Box 5. The impact of fiscal measures on the balance on trade in goods

Throughout the years, fiscal and income policy configuration was changed following the adoption of a number of measures, most of them expansionary in nature. Based on the fiscal impulse, it is assessed to have had a stimulative impact on aggregate demand in the past four years, but also to have played a role in the widening of the current account balance in general and the balance on trade in goods in particular. These developments are largely ascribable to the traction of the rise in household consumption onto imports of goods, given that domestic output failed to accommodate consumer demand. Hence, this box is aimed at gauging the impact of expansionary fiscal measures on the balance on trade in goods.

The analysis of effects of these measures is based on two main reasons. First, external imbalances were a typical feature of Romania's economy, their excessive build-up fuelling/generating episodes of crisis. For instance, in early 2009, Romania received financial assistance from the IMF in order to ensure financing for the significant current account deficit (11.4 percent of GDP in 2008)[1] since, generally, adjustments of a country's competitiveness may take quite some time, are difficult and require in-depth reforms. Second, the literature provides lengthy debates on the twin deficits and the ensuing effects. This issue was frequently studied based on macroeconomic models (Kumhof and Laxton, 2009; Beetsma *et al.*, 2008), but with equivocal results, and less often by applying a comparative method, such as the synthetic control method (SCM; see Hope, 2016), which is employed in this study.

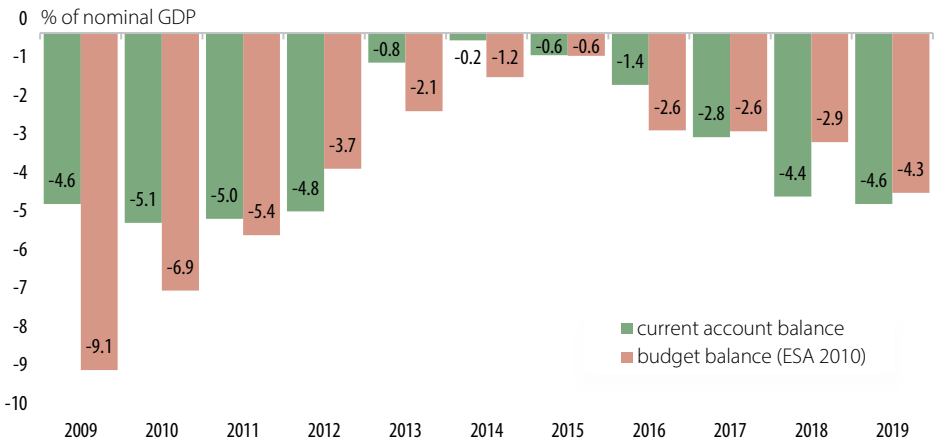

Chart A
Budget and current account balances

Source: NBR, Eurostat

The current account deficit and the fiscal deficit generally went hand in hand (Chart A). After the fiscal deficit (ESA 2010) reached 9.1 percent of GDP in 2009, in 2011-2016 it followed a downward course. Concurrently with fiscal consolidation, external imbalances (reflected in wide current account shortfalls) began to narrow. The sharpest adjustment occurred in 2013-2014, also amid the developments in the government sector. Since 2015, however, the closing trend of the current

[1] https://www.imf.org/en/News/Articles/2015/09/14/01/49/pr09148.

account deficit has reversed, at the same time with the worsening of the fiscal deficit. This was also the result of expansionary fiscal and income policies, marked by many stimuli that sent households' disposable income higher.

The gradual opening of the current account deficit starting 2015 is largely associated with the deterioration of the balance on trade in goods (Chart B). Among the drivers behind these developments were both structural deficiencies that persisted over time[2] and the effects of a positive fiscal impulse, reflected also by the balance of consumer goods falling into negative territory.

