bank reserves) of the Banking Department placed with the Issue Department. Moreover, the BNB may provide loans only to solvent banks experiencing pressing need for liquidity only against collateral of liquid assets. The currency board is a conservative and dependent monetary regime (pursuing the monetary policy of the ECB) having limited opportunities for reactions to shocks and systemic crisis[5].

Unlike Bulgaria, Romania and Serbia have been implementing monetary policy of inflation targeting. In fact, both countries pursue the monetary policy of the ECB despite preserving their monetary independence and the execution of discretionary monetary policy. Starting in 2013, Romania has applied inflation targets which are formulated in terms of the annual change in the consumer price index and are set as midpoints within a target band of ±1 percentage points. The inflation target is set at 2.50% with variation band of ± 1pp. The National Bank of Romania (NBR) has announced that this is an intermediate stage meant to ensure the transition towards the phase of long-term continuous inflation targeting in line with the ECB's definition of price stability[6]. The main monetary policy instruments available to the NBR are: open market operations, standing facilities and reserve requirements.

[5] Dependent monetary regimes in the Balkans are studied by Nenovsky & Magnin, 2022

[6] https://www.bnr.ro/Inflation-Targets-3241-Mobile.aspx

The National Bank of Serbia (NBS) has been implementing a managed floating exchange rate regime since 1st January 2009. The inflation target is set for three years ahead until the process of nominal, real, and structural convergence to the EU is finished. Headline inflation target from January 2021 to December 2023 is set at the level of 3%, with a tolerance band of ±1.5 percentage points. The NBS strives to achieve the targeted rate of inflation by changing its key policy rate[7] .

Unlike inflation targeting rule in other contexts, central banks are allowed to apply all the tools of conventional and non-conventional monetary policy to react to economic shocks and crises. Moreover, there are no institutional restrictions to fiscal policy. Hence, governments have bigger fiscal space and can execute expansionary fiscal policy.

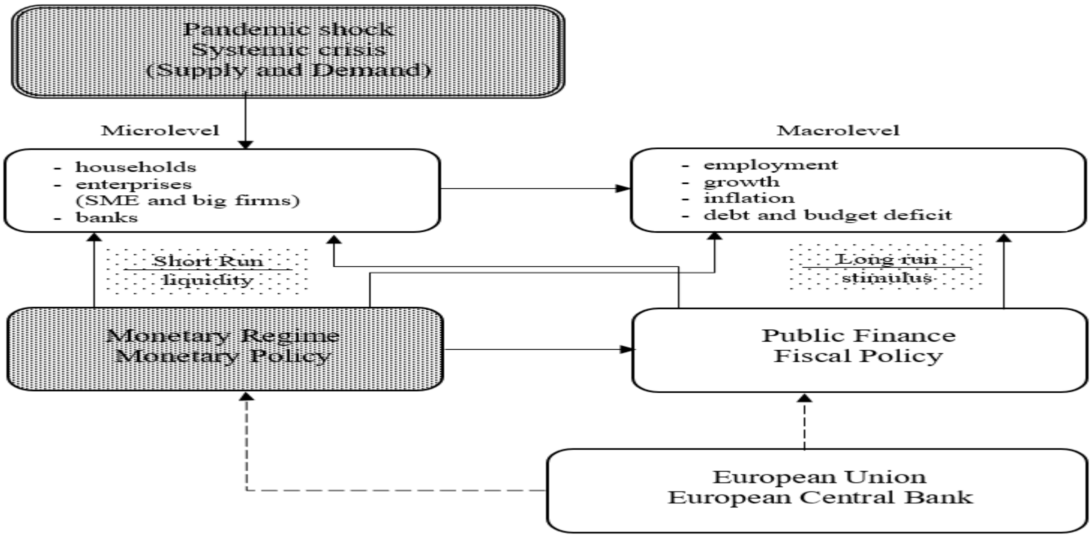
Figure 1 illustrates the dependence of the monetary regimes and the monetary policies in Bulgaria, Romania and Serbia on the ECB's common monetary policy executed in the eurozone as well as their direct relation, interaction and impact on the fiscal policies and the state of the public finances in the countries. We reveal the short term implications of the monetary policy as well as the long term implications of the fiscal policy for the Balkan economies. Bulgaria and Romania are not yet part of the eurozone and Serbia is a candidate country for EU membership. Bulgaria applies currency board and a fixed exchange rate of the lev against the euro as well as it participates in ERM2. Romania and Serbia, on the other hand, pursue a monetary policy of inflation targeting based on the ECB's definition of price stability.

The pandemic has brought to the fore the need for timely and proper coordination and interaction between countries' fiscal and monetary policies. In the short term, monetary policy measures relate to the provision of liquidity to households, firms and banks, while in the long term, banking regulations and fiscal measures are of paramount importance to sustainable growth. At the same time, Bulgaria and Romania have to respect the rules for sound public finance set out in the EU institutional framework (Maastricht Treaty, Stability and Growth Pact) and they have to avoid excessively high budget deficits and public debt[8]. While for Bulgaria there are both internal and external constraints to monetary and fiscal policy, for Romania and Serbia these are mostly external, coming from the EU.

