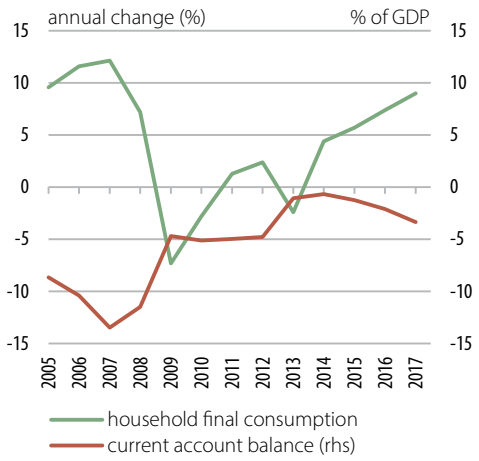
Box 2. Cyclical and structural influences in recent developments in the current account balance

Over the past few years, the current account deficit in Romania resumed its widening trend, after going through an adjustment process subsequent to the onset of the economic crisis, down from 13.5 percent of GDP in 2007 to 0.7 percent in 2014. The worsening of the current account in the recent period was driven by the significant step-up in aggregate demand (which exceeded its potential level during 2016[1]), following a pattern that reminds of the prevailing situation before the recession and that highlights the part played by the business cycle in explaining the trajectory of the current account (Chart A).

Chart A
Consumer demand and external balance



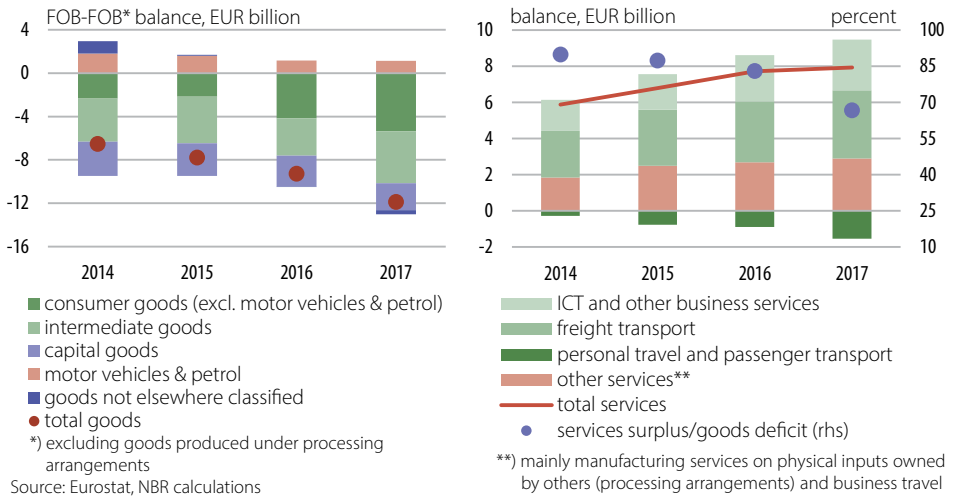
Source: NIS, NBR

This box aims to describe briefly the way in which cyclical factors impacted several key positions of the trade balance, while also mentioning some structural developments observed in recent years that acted especially towards narrowing external imbalances. The discussion is accompanied by an empirical estimation of the extent to which the two types of influences are reflected in the current account balance dynamics, this exercise being based on the External Balance Assessment (EBA) methodology of the IMF[2].

Analytical evidence

The domestic environment in the past few years, marked by labour market tightening and the adoption of several stimulative measures designed to increase household income and reduce indirect taxation, generated a strong response from consumer demand, which soon had a bearing on the external balance on trade in goods and services (Chart B).

Chart B
Balance on goods and services



Source: Eurostat, NBR calculations

1 Assertion made based on the output gap assessment within the macroeconomic forecast of the NBR's May 2018 *Inflation Report*.

2 "The External Balance Assessment (EBA) Methodology", *IMF Working Paper 272*, 2013.

