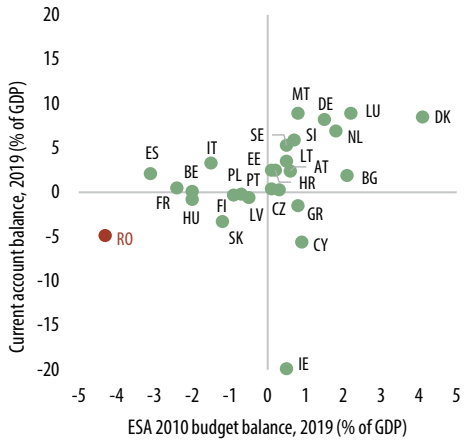
Box 3. Assessments of the impact of the budget balance on the current account balance

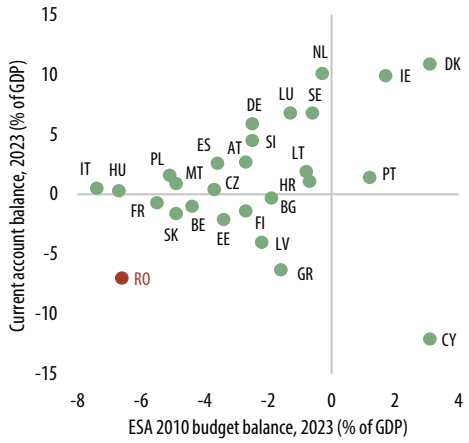
Romania's economy faces a number of large domestic and external disequilibria. Fiscal developments led the European Commission to open the Excessive Deficit Procedure (EDP) in early 2020, calling for a swift start to fiscal consolidation. However, the budget deficit correction was hampered by the simultaneous/successive adverse shocks such as the COVID-19 pandemic or the subsequent mounting of geopolitical tensions. All this also affected the current account deficit, entailing its sizeable widening.

Chart A
Budget balance and current account balance in EU Member States, 2019



Source: Eurostat, NBR processed data

Chart B
Budget balance and current account balance in EU Member States, 2023



Source: AMECO forecasts, NBR processed data

This box aims to highlight in an empirical manner some of the implications that the growth rate of the budget balance has on that of the current account deficit. Specifically, in view of the simultaneous occurrence of the two disequilibria, this study aims to quantify the extent to which a budget deficit widening contributes to the opening of the current account deficit and thus to test the twin deficits hypothesis. A generic analysis focusing on the statistical correlation between the two macroeconomic indicators is pursued rather than a case-by-case approach to assessing how certain fiscal policy decisions impacted the current account deficit.

General considerations on the developments in the budget balance and current account balance

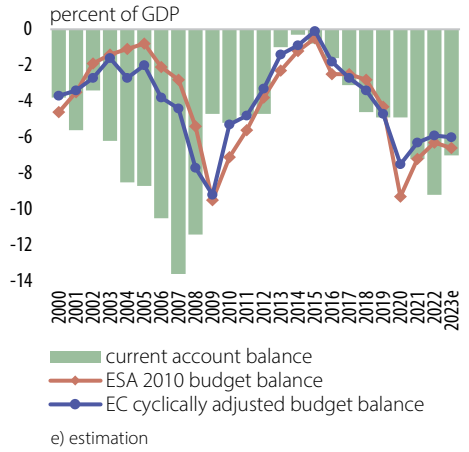
At EU level, Romania is among the countries with the highest current account deficit, alongside a wide negative budget balance. There were large disequilibria even prior to the outbreak of the public health and energy crises (Chart A), which also caused the fiscal positions of other European countries to worsen[1] (Chart B).

As far as Romania is concerned, the current account deficit and the budget deficit (especially its cyclically adjusted component[2]) generally moved in tandem (Chart C). Throughout the period under review (2000-2023), the two disequilibria were correlated, with the relationship between them being stronger from 2009 to 2020. The unfolding of the EDP from 2009 to 2013, implying budget deficit corrections, added to the fallout of the financial crisis, compounding the current account adjustment.

Starting 2016, the progressive deterioration of the fiscal position has also been accompanied by a fast-paced widening of the current account shortfall.

1 In order to mitigate the adverse impact of these shocks, the authorities introduced large packages of economic support measures (e.g. furloughs, vouchers for socially vulnerable groups, the energy price capping and compensation scheme, etc.).

2 The general government balance adjustment by the influence of cyclical factors seeks to determine the size of the budget balance that would have prevailed should the economy have run at its potential level.



