



TOPICAL RESEARCH AND HIGHLIGHTS

ANALYSIS OF BULGARIA'S FISCAL STANCE IN THE PERIOD AFTER 2020

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BULGARIAN NATIONAL BANK

Analysis of Bulgaria's fiscal stance in the period after 2020

A country's fiscal stance is generally assessed as appropriate if it ensures an appropriate balance between the objectives of achieving sustainability of public finances and stabilisation in economic activity. The prudent fiscal policy implemented by Bulgaria allowed it to respond to the economic shock caused by the COVID-19 pandemic in 2020 with very good fiscal indicators, which provided the necessary fiscal space to undertake stimulus measures to limit the negative effects of the pandemic spread. At the same time, a sustainable trend of maintaining budget deficits was formed in the period after 2020 in Bulgaria, reflecting both a prolonged period of political instability and easing of fiscal policy as well as the impact of other factors such as the military conflict in Ukraine that started in 2022. The aim of this study is to analyse in greater depth Bulgaria's fiscal stance in the period after 2020, comparing it with the cyclical position of the economy over the same period, as well as examining the synchronisation of the ongoing fiscal policy with the monetary and macroprudential policy measures of the Bulgarian National Bank (BNB) and the outlook for the sustainability of public finances.

The budget balance reacts automatically to the dynamics of economic activity, mainly through the change in tax and social security revenues and unemployment benefits, which contribute to smooth the economic cycle regardless of the discretionary measures of the fiscal policy. The impact of automatic stabilisers on the budget balance is usually measured by its cyclical component, which, in turn, depends on estimates of the cyclical position of the economy and the elasticity of the budget balance as a percentage of GDP to the change in the cyclical position of the economy. At the same time, the budget balance reflects also governments' discretionary decisions on the expenditure and revenue side of the budget, as well as non-cyclical factors beyond the control of governments. There is no uniform definition or a uniform approach in the economic literature to estimate a country's fiscal stance. Different approaches are used to capture the aggregate impact of discretionary fiscal measures on the budget balance through certain indicators.

Approaches for the assessment of the fiscal stance

Approaches for the assessment of the fiscal stance can be broadly divided into three groups.

The first (referred to as 'top-down') approach uses the cyclically adjusted (or structural¹) budget balance, *i.e.* the budget balance, that would be realized if the level of economic activity was consistent with the potential level of output in a country. Interest expenditure is deducted from the cyclically adjusted (structural) balance², as interest expenditure is assumed to be outside the direct control of governments, at least in the short run. When viewed in terms of its level, the cyclically adjusted primary (respectively structural primary) balance can be considered an appropriate indicator of the underlying fiscal position of the country, as it provides an indication of the level of fiscal support to economic activity provided by governments in addition to automatic stabilisers. In turn, the change in this balance compared to the previous year may be seen as a more appropriate indicator regarding the amount of the additional impulse (stimulus) by which fiscal policy contributes to the economic activity in a particular year, as presented by the growth rate of real GDP.

The European Central Bank (ECB) uses the annual change in the cyclically adjusted primary balance³ as the main indicator for determining the fiscal policy stance (or direction/course) of the individual euro area countries. In turn, the European Fiscal Board, which has a mandate to assess

¹ The structural budget balance is the cyclically adjusted balance calculated on the basis of cyclically adjusted revenue and expenditure items, net of one-off or temporary fiscal measures.

² The cyclically adjusted (structural) budget balance, which excludes interest expenditure, is the so-called cyclically adjusted primary balance (structural primary balance, respectively).

³ The amount of fiscal measures to support the financial sector is deducted from the cyclically adjusted primary balance. In addition, as of 2021, it is also net of revenue from grants under the Next Generation EU (NextGenerationEU) instrument, as this revenue does not have an impact on economic activity because it does not have a direct impact on demand.

the adequacy of the euro area fiscal stance as a whole, considers the level of the structural primary balance as an indicator of the degree of support provided by fiscal policy to aggregate demand in the economy, and this support is defined as expansionary or restrictive. The European Fiscal Board measures the fiscal impulse through the annual change in the structural primary balance and identifies it as expansionary or restrictive accordingly.