It goes without saying that the current account does not solely depend on the economy's position in a certain stage of the business cycle. In fact, a significant contribution to the deterioration of the balance of payments in 2017 was made by energy goods (excluding motor fuels) – accounting for approximately 20 percent of the total goods deficit –, with the change in terms of trade after the rise in international crude oil prices playing an important part thereto. At the same time, the external balance was further eroded by purchases of chemical intermediate goods (which also accounted for about a fifth of the total goods deficit in 2017), for rather structural reasons, this industry being affected by the closures of plants in the post-crisis period. Specifically, a visible impact came from the exit from the market of an important player around three years ago, but also from the below-potential production of another large company, which had been declared insolvent in 2013. A more favourable outlook for the latter's activity began to take shape only towards the end of 2017 with the sale of some share packages, as signals emerged subsequently on possible investments in the following period.

Nevertheless, aside from these aspects, 2014 through 2017, when the output gap was on an upward trend – posting first diminishing negative values, and next increasing positive values – consumer goods[3] were the most notable contributor to the larger negative balance on trade in goods, the share of the related deficit reaching 36 percent in 2017.

Looking at this category, noteworthy are semi-durables (clothing, footwear), a group with high sensitivity to the cyclical position of the economy, given the limited participation of local producers to the accommodation of domestic consumption, their activity having been focused on exports for many years (mainly under outward processing or, more recently, integrated production). However, the most illustrative example is the agri-food segment[4], which has witnessed a widening of the trade imbalance for the past few years, up to EUR 3.1 billion (over 25 percent of the goods deficit in 2017). The advance in imports was also supported by exogenous factors, such as the local climate unsuitable for the cultivation of certain species of fruit and vegetables or the lower prices of agri-food items on the European market, as a result of the oversupply generated by Russia's ban on the EU and Turkey (starting with August 2014 and January 2016 respectively). Yet, at the same time, the competitiveness of the local food industry deteriorated constantly, reflecting the fast-growing unit labour costs, and especially the persistent deficiencies throughout the entire production and supply chain, which limit the increase in potential production. The above-mentioned deficiencies stem from the excessive fragmentation of agricultural holdings – a major obstacle for capital investment and, consequently, for improving product yields and quality – while the upper links of the chain suffer from a skilled labour shortage, inadequate technological equipment as well as the lack of longer-term business vision[5]. Moreover, in certain cases of foreign companies acquiring local manufacturers, the cost-efficiency criterion leaned towards relocating production

3 Including motor vehicles and fuels.

4 Excluding livestock, cereals and oleaginous plants.

5 Details about the modest competitive position of the food industry can be found in the box titled "Sources of trade deficit in food products", included in the NBR's February 2018 *Inflation Report*.

for some products. Coming as no surprise, the local industry's difficulty in covering domestic demand was accompanied by a nearly imperceptible participation to exports, in contrast to other countries in the region (Poland, Hungary). The higher importance of modern trade (the market share currently stands at around 60 percent, 10 percentage points above the one in 2013) also supported the rise in food imports, mainly considering that the marketing strategies of some retailers focus on own brand products, which are imported most of the time.

Another relevant example of how the higher purchasing power in recent years impacted the external position is the automotive segment, where the step-up in demand was accompanied by the diversification of consumer preference as well. Under these circumstances, the local manufacturing models were strongly rivalled by foreign vehicles, primarily used cars, which are more attractive in terms of the equipment/price ratio (receiving an additional boost, in terms of price, as of January 2017 with the removal of the environmental stamp duty). This translated into a downward trend of the trade surplus in the motor vehicle segment (down to approximately EUR 1.2 and 1.1 billion in 2016 and 2017 respectively, compared with EUR 1.9 billion in 2014), its recent slowdown being mostly attributed to a recovery in sales on external markets.