[7] National Bank of Serbia's Memorandum on Inflation Targets until 2023

[8] See Nenovsky, Turcu & Tochkov 2013

*Figure 1. Theoretical framework for understanding monetary regimes in the Balkan countries during Covid-19 crisis*




*Source: Sahling, Nenovsky & Chobanov (2021), p. 279*

## 2. Fiscal and monetary policies reactions to Covid-19 crisis

Before the pandemic, the three Balkan countries had stable growth, decreasing unemployment, moderate inflation and stable fiscal positions (budget surpluses in Bulgaria and Serbia and lower public debt in the three countries compared to the other EU countries). The Covid-19 pandemic led to a sharp decline in economic activity and a rapid deterioration in the budgetary positions of the three countries. In 2020, Bulgaria experienced the biggest decline in the economic activity among the three countries. The Bulgarian economy contracted by 4.4% and the Romanian[9] and the Serbian economies by 3.9% and 0.9% respectively. Slight increases in the unemployment rate were recorded in Bulgaria and Romania. In Bulgaria, the unemployment rose from 5.9% in 2019 to 6.7% while in Romania it increased from 2.9% in 2019 to 3.4% in 2020. It is noteworthy, that in Serbia the unemployment rate declined from 11.2% in 2019 to 9.7% in 2020. The governments increased public expenditure mostly in Serbia where it reached 49.4% of GDP in 2020, while in Bulgaria and Romania it was 41.8% and 42.0% of GDP respectively. The fiscal measures to address the effects of the pandemic have worsened the budgetary positions. The budget deficit in Bulgaria grew to 4.0% of GDP and the public debt rose to 24.7% of GDP. Nevertheless, the Bulgarian sovereign debt is still among the lowest in

[9] For the impact of the pandemic on the export-import activities of the companies see Belu 2021

the EU27[10]. In Romania, the budget deficit doubled (9.3% of GDP) and the public debt reached 47.3% of GDP. In Serbia, the budget deficit was 8.3% of GDP and the government debt rose to 57% of GDP.

In the three Balkan countries, the financial stability has been sustained and further strengthened due to the monetary and regulatory policy measures. Moreover, the banking system has remained excessively liquid. Furthermore, the delayed consumption and investment by economic agents have led to a significant accumulation of savings and credit decline for households and non-financial companies in 2020.

### *2.1 Fiscal policy measures during Covid-19*

According to the analysis of the IMF (2021) governments have implemented two types of fiscal measures worldwide: demand-support measures and emergency lifelines. Demand support measures have been applied to boost demand and households/firms' disposable income which included: wage subsidies and targeted transfers to households, enhancement of unemployment benefits, paid sick leave and support to parents for school closures; tax relief measures for firms and households, and deferrals of tax and social security payments for firms and households, etc. This group of fiscal measures have exacerbated fiscal imbalances, the government debt and the borrowing needs have risen in the short run. They are considered as above-the-line measures. Meanwhile, emergency lifelines refer to liquidity measures which provided sustained cash flow support to firms and households, especially during the lockdown phase of the pandemic, when firms needed to shut down production in order to maintain social distancing. Such measures include loans to firms and households, state guarantees, government provisions of loans, and equity injections. These measures have no upfront impact on the fiscal deficit but they increase debt or liabilities in the long-term and are considered to below-the-line measures.

Similary to the other European countries, the governments of the three Balkan states have pursued countercyclical fiscal policies by increasing transfers to economic agents, programmes to preserve employment and boost government consumption and investment. The demand support measures and health spending became a major part of the fiscal packages and fiscal stimuli. In Bulgaria, total government spending was Bulgarian lev (BGN) 10.9 bn or USD 6.4 bn. According to the IMF estimations (2021) the demand support measures and health spending amounted to 5.3% of GDP (BGN 6.3 bn or USD 3.7 bn). The fiscal measures included subsidised employment programmes (60/40 programme), payment of pension supplements, health spending, including for frontline medical staff, credit guarantees from the state-owned Bulgarian Development Bank, and tax relief (reduction of the VAT rate on certain goods and services, extension of corporate tax payment deadlines and increase in the amount of personal tax allowances).

[10] For economic trends and risks during the pandemic see Yotsov et al. 2022

In Romania, the demand support measures and health spending constituted 3.4% of GDP Romanian leu (RON) 36 bn or USD 8.5 bn) They also included: partially covering the wages of parents staying home during school closure as well as partially covering the wages of self-employed and workers in danger of being laid off, partially subsidizing the wages of those returning to work, deferral of utilities payments for SMEs (small and medium enterprises), bonus for corporate income tax payments, grants for the businesses which totaled 2.5% of GDP (RON 26 bn or USD 6.1bn). In addition, the government has rescheduled the payment of certain taxes for companies in difficulty. Other measures included: faster reimbursement of VAT, suspending foreclosures on overdue debtors, suspending tax authorities' control, discounts for paying corporate income taxes, postponement of property tax by three months, exempting the hospitality industry from the specific tax for 90 days, changes in the insolvency legislation. The possibility to reschedule tax payments was extended in 2021 (IMF 2021).