The main constraints in using a top-down approach to measuring the fiscal stance are related to the uncertainty regarding both the assessment of output gap and estimates of the elasticity of individual budget revenues and expenditures to the change in the cyclical position of the economy⁴. In addition, this approach does not provide information on individual discretionary fiscal measures on the revenue and expenditure side of the budget, but for the purpose of determining the impact of fiscal policy on economic activity, these measures play an important role as a number of empirical studies point to significant differences in the size of fiscal multipliers⁵ in individual tax and expenditure budget measures.

The second (referred to as 'bottom-up') approach defines active fiscal policy by estimating the amount of fiscal measures on the revenue and expenditure side of the budget. A limitation to the practical application of this approach is often the lack of sufficient and detailed information to allow measuring the exact amount of budgetary effect of government discretionary measures both *ex ante* and *ex post*. Another limitation of this approach is that it does not sufficiently take into account the impact on the current fiscal stance of discretionary measures that have entered into force in previous years.

The third approach to assessing the fiscal stance is based on a combination of elements from the above two approaches and can be defined as mixed. Building on the reformed fiscal framework of the European Union (EU), which has been in place since the end of April 2024⁶, the European Commission (EC) is currently applying a similar mixed approach to assessing the fiscal stance of EU Member States⁷. Under this approach, the European Commission measures the fiscal stance as the increase in net budget expenditures relative to medium-term potential output growth. The net expenditure indicator covers budget expenditures that are generally under governments' control. This expenditure excludes interest expenditure, the cyclical component of unemployment benefits expenditure, as well as one-off and temporary budget expenditures. The amount of discretionary measures on the revenue side of the budget (net of revenue measures of a one-off and temporary nature) is also excluded from the net budget expenditures. The European Commission determines a country's fiscal stance as contractionary if the indicator so calculated grows at a lower rate than nominal medium-term potential GDP growth, and as expansionary if the net expenditure growth rate is higher than that of medium-term potential output.

Assessment of Bulgaria's fiscal stance

Taking into account the information available, in this research topic the fiscal stance of Bulgaria is estimated only by applying a close to a 'top-down' approach. It is based on the methodology currently applied within the European System of Central Banks.⁸

⁴ A detailed analysis of the main weaknesses in the use of the cyclically adjusted balance to assess the fiscal stance is provided in the article: *Braz, C. and M. M. Campos (2021). Challenges in Measuring Fiscal Effects. Bank of Portugal Working Paper 2021-08.*

⁵ For more information on fiscal multipliers in Bulgaria, see: *Karagyzova-Markova, K., Deyanov, G. and Iliev, V. (2013). Fiscal Policy and Economic Growth in Bulgaria. BNB Discussion Papers, 90/2013.*

⁶ The 2024 EU Revised Fiscal Framework is presented in detail in the Research topic *European Union's Revised Economic Governance Framework and Its Potential Implications for Bulgaria's Fiscal Policy* BNB, *Economic Review*, issue 3/2024.

⁷ For more detailed information on the Commission's approach to assessing the fiscal stance of EU Member States, see: *Cepparulo, A. et al. (2024) An Assessment of the Euro Area Fiscal Stance since the Pandemic. European Economy Economic Brief 080/July 2024.*

⁸ The methodology is presented in detail in *Braz, C., M. M. Campos and S. Sazedj (2019). The New ESCB Methodology for the Calculation of Cyclically adjusted Budget Balances: An Application to the Portuguese Case. Bank of Portugal Working Paper 2019-07*, as well as *Morris, R. and L. Reiss (2020). A decomposition of Structural Revenue Developments for Euro Area Member States. ECB Working Paper Series No 2455. August 2020.*

The method for determining the fiscal stance uses the cyclically adjusted balance as the main indicator, which is calculated as follows:

$$CAB_t = \frac{B_t}{Y_t} - \varepsilon^B \times G_t,$$

where CAB_t is the cyclically adjusted balance as a percentage of nominal potential GDP; B_t is the budget balance in level; Y_t is the nominal GDP in level; ε^B is the semi-elasticity of the budget balance as a percentage of GDP relative to the cyclical position of the economy⁹, this semi-elasticity being considered a constant parameter; G_t is the output gap (the difference between the level of economic activity in a given year and the potential level of output in that year, measured as a percentage of potential output).