Source: Eurostat, AMECO, NBR processed data

Chart C
Budget balance and current account balance in Romania

This reflected *inter alia* the sizeable fiscal stimulus package implemented by the authorities between 2016 and 2017. Box 5 in the NBR's 2019 *Annual Report* sets forth empirical evidence regarding the impact of fiscal measures on the trade in goods balance, as a driver of the current account deficit opening. The analysis shows that the deficit on trade in goods would have been significantly lower in the absence of fiscal easing measures.

There are, however, episodes when the growth rate of the budget deficit and that of the current account deficit appear to be decoupled. A case in point is the 2021-2022 period, when the fiscal consolidation was accompanied by further aggravation of the external imbalance. Nonetheless, this development is associated with one-off factors independent of the fiscal stance, such as persistent disruptions in global value chains or the energy crisis. The presence of such sporadic episodes does not however invalidate the direct historical relationship between the budget deficit and the current account deficit. Subsequently, in the course of 2023, the adjustment of the external imbalance overlapped with a widening of the budget deficit reflecting also high temporary expenses following court rulings favourable to historical wage claims in the public sector.

Mixed empirical evidence on the relationship between the budget balance and the current account balance

In the literature, the twin deficits phenomenon is analysed starting from a macroeconomic model that captures in a stylised yet realistic manner the interplay between the key macroeconomic variables. The model highlights the mechanisms whereby an increase in budget deficit influences the current account imbalance. For example, a policy to reduce taxation (generally) rises households' disposable income, boosts consumption, including that of imports, and thus causes the current account deficit to widen (in this case, the twin deficits hypothesis would be validated). However, the same fiscal easing policy might equally not change household consumption, given that the currently low taxes, which coexist with a higher budget deficit, create expectations of future tax hikes, fuelling savings in the current period. Therefore, fiscal easing would have no effect on the current account deficit (a phenomenon known in the literature as Ricardian equivalence, which invalidates, in certain conditions, the twin deficits hypothesis).

While there is no clear consensus on the causality between the two indicators, most empirical studies point to an incomplete pass-through of budget balance changes to current account changes, thus validating the twin deficits hypothesis. Abbas *et al.* (2011) assessed, in panel regressions on several non-oil-exporting economies, that an increase (improvement) in the (cyclically adjusted) budget balance by 1 percentage point of GDP leads to an increase (improvement) in the current account balance by 0.3-0.4 percentage points of GDP. Similar values for this sensitivity coefficient were found by Forte and Magazzino (2013) for European countries, the authors reporting a range of 0.3-0.5, but also by Furceri and Zdzienicka (2018), whose

panel estimations for a large number of developing economies indicate a value of 0.25, the latter considering only the structural (cyclically adjusted) component of the budget deficit. If the effects stemming from shocks on the discretionary fiscal policy stance, approximated by the impact of fiscal consolidation measures, are quantified, as suggested by Bluedorn and Leigh (2011), or interpreted as forecast errors, as Furceri and Zdzienicka (2018) do, these coefficients reach higher values of between 0.6 and 0.8.

Bussière *et al*. (2004) identify a relatively low short-term effect of a 1 percentage point improvement in the budget balance on the current account balance, assessed at around 0.1 percentage points, and an estimated long-term impact of around 0.2-0.4 percentage points for a sample of 21 OECD countries for the 1960-2003 period. Copaciu and Răcaru (2006) also confirmed these results for a group of OECD countries and Central and Eastern European economies, Romania included. Nickel and Vansteenkiste (2008) show that the relationship between the current account balance and the budget balance turns to be not significant for the countries with a high public debt-to-GDP ratio (above 90 percent), as households become Ricardian, boosting their current savings in anticipation of future tax hikes. However, there are authors who pointed to a bidirectional causality between the two imbalances (Bölükbaş *et al*., 2018), yet such a conclusion is not the subject of this analysis. The various results in the literature could also be explained by the factors behind the pass-through of fiscal shocks to the current account balance, such as the position of the economy within the business cycle, the exchange rate regime or the level of public debt.