In Serbia, the demand support measures and health spending introduced by the government amounted to 12.2% of GDP Serbian dinar (RSD) 664 bn or USD 6.4 bn). The fiscal measures announced in 2020 included: wage subsidies (RSD 93 bn): (i) Payment of three minimum wages for all employees in SMEs and entrepreneurs; (ii) Payment of 50% of minimum wages to big companies for employees who were not working; one-off payment to all pensioners (RSD 7 bn); new loans to SMEs from the Development Fund (RSD 24 bn); universal cash transfer of EUR 100 to each citizen over 18 years old (about RSD 71bn); support to 14,000 most vulnerable women in 50 municipalities across Serbia in hygiene packages and essential foods (RSD 12 bn); one-off fiscal support to help city hotels through a fixed subsidy per room and per bed, with an estimated cost of RSD 1.3 bn. Most of these measures were prolonged in 2021: three additional months of wage subsidies (RSD 73bn); payments for employees in travel and hospitality; universal cash transfers to all adult citizens paid in May and November (RSD 43bn); pension bonus (RSD 8.5bn); support for the transport sector and for city hotels (RSD 3bn); one-off financial assistance to all the registered unemployed people, of EUR 60; a one-off payment to vaccinated citizens (RSD 9 bn).

In Bulgaria the limited capacity of the government to use fiscal policy to tackle the crisis was partly offset by EU funds. The financial support measures utilizing national and EU resources amounted to 3.9% of GDP (BGN 4.6 bn or USD 2.7 bn). They consisted of capital increase in the Bulgarian Development Bank (BGN 700 mn) as well as liquidity provided through state-owned entities and other EU institutions. The Bulgarian Development Bank, the Fund of Funds, the JEREMIE initiative ("Joint European Resources for Micro to Medium Enterprises") and Urban Development Funds executed quasi-fiscal operations on behalf of the government which amounted to 2.5% of GDP (BGN 3 bn or USD 1.8 bn).

Unlike Bulgaria, the Romanian government provided loan guarantees and state guarantees for SMEs and big companies which amounted to 4% of GDP (RON 42 bn or USD 10 bn). The IMF (2021) estimated that below the line measures corresponded to 4.2% of GDP (RON 44 bn or USD 10.4 bn).

In Serbia state guarantees amounted to 3.2% of GDP (RSD 175 bn or USD 1.7 bn). In 2020 a state guarantee scheme for bank loans to SMEs was approved (RSD 56.5bn). In 2021 the existing scheme for state guaranteed bank loans to SMEs was expanded by EUR 500 mn (1% of GDP) and a new EUR 500 mn scheme for vulnerable companies was implemented. Quasi-fiscal operations totaled EUR 200 mn (0.4% of GDP), including subsidized loans (1% interest rate) to SMEs from the Development Fund (IMF 2021).

### *2.2 Monetary and macro financial policy measures*

The monetary and macro prudential policy tools during the Covid-19 pandemic can be divided into four categories: interest rate cuts, asset purchases, liquidity provision and credit support as well as regulatory easing. The specific tools used by each central bank depended on local macroeconomic conditions, the state of the banking system and the financial sector as well as of the institutional constraints of the applied monetary regime.

In March 2020, the **Bulgarian National Bank** adopted an anti-crisis package for the banking sector which totaled BGN 9.3 bn. Its main objectives were to further strengthen the resilience of the banking sector and to temporarily ease payments to businesses and households on bank loans. The regulatory measures included:

- Prohibition on distribution of retained earnings from previous years to strengthen the capital base;
- Restrictions on the level of concentration and quality of assets in which banks can invest their liquid assets;
- Repeal of the planned increases in the countercyclical capital buffer;
- Private moratorium on bank loan payments.

In March 2020, the BNB adopted a decision to cancel the increases in the countercyclical capital buffer applicable to domestic credit risk exposures scheduled for the second quarter of 2020 and the first quarter of 2021 and maintaining its 0.5% level during 2020-2021. In September 2021, the BNB decided to increase the countercyclical capital buffer applicable to credit risk exposures to 1.0%, effective from 1 October 2022. The main reason for this measure was the accelerated growth rates of housing loans and the risks of increasing indebtedness and non-performing loans, with a negative change in economic conditions. The countercyclical capital buffer will be raised to 1.5% with effect from 1 January 2023. In December 2021 the BNB confirmed 3% systemic risk buffer of 3% (BNB 2021). The measures taken do not inject liquidity into the banks. They preserve and reallocate available resources within the banking system, as the currency board rules prohibit the BNB from creating money and financing the government through securities purchase programmes. Nevertheless, the ECB can provide liquidity through swaps and repo transactions. In April 2020, for the first time, the ECB and the BNB set up a swap line of EUR 2 bn which was in place until end-2020[11].

[11] https://www.eCurrency board.europa.eu/press/pr/date/2020/html/eCurrency board.pr200422~962a743486.en.

Unlike the BNB, the Romanian and Serbian central banks implemented almost all monetary policy instruments during the pandemic. Foreign exchange interventions were undertaken to smooth excessive volatility and stabilise the exchange rate in order to further strengthen financial stability The Romanian and Serbian central banks acted as lender of last resort and applied quantitative easing. **The National Bank of Romania (NBR)** reduced the monetary policy rate by 1.2 percentage point to 1.25% and narrowed the corridor defined by interest rates on standing facilities around the monetary policy rate to ±0.5 percentage points from ±1.0 percentage points. The NBR purchased government securities on the secondary market and implemented measures to ensure the smooth functioning of payment and settlement systems. The NBR performed open market operations and provided liquidity to credit institutions via repo transactions (repurchase transactions in government securities). The repo transactions stood at around RON 42 bn in 2020 and more than RON 2 bn in 2021. The total volume of leu-denominated government securities purchased on the secondary market in the period April 2020-March 2022 amounted to RON 5.895 bn[12]. The banks deferred loan repayments for households and businesses affected by COVID-19 for up to nine months (applicable until March 2021). The ECB set up a euro repo line with NBR worth a maximum of €4.5 bn. Extended until March 2022 (IMF 2021).