The semi-elasticity of the budget balance is the difference between the semi-elasticities of total budget revenues (ε^R) and total budget expenditures (ε^E), and these semi-elasticities are the sum of the contributions of revenue and expenditure items (designated by indexes i and j) to the respective semi-elasticity, as shown in the following equation:

$$\varepsilon^B = \varepsilon^R - \varepsilon^E = \sum_i \varepsilon_i^R - \sum_j \varepsilon_j^E.$$

At the same time, the elasticities of individual revenue and expenditure items to the output gap are defined as the product of two elasticities (elasticity of a fiscal variable to the corresponding macroeconomic base and elasticity of each individual macroeconomic base to the change in the cyclical position of the economy).

The estimate of the semi-elasticity of Bulgaria's budget balance (as a percentage of GDP) relative to the output gap used in the current calculations is 0.31. This means that a 1 percentage point increase (decrease) in the output gap is reflected in an improvement (deterioration) in the budget balance of 0.31 percentage points of GDP. The semi-elasticity of total budget revenues is estimated at -0.08 and the semi-elasticity of total budget expenditures is estimated at -0.39. The semi-elasticity of total revenue close to zero indicates that the dynamics of budget revenues (as percentage of GDP) reflects the impact of the business cycle, and, as a result, the total revenue-to-GDP ratio remains broadly unchanged when moving through the phases of expansion and contraction of the economic cycle¹⁰. At the same time, the dynamics of most budget expenditures is assumed not to depend on the business cycle historically, which means that the total expenditure-to-GDP ratio is largely influenced by the denominator (GDP), while the impact of the numerator (expenditure) is very limited.¹¹ As a result, the semi-elasticity of budget expenditures is relatively higher in absolute terms than that of total budget revenues. The estimated semi-elasticity of the budget balance used currently is very close to the assessment in the European Commission's 2019 publication, according to which the semi-elasticity of Bulgaria's budget balance amounts to 0.298.¹²

From the cyclically adjusted budget balance thus obtained, interest expenditure has been additionally deducted. In addition, one-off and other temporary fiscal measures, driven by factors beyond the

⁹ The semi-elasticity captures the impact of the business cycle on both the numerator (budget balance) and the denominator (GDP) of the budget balance-to-GDP ratio.

¹⁰ Non-tax revenues are characterised by relatively low cyclicity and their contribution to the semi-elasticity of total revenue is slightly negative.

¹¹ In times of economic contractions, the total expenditure-to-GDP ratio can be expected to increase and, in the expansion phase of the business cycle, it can be expected to decline.

¹² European Commission's assessment of Bulgaria's budget balance semi-elasticity is published in Table I.3. In [Mourre, G., A. Poissonnier and M. Lausegger \(2019\). The Semi-Elasticities Underlying the Cyclically-Adjusted Budget Balance: An Update and Further Analysis. European Economy Discussion Paper 098/May 2019.](#)

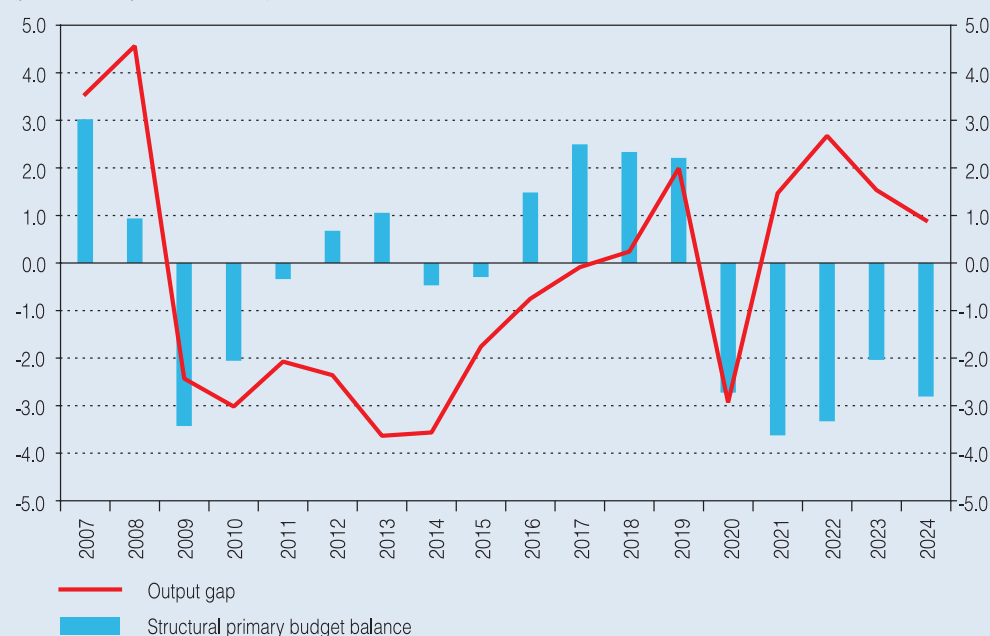
control of the government, which have a significant but short-term effect on the budget balance are also netted-out¹³. As a result of these adjustments to the cyclically adjusted balance, estimates of the structural primary balance are obtained.