Quantitative assessments

An annual panel data set was used to quantify the impact of the budget balance on the current account balance. The period under review is 2000-2022, ensuring a sufficiently large number of observations. Estimations were based on a sample of nine countries in Central and Southeast Europe: Romania, Czechia, Poland, Hungary, Estonia, Lithuania, Latvia, Slovakia and Slovenia. In line with the assessments made by Abbas *et al*. (2011) and Furceri and Zdzienicka (2018), the effect from the (cyclically adjusted) budget balance was investigated to more accurately reflect the discretionary fiscal stance. The choice of this indicator over the headline measure is indicative of the need to address the issue of endogeneity (as aggregate demand shocks are expected to be correlated with the budget balance).

The estimated equation is:

$$CA_{it} = \beta * Cyclically\ adjusted\ budget\ balance_{it} + control\ variables_{it} + \theta_t + \delta_i + \varepsilon_{it}\ ,$$

where:

CA_{it} – current account balance (percent of GDP) of a country i in year t;

$Cyclically\ adjusted\ budget\ balance_{it}$ – cyclically adjusted budget balance (percent of GDP) of a country i in year t; this variable is included, as appropriate, in some specifications also with a lag (e.g., previous year's value, $t-1$);

$control\ variables_{it}$ – depending on the specification, the following variables are used alternatively: (i) real GDP dynamics, (ii) change in unit labour costs (ULC), (iii) degree of openness of the economy (share of imports and exports of goods in GDP), (iv) dynamics of real effective exchange rate (ULC-based REER), and (v) gross fixed capital formation in the private sector (percent of GDP);

θ_t, δ_i – fixed time and country effects; and

ε_{it} – residual term.

Empirical evidence for the countries under review shows, on average, a contemporaneous impact of the improvement in the cyclically adjusted budget balance by 1 percentage point of GDP on the current account balance in the range of 0.2-0.3 percentage points, depending on the chosen specification. The effect reaches around 0.4-0.5 percentage points over the medium term in two years by summing up the coefficients of the cyclically adjusted budget balance in period t and the previous period, $t-1$ – specifications (4) and (5) in Table A[3]. The results are statistically significant in all model specifications.

Table A
Results of the estimations for the impact of the budget balance on the current account balance

Explanatory variables/Dependent variable: Current account balance	(1)	(2)	(3)	(4)	(5)
Cyclically adjusted budget balance	0.32***	0.34***	0.33***	0.26***	0.23**
	[3.62]	[4.78]	[4.44]	[3.07]	[2.32]
Cyclically adjusted budget balance ($t-1$)				0.16*	0.26***
				[1.86]	[3.55]
Δ real GDP	-0.36***		-0.10		
	[-3.35]		[-3.12]		
Δ ULC	-0.15***	-0.10***			
	[-3.35]	[-3.12]			
Degree of openness of the economy		-0.04*	-0.04*	-0.04*	-0.06**
		[-2.04]	[-1.89]	[-2.00]	[-2.71]
Δ REER			-0.10***	-0.10***	-0.12***
			[-2.95]	[-2.95]	[-3.89]
GFCF – private sector		-0.77***	-0.74***	-0.74***	-0.77***
		[-8.71]	[-7.99]	[-7.62]	[-8.48]
R^2	0.73	0.81	0.81	0.81	0.83

*) p<0.10; **) p<0.05; ***) p<0.01

Note: Δ is the annual dynamics of a variable. t statistics are shown in parentheses.

Source: NBR assessments based on AMECO and Eurostat data

The above-described impact reflects an average value, conditional on the characteristics of the economies under review. The incorporation of fixed country effects is intended to mitigate the country specificities of current account balances.

3 For the specification in column 5 of Table A, the 2021-2022 period corresponding to the global inflationary shock, which led to a significant appreciation of the real effective exchange rate, was excluded.

Nevertheless, the question arises whether, in the case of Romania, a different magnitude of current account sensitivity to budget balance changes is justifiable.

Chart D shows the correlation coefficients between the cyclically adjusted budget balance and the current account balance for each country in the analysis. For comparability with previous empirical evidence, the 2000-2022 period was chosen. For Romania, this coefficient is marginally higher than the average of the correlation coefficients of the economies under review (0.45 versus 0.36). Under the circumstances, worth noting is that the previously assessed effects (0.2-0.3 contemporaneous effect and 0.4-0.5 over two years) may be somewhat stronger for Romania's economy.

To sum up, the estimated models confirm the direct relationship between the two variables. Specifically, an increase in budget deficit is expected to bring about a worsening of the current account deficit. Similarly to the results in the literature, this box also pointed out that the pass-through of medium-term fiscal shocks is below one over a two-year horizon, with nearly half of the opening of the structural budget deficit reflecting in a wider external imbalance.

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