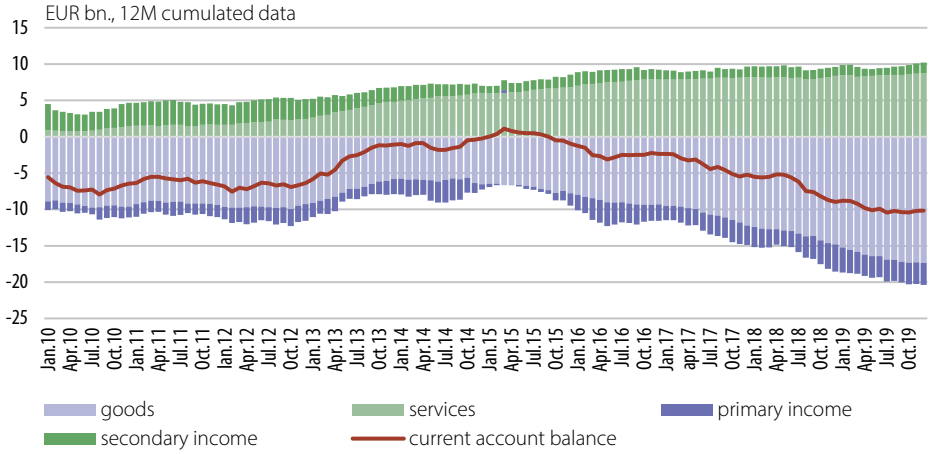

Chart B
Current account balance

Source: NBR, NBR calculations

Between 2015 and 2017, Romania implemented a package of fiscal stimuli that were sizeable relative to both its recent track record and its peers in the region that exhibited similar characteristics over the same period. These measures were largely embedded in Government Programmes or the 2015 Tax Code, as subsequently amended and supplemented. From among the enacted measures, the following deserve mention: (i) lowering of the social security contribution rate for employers by 5 percentage points, effective 2014 Q4, (ii) introduction of a reduced VAT rate on food items starting June 2015, and (iii) the cut in the standard VAT rate from 24 percent to 20 percent in January 2016 and to 19 percent in January 2017. Over the same period, Romania saw its general government balance worsen from a deficit of 0.6 percent of GDP in 2015 to 2.6 percent of GDP in 2016 and 2017, before widening further to 2.9 percent in 2018.

The synthetic control method (SCM) serves to identify the effects of one-off measures with a noticeable long-term impact[3]. Intuitively, a counterfactual[4] (hypothetical) unit (country/economy, firm, individual, etc.) is constructed with

2 For the shortage of food items, see Box 2 in the February 2018 *Inflation Report*.

3 Although the package of fiscal measures considered herein was significant in size, the fact that its implementation coincided with the application of measures outside the fiscal realm (e.g. increase in the minimum wage), with a similar impact on the balance on trade in goods, may entail an overestimation of fiscal policy effects.

4 This is estimated as a weighted average of the developments in other units in the sample (control group), comparable to the treated unit, but which were not subject to the application of the measure whose effects are investigated. Weights are chosen so as to minimise the distance between the actual and the counterfactual evolutions and are applied to the variables related to the units in the control group.

an evolution similar to the treated unit in the pre-intervention period[5] (prior to applying the measures) and whose post-intervention evolution is the reference outcome for the unit where the measure was applied (treated unit). Specifically, the effect of the measure is estimated as the difference between the evolution of the treated unit and that of the counterfactual unit – in this analysis, it is estimated as the difference between the actual and the hypothetical evolutions had the fiscal measures not been applied.

The period under review stretches from 2004 to 2018. Data are taken from the national accounts, the balance of payments, the European Commission's *Taxation Trends in the EU* and central bank publications. The control group included only the countries that, in a two-year window before and after 2015, did not implement measures similar, and of significant magnitude, to those applied in Romania. The countries are Bulgaria, Czechia, Estonia, Lithuania, Poland, and Slovenia.

Chart C shows that, for the period prior to 2015, Romania's counterfactual evolution was similar to the actual one, except for the period 2009-2011, when its peers in the region reported gradual adjustments of the balance on trade in goods, interrupted by the euro area's economic shock in 2012 (double-dip recession). Romania did not benefit from a similar adjustment of the trade balance over the same period, but from 2012 to 2014 it followed a path similar to that of Central and Eastern European (CEE) countries in the sample. Starting in 2015, a significant divergence has become manifest between the real and the counterfactual paths of Romania's trade balance.