Analysis of Bulgaria's fiscal stance after 2020 in the context of the cyclical position of the economy and the BNB monetary and macroprudential policy over the same period. Risks to the sustainability of public finances

The structural primary balance is the main indicator used to analyse Bulgaria's fiscal position over the period since 2020 as presented below. The fiscal stance is assessed using annual data from non-financial accounts of the general government sector published by the National Statistical Institute as of 22 April 2025 and BNB estimates of potential GDP prepared as part of the BNB macroeconomic forecast from June 2025.¹⁴ The analysis covers the period 2007–2024.

Chart 1: Structural Primary Budget Balance and Cyclical Position of the Economy

(per cent of potential GDP)



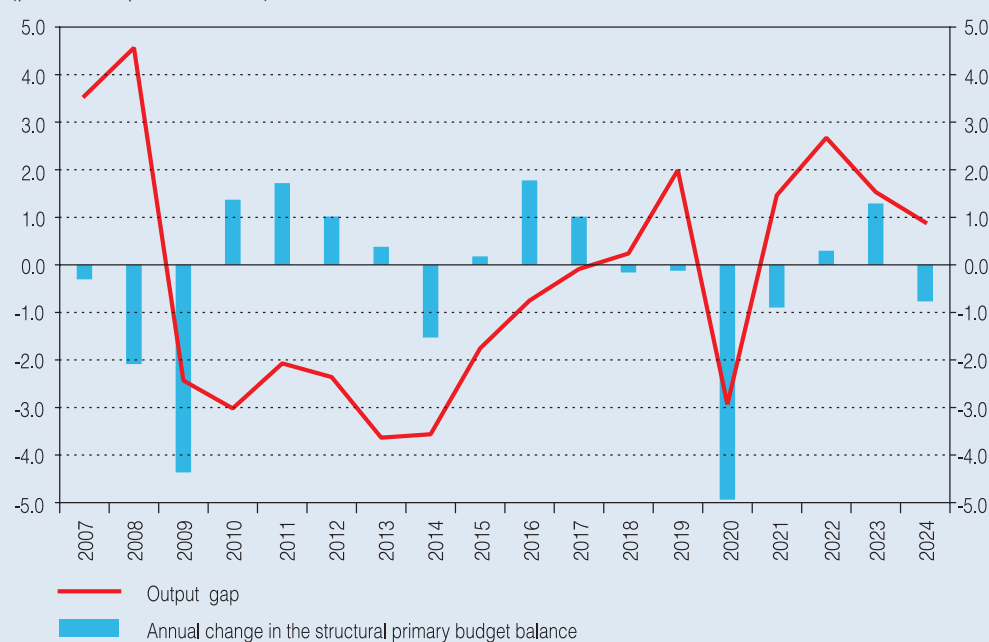
Source: the NSI and own calculations.

When considering the level of the structural primary budget balance and the cyclical position of the economy, the estimates for the 2007–2019 period generally point that the ongoing fiscal policy has been counter-cyclical, and this continued in 2020 with the fiscal measures taken to cushion the economic and health impact of the COVID-19 pandemic. Concurrently, in 2021–2024 amid upward dynamics of the business cycle, which signals overheating economic activity in Bulgaria, there has been a reversal of the counter-cyclical fiscal policy pursued until then and a shift to a pro-cyclical policy as a result of sustained structural primary budget deficits. As regards the fiscal impulse which in this study is measured by the annual change in the structural primary budget balance, a pro-cyclical and accommodative fiscal stance is estimated for 2021 and 2024, while in 2022–2023, the fiscal impulse is identified as counter-cyclical and restrictive.

¹³ In this analysis, such one-off and other temporary fiscal measures have no significant impact on Bulgaria's structural budget balance estimates for most of the period under review, which covers 2007–2024. In particular, their impact is limited to only two years (2007 and 2014). When determining one-off and other temporary fiscal measures the definition used by the European System of Central Banks is followed.