On 11th March 2020 the **National Bank of Serbia** cut main interest rates. The key policy rate was lowered to 1.75%, the deposit facility rate to 0.75% and the lending facility rate to 2.75%. The main interest rates were further lowered and the terms of financing became even more favourable than before the beginning of the pandemic. In April, June and December the NBS Executive Board further trimmed the key policy rate by a total 0.75 pp, to its historical low of 1.00%, while the deposit facility rate was decreased to 0.10% and the lending facility rate set at 1.90%[13].

During Covid-19 the NBS continued to promote the use of the dinar in the national financial system (*dinarization*). The domestic financial sector was supplied with additional dinar and FX liquidity to sustain unhindered flow of credit to local businesses and households. From March to May 2020, the NBS provided to banks additional dinar liquidity worth RSD 41.1 bn and FX liquidity amounted to EUR 96.0 mn via additional FX swap auction, regular swap auctions and three repo securities purchase auctions. The commercial banks were given the opportunity to tap two dinar liquidity lines – additional FX swap purchase auctions and repo securities purchase auctions. The NBS supplied additional liquidity to banks which totaled RSD 145.1 bn (repo purchase amounted to RSD 101.4 bn and FX swaps worth RSD 43.7 bn) (IMF 2021). In July 2020, dinar loans were approved under the guarantee scheme at lower interest rates. Moratorium on debt payments was introduced during 2020-2021. Housing loan requirements were facilitated[14].

[12] Leu-denominated government securities purchased by the NBR on the secondary market in 2020: RON 1,882.9 mn in April; RON 1,611.5 mn in May; RON 533.1 mn in June; RON 748.5 mn in July; RON 504.3 mn in August.
Leu-denominated government securities purchased by the NBR on the secondary market in 2021 and in the first quarter of 2022: RON 112.7 mn in March; RON 134.7 mn in April; RON 367.3 mn in March 2022 (NBR 2020, NBR 2022)

[13] See Martin 2020

[14] https://nbs.rs/en/drugi-nivo-navigacije/pres/covid19/

In May 2020, for the first time, local-currency denominated corporate bonds became eligible for open market operations and as collateral for banks to receive daily liquidity loans and short-term liquidity from the NBS. Thus, the NBS acted as lender of last resort also for the non-financial companies. On 17th July 2020 the ECB and the NBS set up repo line to provide euro liquidity extended until end-March 2022.

The NBS has intervened heavily in the foreign exchange market to maintain a relatively stable exchange rate during the crisis[15].

***Table 1 Central banks' policy measures during Covid-19 (2020-2021)***

| Tool type | Measures | Bulgaria | Romania | Serbia |
|---|---|---|---|---|
| Interest rate | Policy rate cut | | X | X |
| Lending operations/liquidity provision and credit support | Liquidity provision | | X | X |
| | Use of swap line/repo line (with ECB) | X | X | X |
| | FX operations | | X | X |
| Asset purchases | Government bonds/sovereign debt | | X | X |
| | Corporate bonds | | | |
| Reserve policy/regulatory easing | Capital requirements | | | |
| | Countercyclical capital buffer | X | | |
| | Systemic risk capital buffers | | | |
| | Easing collateral eligibility rules | | | X |

*Source: Bulgarian National Bank, National Bank of Romania, National Bank of Serbia, IMF, Authors*

### *2.3 The effects of fiscal and monetary measures on the Balkan economies*

In this part we refer to Figure 1 on the theoretical framework of monetary policy regimes to analyze the effects of the monetary and fiscal measures implemented by the national institutions. In 2021, the three Balkan economies have started to recover from the crisis. In Bulgaria, the GDP growth reached 4.2% and private consumption was the main driver of growth. The unemployment rate declined to 4.8%. The major causes of inflation were the price hikes of primary energy commodities (oil, natural gas and electricity) and food in international markets, as well as the rising consumption expenditure of households and the higher consumer goods prices in Bulgaria's major trading partners. To curb inflation the government imposed a moratorium on regulated prices of electricity, water and sewerage services and heating in December 2021 which expired on 31 March 2022. For the first quarter of 2022 the CPI rose to 10.5% while the CPI compared to the previous period reached 4.3%. In March 2022, the CPI was 12.4% year-on-year. The harmonised index of consumer prices (HICP) reached 8.9% on an annual basis. The continuation of fiscal stimulus in 2021 resulted in further increase in the

[15] https://nbs. rs/en/other-navigation/pres/covid19/

budget deficit and government debt while the fiscal reserve which provides some scope for stimulative fiscal policy, remained at high levels during the pandemic.

The banking system continued to be liquid and stable in 2021. The commercial banks' reserves on the BNB's balance sheet more than doubled. The Banking Department's deposit with the Issuance Department also continued to grow, which has further strengthened the confidence and stability of the financial system because it enables the BNB to serve, albeit in a limited capacity, as a lender of last resort in the event of a systemic crisis.

In 2021, the deposit growth slowed in comparison to 2020 due to the retention of very low deposit interest rates coupled with accelerating inflation which stimulated economic agents to redirect part of their savings to consumption as well as to seek investment opportunities as alternatives to deposits. At the same time, lending to households and businesses almost doubled in 2021.