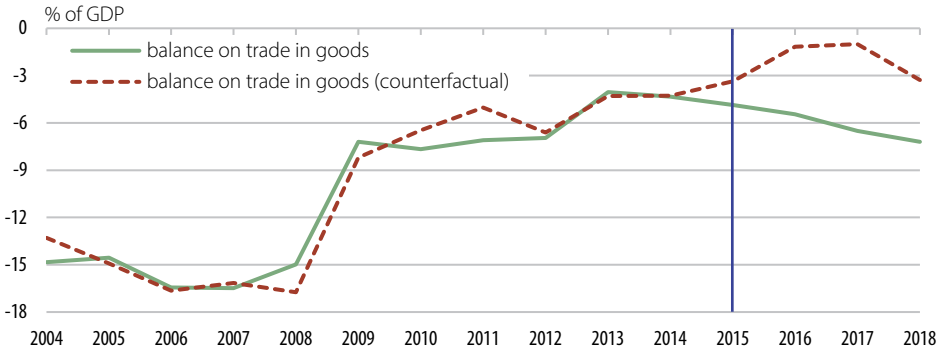

Chart C
Estimation of fiscal measure effects: balance on trade in goods

Note: The balance on trade in goods is the actual data series and the balance on trade in goods (counterfactual) is the hypothetical, SCM-based series associated with the actual data. Values are expresseed as a percentage of GDP. The vertical line shows the year when the fiscal measures were introduced.

Source: Eurostat, NBR estimates

The analysis identified a cumulative negative effect of 3.9 percentage points of GDP on the balance on trade in goods, four years after the package of fiscal measures started to be implemented (Chart C)[6]. Specifically, in the absence of fiscal easing measures, the goods deficit would have been significantly lower, as shown by the

5 See Abadie *et al.* (2010), Abadie *et al.* (2015) or Firpo and Possebom (2018) for formal methodological details.

6 For robustness reasons, the placebo test (Abadie *et al.*, 2010) was applied, based on which the significance of estimations was determined. The estimated effect is statistically significant for 2016, 2017 and 2018.

counterfactual evolution[7]. Moreover, the latter exhibits an improvement from 2015 to 2017, which reflects both the regional developments in the balance on trade in goods and its hypothetical dynamics had the fiscal measures in Romania not been applied. Thus, it is implicitly underscored that during the post-crisis period most of the CEE countries saw their balances on trade in goods improving, amid favourable demand conditions and their competitive edge over other countries[8].

The estimated effect has faded in time: while the trade deficit widened steadily 2015 through 2018 (from about 4.9 percent of GDP in 2015 to 7.2 percent in 2018), the counterfactual evolution of this balance displayed a significant correction between 2015 and 2017, from a deficit of 3.4 percent of GDP to 1 percent of GDP, before returning to about 3.3 percent of GDP in 2018 (and causing the gap between the two variables to narrow). This conclusion is in line with theoretical assumptions, as fiscal measures have a short-lived effect on the economy. Nevertheless, the correlation between fiscal and income policy measures, particularly the increase in the minimum wage, adds to the uncertainty surrounding the magnitude of the estimates.

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7 Although Romania's counterfactual trade balance has rung up a deficit subsequently to 2015, countries such as Poland or Czechia posted either a trade surplus in the same period (Czechia), or a surplus in 2016 and 2017, then a very low deficit in 2018 (Poland). This underlines Romania's structural issues, with potential effects on competitiveness, regardless of the impact of the fiscal easing episode under review.

8 From among the countries included in the control group used for estimating the counterfactual evolution (Bulgaria, Czechia, Estonia, Lithuania, Poland, Slovenia), four countries (Czechia, Estonia, Lithuania and Poland) made it to the top 40 according to the *Global Competitiveness Index* (World Economic Forum) in 2018. According to this publication, Romania ranked 52nd and Bulgaria 51st.