¹⁴ The BNB macroeconomic forecast from June 2025 is published on [the BNB website](#). The estimate of potential GDP is derived from a multivariate model with unobserved components presented in the research topic on [Methods for Estimating the Cyclical Position of the Economy](#), BNB, Economic Review, issue 1/2019.

Chart 2: Annual Change in the Structural Primary Budget Balance and Cyclical Position of the Economy
(per cent in potential GDP)



Source: the NSI and own calculations.

Estimates of the cyclical position of the economy are related to uncertainty in their preparation in real time and are also subject to revisions in view of regular revisions to GDP data and, in the period from 2020, additional uncertainty in the estimates is also added by determining the impact of the shock caused by the spread of the COVID-19 pandemic on the level of potential output. As mentioned above, uncertainties in the assessment of structural developments in terms of government revenue and expenditure are also caused by the use of the semi-elasticities regarding the cyclical position of the economy. In particular, uncertainty in estimates of semi-elasticities stems from the fact that they are calculated over a specific historical period, while in a particular year the cyclical component of individual revenue and expenditure items could deviate from historical dependencies. This would distort the assessment of the cyclical component of the budget balance and, consequently, the estimated structural developments in its dynamics.

Notwithstanding these limitations, the estimates presented indicate that in 2021–2024, a clear downward trend in Bulgaria's fiscal stance was observed as a result of the sustained structural primary deficits, as well as a tendency of continuous pro-cyclical fiscal policy. In addition, taking into account the general government deficit forecast for 2025 (-2.9 per cent of GDP) and interest expenditure forecast (0.8 per cent of GDP) from the Updated Medium-term Budget Forecast for the 2025–2028 Period of the Ministry of Finance of 24 February 2025, as well as the BNB estimate for a persistent positive output gap, a continued pro-cyclical and expansionary fiscal policy in 2025 can be inferred from a continued negative structural primary budget balance. This conclusion is also supported by the EC forecast, which, based on the indicator for the growth of net budget expenditure relative to medium-term potential GDP growth, also determines Bulgaria's fiscal position as expansionary in 2025.¹⁵

To determine the macroeconomic effects from the implemented expansionary fiscal policy, the factors that contributed to the deterioration in Bulgaria's budgetary position, as measured by the structural primary budget balance, are analysed in more detail from 2020-onwards, with developments in government expenditure and government revenues assessed separately.

¹⁵ For further details, see [European Commission, European Economic Forecast, Spring 2025. Institutional Paper 318/May 2025](#).

Over the 2020–2024 period, on average, the structural primary budget balance was negative, with a deficit of -2.9 per cent of potential GDP, while for the historical period from 2007 to 2019, the average balance was positive at 0.6 per cent of potential GDP. The deterioration of the budgetary position between the two periods is determined by an increase in primary budget expenditure by 4.7 percentage points, while the increase in total revenue, measured in structural terms, estimated at 1.2 percentage points, only partially limits the structural deficit.

The increase in primary budget expenditures as a percentage of potential GDP since 2020 compared to the previous period considered was mainly driven by subsidy expenditure, expenditure on compensation of employees in the public sector and pensions expenditure (pensions expenditure accounts for the largest share of social transfers excluding social transfers in kind). The increase in subsidy expenditure mainly reflects the impact of the measures taken to support business and preserve employment to limit the negative consequences of the COVID-19 pandemic (such as the so-called 60/40 programme, which ran until mid-2022), as well as programme measures to compensate industrial end-users for high electricity prices following the start of the war in Ukraine, which continues in a modified version in 2025, notwithstanding a substantial decrease in the price of electricity. Expenditure on compensation of employees and pension expenditure, which account for about half of the primary expenditure and are entirely expenditure of a permanent nature, also contribute significantly to the upward dynamics of government expenditure relative to potential GDP dynamics and are important factors for the structural deterioration of Bulgaria's budgetary position over the last few years. These two expenditure items also recorded the most significant increase when comparing their levels to potential GDP in 2024 and 2019. At the same time, expenditure on fixed capital investment of the general government sector, which is a prerequisite for raising the long-term growth potential of the economy, declined both in the period 2020–2024 compared to 2007–2019, and in 2024 compared to 2019.

