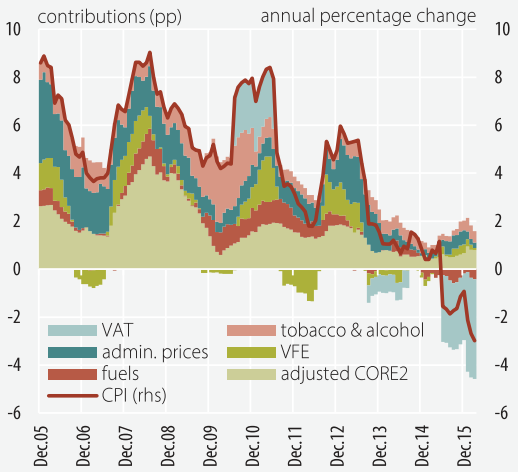
Box 2. Monetary policy and exogenous shocks to inflation

Over the medium and long term, inflation is essentially determined by the relationship between aggregate demand and the capacity to supply goods and services in an economy. Monetary policy has the key role in ensuring and maintaining price stability at this horizon. With a view to achieving this objective, the central bank uses its available tools to influence aggregate demand, seeking to bring and maintain it in a relative balance with potential output. In the short run, however, exogenous shocks – usually on the supply side (e.g. fluctuations in agri-food and energy commodity prices or changes in indirect taxes) – can cause temporary deviations of inflation from the central bank's objective.

In the context of the inflation targeting strategy adopted in 2005, the NBR's primary objective of ensuring and maintaining price stability[22] was quantitatively transposed into inflation targets, whose level was gradually lowered in a first stage[23] from 7.5 percent ±1 percentage point to 3 percent ±1 percentage point. Since 2013, with the overall completion of the disinflation process that had started in 2000, fundamentally underpinned by the prudent tailoring of the monetary policy stance, the central bank has adopted a flat inflation target of 2.5 percent ±1 percentage point, compatible with the quantitative definition of price stability for the Romanian economy.

Chart A. Impact of Supply-Side Shocks on Inflation Rate



Source: NIS, NBR calculations

Monetary policy has been consistently geared towards ensuring price stability over the medium term, in line with the inflation targets. Over the short term, however, numerous and sizeable supply-side shocks, occurring successively or simultaneously, on the domestic and external fronts, mainly after the breakout of the global financial and economic crisis, caused temporary deviations of the annual inflation rate from the target. These shocks were largely inflationary in nature prior to 2012 – a period marked globally by abrupt hikes in oil prices in 2008 and 2011 and in agri-food commodity prices in 2007-2008 and 2010-2011, and domestically by significant adjustments in indirect taxes (the rise in the standard VAT rate from 19 percent to 24 percent in 2010 and successive excise duty increases), to which added the poor harvest of 2012 owing to adverse weather conditions. Over the past around three years, supply-side shocks have become predominantly disinflationary, further stemming from both external sources (the sharp drop in global oil prices in the period from 2014 to 2016, the steady decline in agri-food commodity prices manifest since 2013, the larger supply of agri-food products on the European market under the impact of Russia's trade embargo) and domestic ones (cutting the VAT rate applied to some bakery products from 24 percent to 9 percent as of 1 September 2013, broadening the scope of the reduced VAT rate to all food items in June 2015, lowering the standard VAT rate from 24 percent

[22] Set through Law No. 312 of 2004 on the NBR Statute.

[23] Given that the Romanian economy was in a process of disinflation, a typical feature of the monetary policy strategy in a first stage consisted in gradually decreasing annual (Dec./Dec.) inflation targets set for two-year horizons; they were lowered from 7.5 percent ±1 percentage point in 2005 to 3.0 percent ±1 percentage point in 2011; the annual inflation targets for 2010 and 2012 were left unchanged from a year earlier, i.e. 3.5 percent ±1 percentage point and 3 percent ±1 percentage point respectively.

to 20 percent as of January 2016, expansion of the agricultural product supply on account of the 2014 bumper crop). Against this background, the annual inflation rate peaked at 9.0 percent in July 2008, while it reached a post-1990 low of -3.0 percent in March 2016 (Chart A).

The high inflation volatility was by no means a peculiarity of the Romanian economy. It was manifest worldwide during this period, including in advanced economies, reflecting both the increased intensity of the aforementioned global shocks and the impact of country-specific ones. For instance, in the period from 2008 to 2016, the annual inflation rate fluctuated between 4.1 percent and -0.7 percent in the euro area, between 4.2 percent and -1.2 percent in the US, and between 5.2 percent and -0.1 percent in the UK.