Apart from the negative effect on the balance on trade in goods, the cyclical component is also responsible, to a large extent and especially in 2017, for the lower capacity of the services account to counterbalance this deficit, given that, similarly to consumer goods, domestic supply failed to fully cover the increased demand witnessed mainly by tourism and air travel. Specifically, investments for expanding and modernising accommodation spaces at national level as well as the adoption of certain measures for boosting domestic tourism proved to be insufficient for offsetting the higher attractiveness of international holiday packages (also in terms of the quality/price ratio), which was reflected by the increase in the number of tourists who travelled abroad. These effects were only partly counterbalanced by the greater number of foreign tourists, the poor transport and accommodation infrastructure further hindering the local tourist market to near its potential. With regard to air transport as well, the opportunity provided by the higher household purchasing power in recent years was better capitalised on by foreign companies, which are booming (especially low cost operators).

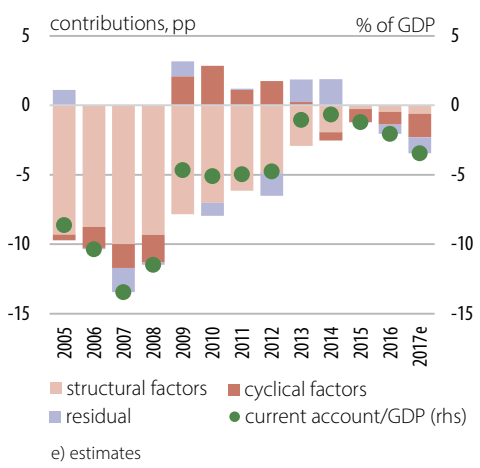
However, the trajectory followed by the current account over the past years also incorporates certain structural gains, likely to limit the deterioration of the external position and, at the same time, ensure its potential recovery, once transitory factors abate. This progress was reflected in aggregate productivity developments, along the lines of: (i) higher energy efficiency – especially in metallurgy and the chemical industry, the improvement seen until 2015, also by closing or downsizing energy-intensive companies, strengthening thereafter due to new investments aimed at technological upgrades; (ii) increased importance of such sectors as ICT (information and communication technology) or (iii) integration in global production networks (particularly visible in the automotive industry). The latter is

based on the stronger domestic presence of foreign-owned companies, generally large firms, with operations spread across several countries. These entities usually operate more efficiently, due, on the one hand, to fewer logistical constraints (e.g., these firms can explore external markets more easily in search of production inputs with the best possible quality/price ratio), and, on the other hand, to superior know-how and management techniques. Moreover, as the relations between these companies and domestically-owned firms strengthen, there will be positive spill-over effects on the latter's productivity.

Empirical exercise – details and results

The quantitative assessment of the connection between the external balance and cyclical factors is based on the IMF's external balance assessment (EBA) methodology, which combines the manner of current account financing with the way in which the current account is determined by real sector activity. Under these circumstances, the empirical exercise consisted in identifying explanatory variables for Romania's current account, which are relevant in terms of either the connection to the real economy or the relationship between saving and investment. These variables may be regarded as having temporary (cyclical) or persistent influences. The first category features excess demand in the domestic economy – measured relative to the world average, in accordance with the EBA approach –, as well as a global risk aversion indicator. In order to capture longer-term influences, the model incorporated indicators frequently used in current account regression equations, namely a productivity measure (in this case approximated based on energy intensity – an indicator identified by previous research as playing an important part in the post-crisis adjustment of external deficit), demographic and institutional indicators respectively, a public finance variable (expressed in structural terms), and the net international investment position. Although the current account balance is also affected by the real exchange rate, due to the latter's impact on the trade balance, the indicator was not included in the estimation because the methodology used does not allow for the precise identification of the effect that a change in the real exchange rate has on the external balance, the two variables responding to the same factors.