Over the past few years, dynamics of the compensation of employees expenditure reflected remuneration policies in individual areas of the public sector, the effects of the increase in minimum wage (including linking it to the average wage in the economy since 2024), as well as the pronounced upward trend in public sector employees, which contributed to a further tightening in labour market conditions in Bulgaria¹⁶. In addition, since 2017, a policy has been implemented to increase the remuneration of teaching staff – initially with the aim of doubling their salaries by 2021, and from 2022 – with the aim of achieving an average salary for teaching staff of no less than 125 per cent of the national average wage for the previous year. Automatic wage-setting mechanisms for the lowest jobs in the defence and security sector also entered into force from the beginning of 2025, linking them to the average wage in the economy for the second quarter of the previous year.

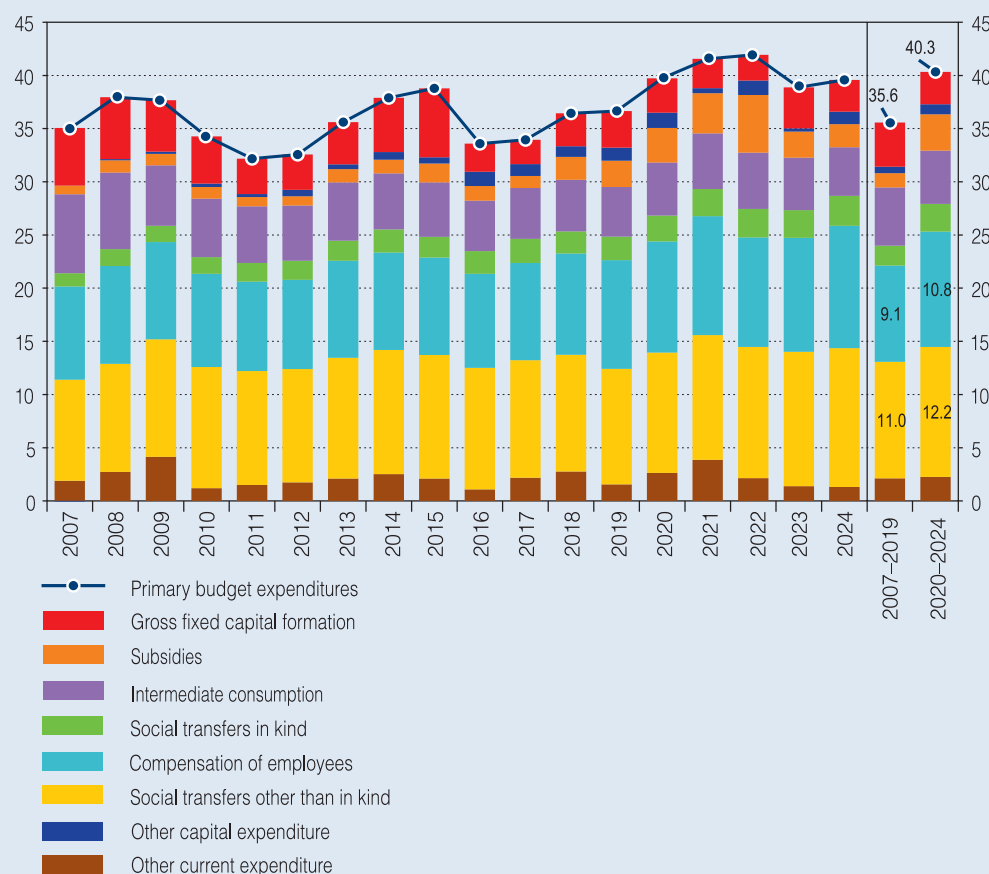
The increase in pension expenditure is due to two main factors, which include annual indexation under the so-called Swiss rule and the effect of the pension supplement initially introduced as a temporary COVID-19 pension supplement for all pensioners, which in 2022 was transformed into a permanent measure by adding it to the basic amount of pensions.