Most supply shocks are usually transitory in nature. They lead to a one-off adjustment of the CPI level – with the annual inflation rate being affected only temporarily, typically over a one-year period – and may exert an opposite influence on economic activity than on inflation (e.g. a drop in oil prices may have a stimulative effect on economic activity and a reduction in indirect taxes entails an increase in households' disposable income, thereby fostering consumption). These shocks are often unanticipated, the only potential way of incorporating them *ex ante* into the monetary policy decision-making process being via the risk scenarios associated with central bank forecasts. However, some supply-side shocks may be known and incorporated beforehand into central bank projections, such as the authorities' decisions on changes in indirect taxes.

Nevertheless, irrespective of the circumstances, in the event of severe exogenous shocks, the central bank's attempt to counteract their "first-round" effects would be not only ineffective[24], but even counterproductive. It would imply sudden and sizeable adjustments of the monetary policy stance, aimed at "forcing" the inflation rate back close to the target as soon as possible, which would generate undesirable fluctuations in economic activity and unemployment.

Therefore, there is a consensus in the literature that the adequate response to such exogenous shocks is their accommodation, at least in part, by monetary policy, while any countering response would be warranted only by a significant risk of de-anchoring of medium-term inflation expectations (Bernanke and Mishkin, 1997; Rosengren, 2011). Due to its features, inflation targeting strategy constitutes a particularly flexible framework for monetary policy response to these shocks (for the benefits of this approach, see for instance Bernanke *et al.*, 2001; Svensson, 2000, 2010)[25].

In line with theory, as well as with central banks' practice in the field, the NBR accepted temporary deviations from the inflation target caused by supply-side shocks, while steadily acting towards countering the risk of their second-round effects, i.e. of altering medium-term inflation expectations and hence the price- and wage-setting behaviour.

As a matter of fact, the direct inflation targeting adopted by the NBR is characterised by the *ex ante* definition, similarly to established practice in the field[26] (Bernanke et al., 2001), of a narrow set of circumstances ("exceptional circumstances") that are beyond the control of monetary policy and condition the monetary authority's responsibility for attaining the inflation target. These escape clauses

[24] Given that the maximum impact of monetary policy measures on the economy is usually manifest with a lag of up to 2 years, by which time the effect of the said shocks on the annual inflation rate has already dissipated.

[25] Mervyn King, governor of the Bank of England until 2013, even coined the term "inflation nutters" referring to central bankers that focus exclusively on stabilising the inflation rate, whatever the circumstances.

[26] Many central banks (e.g. New Zealand, Canada, Czech Republic) reconcile their commitment to inflation targeting with the required flexibility in the face of supply-side or transitory shocks by defining *ex ante* the so-called "escape clauses", which stipulate exceptional circumstances that limit the responsibility for attaining the target.

were announced ever since the adoption of the strategy and refer to: (i) marked increases/decreases in external prices of raw materials, energy-producing materials and other commodities; (ii) natural disasters and other similar exceptional events that induce cost-push or demand-pull inflationary effects, as well as unpredictable changes on the agricultural produce market; (iii) large fluctuations of the exchange rate of the leu that are decoupled from domestic economic fundamentals, as well as from the monetary policy pursued by the National Bank of Romania; (iv) major deviations from the administered price adjustment programme announced by the Government, in terms of both magnitude and proposed calendar; (v) divergence of the fiscal and income policies, in terms of implementation and outcomes, from the programmed coordinates.

The central bank has not resorted to escape clauses as such. However, the NBR has systematically explained in-depth the causes/factors underlying the temporary deviations of the annual inflation rate from the target, as well as the monetary policy decisions and actions meant to bring inflation back onto a compatible path with the set targets. This communication has a key role in safeguarding price stability over the medium term and minimising fluctuations in economic activity.

Such an approach has characterised the monetary policy conduct in the recent period as well, given that current developments in inflation and its short-term outlook have been temporarily – yet strongly – impacted by the successive indirect tax cuts and by the drop in international oil prices, while fundamentals were expected to resume exerting inflationary pressures starting in the latter part of 2016, owing mainly to the easing of the fiscal and income policies.

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Subsequently-released statistical data confirmed the outlook for the annual inflation rate to go deeper into negative territory in the early months of 2016[27]. The data also showed a further pick-up in annual GDP growth in 2015 Q4 (3.8 percent from 3.6 percent a quarter earlier) – exclusively on account of the main components of domestic absorption –, as well as the likely persistence of the robust growth of consumer demand in 2016 Q1, following the new fiscal easing round and the rise in household incomes, to which added the ongoing advance in lending to households. At the same time, the onset of 2016 brought about slower growth in the industrial and construction sectors, somewhat weaker confidence in the economy, as well as still diverging growth rates of labour productivity and wages in industry.

Furthermore, the new assessments pointed to the annual inflation rate staying negative until June 2016, as a result of the cut in the standard VAT rate and other indirect taxes, as well as to

[27] The 12-month inflation rate successively dropped in January and February 2016 to -2.13 percent and -2.68 percent respectively, from -0.93 percent at end-2015, primarily under the impact of lowering the standard VAT rate from 24 percent to 20 percent.