*Table 2 Macroeconomic and financial indicators for Bulgaria*

| Indicators | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|---|---|---|---|---|---|---|
| GDP growth, % | 2.7 | 4.0 | - 4.4 | 4.2 | 2.1 | 3.2 |
| Private consumption growth, % | 3.1 | 3.9 | 1.2 | 8.0 | 2.7 | 3.0 |
| Total deposits, lei million, annual change % | 7.3 | 9.7 | 9.7 | 9.1 | 7.2 | 7.0 |
| Household deposit growth, % | 7.7 | 8.0 | 9.7 | 9.0 | | |
| Non-financial corporations deposit growth, % | 5.2 | 14.3 | 10.5 | 8.5 | | |
| Financial corporations deposit growth, % | 16.9 | 2.4 | 2.0 | 16.9 | | |
| Foreign direct investment, % of GDP | 2.7 | 3.2 | 5.2 | 2.6 | | |
| Gross capital formation, % of GDP | 18.8 | 18.6 | 19.2 | 16.6 | | |
| HICP, % | 2.3 | 3.1 | 0.0 | 6.6 | 9.6 | 3.9 |
| Unemployment rate, % | 6.1 | 5.9 | 6.7 | 4.8 | 5.2 | 4.9 |
| Public sector expenditure, % of GDP | 36.9 | 35.5 | 41.8[16] | 43.1 | | |
| Gross external debt, % of GDP | 66.1 | 61.3 | 64.9 | 61.8 | | |
| Government debt, % of GDP | 22.1 | 20.0 | 24.7 | 25.1 | | |
| Budget deficit/surplus, % of GDP | 1.7 | 2.1 | - 4.0 | - 4.1 | | |
| Average monthly wage in euro | 573 | 633.5 | 695.5 | 775.5 | | |
| Money supply, % of GDP | 84.8 | 85.1 | 94.7 | 94.8 | | |
| Monetary base, million BGN | 32 590.2 | 32 477.6 | 43 810.5 | 47 779.7 | | |
| Central bank balance sheet, BGN thousand | 51 264 563 | 50 881 190 | 62 539 687 | 69 964 089 | | |
| Key interest rate | 0.00 | 0.00 | 0.00 | 0.00 | | |
| Deposit of the Banking Department, BGN thousand | 5 721 320 | 6 150 286 | 6 909 195 | 8 963 406 | | |
| Commercial banks reserves, BGN thousand | 15 267 214 | 14 462 625 | 23 518 532 | 24 313 910 | | |
| Fiscal reserve at BNB, thousand BGN, as at 31 December | 10 719 427 | 8 853 715 | 8 646 875 | 9 531 918 | | |
| Gross international foreign reserves, million BGN | 49 036.9 | 48 574.2 | 60 333.9 | 67 666.3 | | |
| Loans to non-government sector, annual growth, % | 8.4 | 9.3 | 4.4 | 8.7 | | |
| Household loans, annual growth, % | 11.2 | 9.5 | 6.6 | 13.4 | | |
| Loans to non-financial corporations, annual growth, % | 5.4 | 5.9 | 3.0 | 4.6 | | |
| Loans to financial corporations, annual growth, % | 23.7 | 26.9 | 3.6 | 15.0 | | |
| House Price Index, total | 6.6 | 6.0 | 4.6 | | | |
| Current account balance, % GDP | 0.9 | 1.9 | -0.1 | -0.4 | - 5.4 | - 2.8 |

*Source: BNB, Eurostat*

According to the BNB analysis (2022) risks to lower GDP growth are mainly associated with the military conflict in Ukraine and the emergence of additional disruptions in the supply of prime and raw materials from the countries involved in the war. There are risks to the inflation forecast of a stronger increase in prices. These risks are associated mainly with international commodity price dynamics. Other risks stem from possible changes in the regulated prices of electricity, water and sewerage services, and heating for household consumers in line with substantial rise in energy prices.

The European Commission Spring forecast (2022) reveals that annual inflation will rise to 11.2% in 2022 and starting to decline in 2023. The unemployment rate is expected to remain at 5.4% in 2022. The budget deficit will exceed 3% of GDP in 2022 while the government debt will remain at 25% of GDP.

**In Romania,** economic growth reached 5.9% in 2021. The unemployment fell to 2.7%, a level lower than before the pandemic. The HICP accelerated to 4.1% on an annual basis, with the main contributors again being the increase in private consumption and rising food and energy prices in the international market. In 2021, the budget deficit declined to 7.1% of GDP. As a result of expansionary monetary policy, the NBR balance sheet has substantially grown. While in 2019 total assets amounted to RON 194,556.1 mn, in 2020 it grew to 231,794. 0 mn and continued to rise in 2021. In February 2020 net foreign assets amounted to RON 203,671.7 mn that augmented to RON 231,314.8 mn in 2021 (NBR 2021, 2022).