Cyclically adjusted budget revenues, measured as a percentage of potential GDP, posted a relatively limited increase over the 2020–2024 period, compared with the average ratio for 2007–2019, mainly driven by social insurance contributions and direct tax revenues of firms and households. Non-tax revenue as a percentage of potential GDP posted a decline over the review period, limiting the upward dynamics of the total revenue, while VAT revenue maintained its ratio to potential GDP. It should be noted that several discretionary measures undertaken on the revenue side after 2020 have

¹⁶ National accounts data show that the number of employed persons in the general government, education, human health and social work activities sector, which provides an indication of those employed in the general government sector, posted an increase of 12.4 per cent in 2024, compared to 2019. In the first half of 2025, the number of persons employed in this sector continues to rise (by 3.4 per cent year-on-year). Concurrently, the number of persons employed in the general government, education, human health and social work activities sector decreased by 8.9 per cent in 2019, compared to 2007.

Chart 3: Cyclically Adjusted Primary Budget Expenditures

(per cent of potential GDP)



Note: '2007-2019' and '2020-2024' marked on the chart show the arithmetic mean value of the series given for the the respective period.

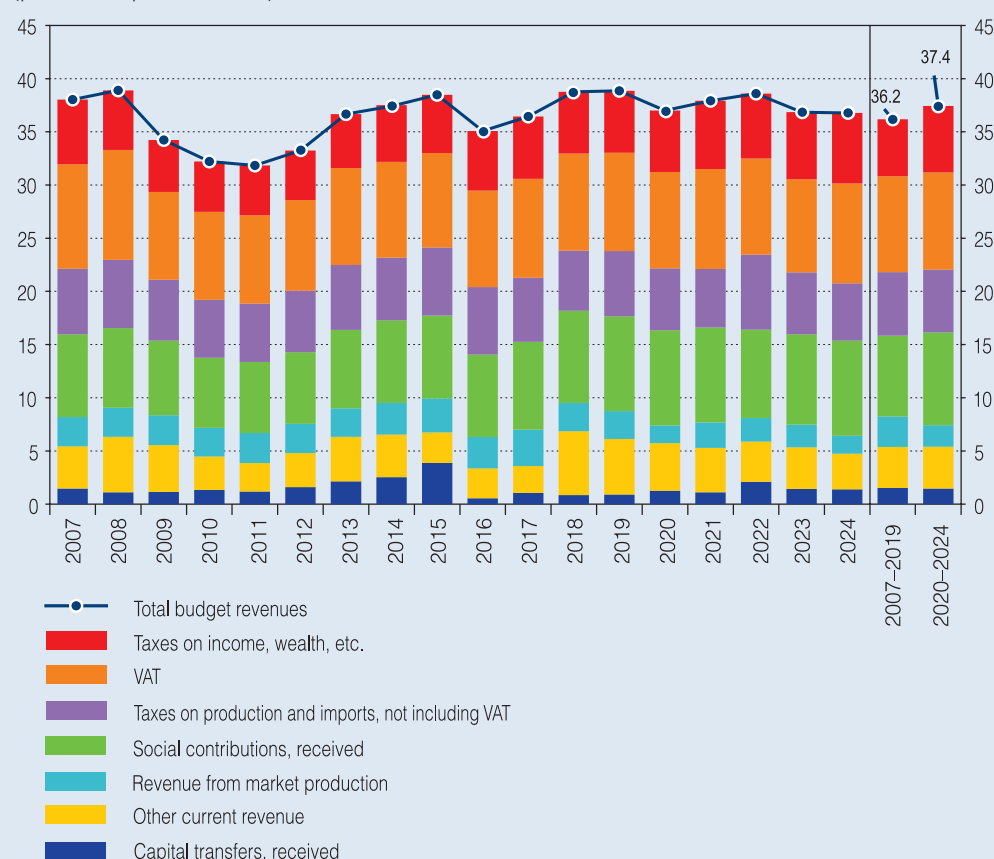
Source: the NSI and own calculations.

had some limiting effect on tax revenue dynamics. These measures include the initially introduced as a temporary but subsequently transformed into a permanent measure related to the increased amount of tax relief for families with children (which is not targeted) as well as the temporarily reduced VAT rates on certain goods and services, some of which were reinstated to the standard level in 2024, while another part was reinstated only since the beginning of 2025.