Chart C
Cyclical and structural influences on the current account balance



e) estimates

Source: IMF, WB, Eurostat, NBR estimates

Summarising the above-mentioned influences, the results of the empirical exercise reveal that the cyclical component had a prevailing influence on the worsening of the external balance over the few past years, owing to the increase in excess domestic demand (above global demand) – Chart C. In the same direction acted the rise in global investment appetite, which could be seen in the higher capital inflows channelled to the Romanian economy, allowing for wider current account deficits. The model captures this mechanism through the contribution of the VIX[6] variable, which is a proxy

6 The VIX index is determined based on the implied volatility of options on the S&P500 index, being calculated and published by the Chicago Board Options Exchange (CBOE).

for risk aversion – periods characterised by calm financial markets (and implicitly lower VIX readings, such as in recent years) usually give rise to the step-up of investment flows from developed economies to emerging economies and hence to higher external deficits in the latter, while in a volatile environment, stronger risk aversion favours the correction of imbalances (Table A).

Table A
Determinants of the current account balance as a share of GDP

Variable	average	std.	t-stat	p-value
Output gap*	-0.270	0.136	-1.980	0.047
VIX (-1)	0.234	0.065	3.620	0.000
PIIN (-1)	0.132	0.043	3.080	0.002
Predominance of elderly people*	-5.081	0.607	-8.370	0.000
Energy intensity*	-0.033	0.011	-2.850	0.004
Institutional environment* (-1)	-0.168	0.070	-2.390	0.017
Cyclically-adjusted general government balance*	0.483	0.247	1.960	0.050

*) expressed in relation to an aggregate variable for all the economies in the sample, the weighting scheme being constructed based on nominal GDP expressed in USD

Note: The dependent variable is expressed as a share of GDP. VIX is introduced as the deviation from the long-term average. NIIP refers to Romania's net international investment position as a share of GDP. In order to address potential endogeneity issues, the cyclically-adjusted general government balance was built using the procedure proposed by EBA methodology. The estimates were made using the Mean Group estimator, which, in the context of panel data, allows for determining specific coefficients for each country. The data used are for the period 1996-2017.

Source: IMF, WB, Eurostat, NBR estimates

As for long-term influences, the size of the investment position (expressed as a share of GDP) affects the current account through primary income, where the flows of interest on foreign investment and external debt are recorded. A negative investment position (characteristic of Romania) has an erosion effect on the current account, as confirmed by the positive coefficient obtained for this variable.

Turning to the other variables, expressed as differentials against the world average, a lower energy intensity signals increased efficiency of the local economy, which contributed decisively to the structural adjustment of the current account deficit in 2013, as indicated by the results of the econometric estimations, and continues to play an important part in positioning the economy on a more productive level. Although energy efficiency is not the only facet of aggregate productivity, the simultaneous introduction of several efficiency measures leads to statistically unsatisfactory models, their evolutions being strongly linked. Even if the estimation does not allow for identifying all the influences on the current account from the productivity side, it may be inferred that other structural changes in the economy, such as those mentioned above regarding the ICT sector or the integration in global value chains, support the external balance by improving the efficiency of economic processes.

With regard to the quality of the institutional environment, this may affect the external balance particularly via the impact on investments – in this respect, countries with sound institutions, characterised inter alia by the safeguarding of property rights and low corruption, offer encouraging arguments to investors, including non-residents. Therefore, the improvement in the institutional framework allows for the financing of higher deficits, by increasing the credibility of the

economy in question at an international level. Another variable included in the estimation is the ratio of the elderly population to the working-age population, which influences the current account balance via the effect on aggregate saving – a change in this ratio in favour of the 65+ age group is generally associated with lower saving. The structural deficit (also among explanatory variables) acts in a similar manner, its widening implying the deterioration of public saving, which is true for aggregate saving as well, and beyond that, the decrease in the current account balance.

In conclusion, the recent worsening of the current account is mainly attributable to cyclical factors, as shown by both analytical evidence and the empirical exercise, suggesting that a decline in excess aggregate demand will improve the external balance. However, the highlighted structural weaknesses, which are manifest in multiple areas, should not be overlooked, as they ultimately influence the level up to which the external balance can adjust towards equilibrium driven by a reduction in output gap. In addition, given that these deficiencies have long-term effects, a decrease in excess demand will probably not lead to the symmetrical reversal of the external imbalance, as illustrated by the consumer goods sector, where structural deficiencies led to the erosion of the market share of local producers over the past years.