Since the beginning of 2022, the NBR has continued to tighten monetary policy, raising the monetary policy rate by 0.50 percentage points, to 2.50%. Moreover, it decided to raise by 0.50 percentage points both the lending facility rate and the deposit facility rate, to 3.50% and 1.50% respectively, as well as to maintain firm control over money market liquidity. Furthermore, the NBR decided to keep the existing levels of minimum reserve requirement ratios on both leu- and foreign currency-denominated liabilities of credit institutions at 8% and 5% respectively[17]. In March 2022 the annual inflation reached 10.15%. This was mainly due to the increase in production costs, as a combined result of the energy crisis triggered in mid-2021 and the shock wave generated by the Russia-Ukraine war on the commodities markets. On 5th April 2022 the NBR decided to increase the monetary policy rate from 2.5% to 3% per year to counter the rising inflation (NBR 2022).

According to the European Commission (2022) Romania's economy is set to slow down to 2.6% in 2022 as high inflation erodes disposable income and Russia's war of aggression against Ukraine affects economic sentiment, supply-chains and ultimately investment. Unemployment is projected to stay at 5.5% while price level growth will peak in 2022. The general government deficit is forecast to reach 7.5% of GDP before decreasing to 6.3% in 2023, bringing the debt-to-GDP ratio up to 52.6% by 2023.

[17] https://www. bnr. ro/Reserve-requirements-3658-Mobile. aspx

*Table 3 Macroeconomic and financial indicators for Romania*

| Indicators | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|---|---|---|---|---|---|---|
| GDP growth % | 4.5 | 4.1 | -3.9 | 5.9 | 2.6 | 3.6 |
| Private consumption growth, % | 7.7 | 3.9 | - 5.1 | 7.9 | 2.9 | 3.5 |
| Total deposits, annual change % | 5.9 | 5.4 | 10.5 | | | |
| Household deposit growth, annual change % | 6.0 | 7.5 | 11.3 | | | |
| Non-financial corporations deposit growth, annual change % | 5.1 | 3.3 | 11.6 | | | |
| FDI, % of GDP | 3.0 | 2.9 | 1.4 | 3.7 | | |
| Gross fixed capital formation, % of GDP | - 1.1 | 12.9 | 4.1 | 2.3 | 4.8 | 8.1 |
| HICP, % | 4.1 | 3.9 | 2.3 | 4.1 | 8.9 | 5.1 |
| Unemployment rate, % | 3.3 | 2.9 | 3.4 | 5.6 | 5.5 | 5.3 |
| General government expenditure, total % GDP | 34.9 | 36.3 | 42.0 | 39.9 | | |
| External debt, total, % of GDP | 48.8 | 49.2 | 57.7 | | | |
| Government debt, % of GDP | 34.7 | 35.3 | 47.3 | 48.8 | 50.9 | 52.6 |
| General government balance % GDP | -2.8 | -4.3 | -9.3 | - 7.1 | - 7.5 | - 6.3 |
| Money supply (M3), % GDP | 40.0 | 39.9 | 46.2 | | | |
| Reserve money, lei million, December | 100,349.8 | 108,249.3 | 132,624.8 | 143,265.2 | Feb. 134,648.0 | |
| Central bank balance sheet, lei million, December | 190,252.5 | 194,556.1 | 231,794. 0 | 258,265.5 | Feb. 262,029.5 | |
| Monetary policy rate, % p.a | 2.50 | 2.50 | 1.50 | 18/01/2021 - 1.25%;<br>06/10/2021 - 1.50%;<br>10/11/2021 - 1.75% | 11/01/2022 - 2.00%;<br>10/02/2022 - 2.50%;<br>06/04/2022 - 3%<br>07/07/2022 – 4.75%<br>08/08/2022 – 5.50% | |
| Lending facility rate, % p.a | 3.50 | 3.50 | 2.00 | 18/01/2021 - 1.75%;<br>06/10/2021 - 2.00%;<br>10/11/2021 - 2.50% | 11/01/2022 - 3.00%;<br>10/02/2022 - 3.50%;<br>06/04/2022 - 4.00%<br>07/07/2022 – 5.75%<br>08/08/2022 – 6.50% | |
| Deposit facility rate, % p.a | 1.50 | 1.50 | 1.00 | 18/01/2021 - 0.75%;<br>06/10/2021 - 1.00%;<br>10/11/2021 - 1.00% | 11/01/2022 - 1.00%;<br>10/02/2022 - 1.50%;<br>06/04/2022 - 2.00%<br>07/07/2022 – 3.75%<br>08/08/2022 – 4.50% | |
| Due to domestic credit institutions and other financial institutions lei thousand | 38, 67,447 | 43, 57,228 | 48, 93,048 | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| Current account of the State Treasury lei thousand | 37, 424,485 | 23, 01,090 | 40, 318,645 | | | |
| International reserves, total million euro | 36,800.2 | 37,450.4 | 42,517.6 | 45,830.7 | | |
| Loans to the private sector - total, annual change % | 1.9 | 3.6 | 2.4 | | | |
| Loans to households, total, annual change % | 4.5 | 3.8 | 3.4 | | | |
| Loans to non-financial corporations, total, annual change % | -1.3 | 3.1 | 0.9 | | | |
| Current account, balance, % of GDP | -4.6 | -4.9 | -5.8 | -7.0 | - 7.5 | - 6.3 |

*Sources: National Bank of Romania, NBR Annual reports 2019, 2020, Eurostat, NBR Monthly bulletin December 2019, 2020, February 2022, European Commission Spring 2022 Economic Forecast*

The Serbian economy recorded a strong rebound in 2021. Real GDP growth reached 7.4%, mostly driven by private consumption, gross fixed capital formation and public consumption. The unemployment rate slightly increased in 2021. It is expected to decline in 2022 and 2023. The general government deficit and the debt-to-GDP ratio, after decreasing to 4.1% of GDP and 57.1% respectively in 2021, are expected to decrease in 2022 and 2023.