The expansionary fiscal policy pursued over the past few years, which has supported domestic demand and exerted inflationary pressure by strengthening the wage-price link, has not been synchronised with the BNB consistent counter-cyclical policy implemented through both macroprudential instruments and limited monetary policy instruments. Over most of the period from the end-2021 to mid-2025 macroeconomic developments in Bulgaria are characterised by sustained high core inflation, a trend towards significant tightening of labour market conditions, strong wage growth (in both private and public sectors), strong private consumption and household credit growth, and accelerated house price growth. In this context of macroeconomic developments and taking into account estimates of an upward phase of the business and financial cycle, the BNB successively raised the countercyclical capital buffer rate from 0.5 per cent to 2.0 per cent, the minimum reserve requirements from 10 per cent to 12 per cent, and introduced additional requirements for credit standard indicators on extending and renegotiating loans secured by residential real estate. Concurrently, the stimulative fiscal policy implemented during this period reduced the effectiveness of the BNB counter-cyclical measures.

Chart 4: Cyclically Adjusted Budget Revenues

(per cent of potential GDP)



Note: '2007-2019' and '2020-2024' marked on the chart show the arithmetic mean value of the series given for the respective period.

Source: the NSI and own calculations.

The new fiscal framework in the EU, which is less restrictive in respect of fiscal rules to countries with low public indebtedness as Bulgaria, does not have a restrictive effect on the budget deficit, but only limits it 3% of GDP¹⁷. However, the protracted pro-cyclical and expansionary fiscal policy would have a negative impact on economic growth in Bulgaria. Various empirical studies suggest that the increased cyclicity of public spending increases the volatility of economic growth and also enhances economic uncertainty.¹⁸ Similar developments would be a potential precondition for generating macroeconomic imbalances and worsening financial stability in Bulgaria.

In addition to potential risks to economic and financial stability, the structural deterioration of the fiscal stance also poses risks to the sustainability of public finances. Risks to fiscal sustainability stem mainly from strong growth in current non-interest budget expenditure, which is hardly reversible in nature, the expanding application of automatic mechanisms for indexation of budget expenditure, creating significant short- and medium-term pressure on the expenditure side of the budget, and the prospects for a rapid increase in public debt, irrespective of its current low level. A protracted and/or rapid increase in public debt would increase interest expenditure and pose a risk to fiscal sustainability with potentially negative effects on economic activity, particularly in a context of heightened uncertainty about developments in the global economic environment. Similar upward debt dynamics would limit the the available fiscal space to increase investment in fixed capital, to meet

¹⁷ See footnote 6.

¹⁸ See *Chrysanthakopoulos, C. et al. (2025) Government Spending cyclicity, Economic Stability and Uncertainty*, Economic Systems. Economic Systems (May 2025); *Fatas, A. and I. Mihov (2003). The Case for Restricting Fiscal Policy Discretion*. The Quarterly Journal of Economics 118(4), 1419-1447.

NATO commitments for higher defence and security spending, and to address external shocks and future structural budgetary risks, including risks related to population ageing.

To mitigate potential macroeconomic risks and the risks to the sustainability of public finances arising from Bulgaria's deteriorated fiscal position, fiscal consolidation measures are to be taken, but they should not have a negative effect on economic growth. Concurrently, given the only mildly restrictive nature of the new European fiscal rules for low-debt countries and to preserve Bulgaria's fiscal sustainability, it is essential for the national fiscal rules to remain sufficiently conservative.

Conclusion

The analysis shows that in the 2020–2024 period a clear trend toward deterioration of the country's fiscal stance is observed, driven mainly by the significant increase in compensation of employees and pension expenditure. This expenditure accounts for a significant portion of current budget spending and will continue to put pressure on the expenditure side of the budget due to the expanding application of automatic mechanisms for budget expenditure indexation. Estimates of the fiscal stance also suggest an implementation of a procyclical fiscal policy since 2021, which has boosted domestic demand and created additional inflationary pressure in the context of an upward phase of the business and financial cycle in the economy. The procyclical fiscal policy poses not only potential risks for higher volatility in macroeconomic activity, but also risks for the sustainability of public finances. To mitigate these risks, it is essential to implement fiscal consolidation measures which contribute to the improvement of Bulgaria's fiscal stance but at the same time they should not adversely affect economic growth. Concurrently, taking into account the only mildly restrictive nature of the new European fiscal rules for low-debt countries and to preserve Bulgaria's fiscal sustainability, it is essential for the national fiscal rules to remain sufficiently conservative.

THE SCULPTURAL COMPOSITION BY KIRIL SHIVAROV DEPICTING HERMES AND DEMETER ON THE SOUTHERN FAÇADE OF THE BULGARIAN NATIONAL BANK BUILDING IS USED IN COVER DESIGN.