Banking sector stability has been preserved and further reinforced in 2021. At the same time, the central bank's balance sheet has grown due to the expansionary monetary policy. It expanded from RSD 1,789,983 mn in 2019 to RSD 1,935,018 mn in 2020 and to RSD 2,211,996 mn in 2021. The foreign assets rose from RSD 1,584,736 mn in 2019 to RSD 1,598,360 mn in 2020 and to RSD 1,947,103 mn in 2021. The net foreign assets were RSD 1,287,399 mn in 2019, and then increased to RSD 1,347,165 mn and RSD 1,744,488 mn in 2021.

Similar to Bulgaria and Romania, the European Commission's forecast (2022) reveals that the Serbian economy will grow more moderately by 3.4% in 2022 and by 3.8% in 2023. The inflation has accelerated since the second half of 2021. In March 2022 it rose to 9.1% and it is projected to peak in the middle of 2022. In May 2022, the NBS decided to increase the key policy rate by 0.5 pp to 2.0% due to the inflationary pressures in the global and domestic markets.

*Table 4 Macroeconomic and financial indicators for Serbia*

| Indicators | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|---|---|---|---|---|---|---|
| GDP growth, % | 4.5 | 4.3 | -0.9 | 7.4 | 3.4 | 3.8 |
| Private consumption growth, % | 3.1 | 3.7 | -1.9 | 7.6 | 3.6 | 3.8 |
| Deposits, total, annual change % | 8.77 | 8.80 | 8.54 | 8.76 | | |
| Household deposits, total, annual change % | 9.2 | 8.9 | 8.9 | 8.8 | | |
| Deposits from non-financial corporations, total, annual change % | 8.1 | 8.6 | 8.0 | 8.7 | | |
| Foreign direct investment, % of GDP | 8.0 | 8.3 | 6.5 | | | |
| Gross fixed capital formation, % of GDP | 17.5 | 17.2 | - 1.9 | 12.5 | 4.4 | 4.8 |
| CPI, % | 2.0 | 1.7 | 1.6 | 4.0 | 8.5 | 4.6 |
| Unemployment rate, % | 13.7 | 11.2 | 9.7 | 11.0 | 10.0 | 9.3 |
| General government expenditure total % GDP | 40.9 | 42.3 | 49.4 | | | |
| Government debt % of GDP | 53.6 | 51.9 | 57.0 | 57.1 | 54.5 | 52.5 |
| General government balance % GDP | 0.6 | 0.2 | -8.3 | -4.1 | - 3.1 | - 1.8 |
| Monthly average wage in euro | 419.8 | 466.0 | 510.9 | 560.2 | | |
| M3, annual change % | 14.5 | 8.4 | 18.1 | 11.8 | | |
| Total reserve money, in million RSD | 776,599 | 810,724 | 1, 009,731 | 1, 074,875 | | |
| Central bank balance sheet, in million RSD | 1, 558,164 | 1, 789,983 | 1, 935,018 | 2, 211,996 | | |
| Key policy rate, % | 3.0 | 2.25 | 1.00 | 1.00 | 1.50 (April)<br>2.00 (May)<br>2.50 (June)<br>2.75 (July)<br>3.00 (August)<br>3.50 (September) | |
| Discount rate, % | 3.00 | 2.25 | 1.00 | 1.00 | 1.50 (April)<br>2.00 (May)<br>2.50 (June)<br>2.75 (July)<br>3.00 (August)<br>3.50 (September) | |
| Deposit facilities interest rate | 1.25 | 0.75 | 0.10 | 0.10 | 0.50 (April) | |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | | | | 1.00 (May)<br>1.50 (June)<br>1.75 (July)<br>2.00 (August)<br>2.50 (September) | |
| Lending facilities interest rate | 4.25 | 3.50 | 1.90 | 1.90 | 2.50 (April)<br>3.00 (May)<br>3.50 (June)<br>3.75 (July)<br>4.00 (August)<br>4.50 (September) | |
| Banks' reserves with the NBS, million RSD | 549,295 | 566,902 | 705,596 | 731,690 | | |
| Government deposits, million RSD | 237,890 | 361,455 | 365,857 | 471,652 | | |
| Foreign exchange reserves, in million RSD | 1, 331,088 | 1, 573,213 | 1, 586,352 | 1, 934,756 | | |
| Loans to the private sector - total, annual change % | 9.15 | 9.21 | 9.10 | 9.20 | | |
| Loans to households, total, annual change % | 8.9 | 9.2 | 8.9 | 9.0 | | |
| Loans to non-financial corporations, total, annual change % | 9.4 | 9.3 | 9.2 | 9.3 | | |
| Loans to financial organisations, total, annual change % | - 11.4 | 8.5 | 9.3 | - 10.5 | | |
| Current account, balance, % of GDP | -4.8 | -6.9 | -4.1 | -4.4 | -6.5 | -6.4 |

*Source: National Bank of Serbia, NBS Statistical bulletin January 2022, Eurostat, Macroeconomic developments in Serbia May 2022, European Commission Spring 2022 Economic Forecast*

## Conclusion

Based on the reactions and measures of the monetary and fiscal authorities during the pandemic, we can draw the following conclusions:

First, the nature of the measures and the scale of the interventions by the governments and the central banks in the three Balkan countries depend mostly on the monetary regime in place and the constraints it imposes on monetary and fiscal policy. Our analysis confirms the limited capacity of Bulgaria's conservative currency board regime to respond to external shocks. Unlike Bulgaria, the two inflation-targeting countries have used both conventional and unconventional monetary policy tools to mitigate the negative effects and recover from the crisis.

Second, under currency board regime, the central bank cannot influence interest rates, cannot create liquidity through the purchase of securities, through quantitative easing, and cannot carry out open market operations. Therefore, the creation of a monetary base and the growth of the central bank's balance sheet is tied to the balance of payments. Unlike the currency board arrangement in inflation targeting regimes, central banks acted as a lender of last resort for banks and the government and increased their balance sheets significantly during the pandemic. Furthermore, the NBS was also a lender of last resort to non-financial corporates, as local-currency denominated corporate bonds became eligible for open market operations and they could be used as collateral for banks to receive daily liquidity loans and short-term liquidity from the central bank.

Third, the constraints on fiscal policy under currency board have led to limited government intervention and have resulted in the smaller fiscal package in Bulgaria compared to those in Romania and Serbia. The limited fiscal space in Bulgaria is partly compensated by payments from EU funds and programmes. Despite the maintenance of a high fiscal reserve, which provides some opportunities for a government response, the fiscal policy has been restrictive and conservative in order to maintain the fixed exchange rate and the stability of the financial system.

Fourth, unlike in Romania and Serbia, where central banks used almost all conventional and unconventional monetary policy tools, in Bulgaria only supervisory and regulatory measures to the banking sector were implemented. In Bulgaria these measures included a ban on the distribution of retained earnings from previous years to strengthen the capital base, restrictions on the level of concentration and quality of assets in which banks can invest their liquid assets, maintaining the level of the countercyclical capital buffer, and a private moratorium on bank loan payments. The regulatory measures applied in the three countries broadly follow those taken by the ECB and the European Banking Authority.

Fifth, although in all three Balkan countries the banking system was highly liquid and stable before the pandemic, national central banks entered into precautionary swap (Bulgaria) and repo lines (Romania and Serbia) with the ECB to further strengthen financial stability in the crisis. The main reason is that the BNB cannot act as a lender of last resort. In Romania and Serbia, central banks have further increased their capacity to act as lender of last resort.

Sixth, as regards to the effects of monetary and fiscal measures on growth, employment and inflation, it is noteworthy that during the pandemic the two countries with inflation targeting achieved a lower decline in GDP than Bulgaria in 2020. In 2021, the Romanian and Serbian economies have achieved a faster recovery, recording higher growth and lower inflation. However, Romania and Serbia have increased their budget deficits and public debt significantly during the Covid-19 crisis, while Bulgaria continues to be among the EU member states with the lowest deficit and government debt.

In the light of these finding we can deduce that now inflation control has become a major challenge for central banks in the post-pandemic time in the context of increased consumption and rising global energy and food prices, supply problems as well as the Russia – Ukraine war. Since the beginning of 2022 the inflation has rapidly surged in the three Balkan countries mainly due to geopolitical tensions and the negative developments in the world economy, imported inflation.

Since the beginning of the year, inflation has been growing rapidly in the three countries under consideration, with the strongest growth in Bulgaria. In Bulgaria, for August the general inflation on an annual basis reached 17.7%, or a monthly rate of 1.2% (for July, 17.3% and a monthly rate of 1.1%), and for food it was even higher, or 24.1% for August and 23.8% for July. Housing and utilities also grew significantly, or 26.8% for August and 18.5% for July. In Romania the numbers were lower, the general inflation on an annual basis for August was 15.32% (monthly 0.56%) and 14.96% for July (monthly 0.89%), and for food it was 18.22% for August and 16.05% for July. In Serbia, the figures for general inflation on an annual basis were even lower, namely, 13.2% for August and 12.8% for July. For food, it was higher, or 20.4% for August and 19.7% for July.

While the BNB does not have the tools to react to soaring prices, the NBR and NBS have started tightening monetary conditions by raising key monetary policy rates as well as lending and deposit facilities interest rates. From the beginning of 2022, the central banks of Romania and Serbia raised 6 times the key interest rates, which reached 5.5% in Romania and 3.5% in Serbia, respectively. The corridors of the marginal lending and deposit facilities rates have a margin of 1% around the key rate.

The monetary authorities in Bulgaria have little choice, and interest rates in Bulgaria follow those of the ECB. For now, the exchange rates in Romania and Serbia are relatively stable, and in Bulgaria the exchange rate is fixed within the framework of the currency board. The inflationary challenge to monetary policies is very strong, both in Romania and Serbia it will require a significantly higher rise in interest rates than in the euro area, as well as efforts to maintain the level of the exchange rate, which could become a major factor in pass-through inflation. In Bulgaria, things are more unpleasant, and only regulatory measures remain at the disposal of the monetary authorities, and above all an increase in capital buffers, - anti-cyclical, systemic and, under certain conditions, sectoral (greater provisioning for real estate loans). In any case, apart from inflation, it is clear that bank balance sheets will deteriorate, and this requires pre-emptive action by regulators.

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