Box. Quantitative assessment of the influence exerted by some unfavourable exogenous shocks

In the current approach, the influence of *general risk factors* on the inflation projection in the baseline scenario is illustrated in quantitative terms, by associating an uncertainty interval to it (see the chart *Uncertainty Interval Associated with Inflation Projection in the Baseline Scenario*). This methodology relies primarily upon the use of past forecast errors in approximating future uncertainty, plus a certain correction factor due to the involvement of monetary policy makers*.

Each issue of the Inflation Report regularly provides a qualitative description of the influence exerted by *specific risk factors* deemed to be particularly relevant over the projection horizon. The quantitative assessment of one or several specific risk factors implies explicitly-quantified assumptions.

This box aims to provide indications regarding the impact on the annual CPI inflation rate projection (calculated through the NBR's forecasting model) in the hypothetical event that several *specific risk factors* materialise at the same time. In order to facilitate the interpretation of results, the scenario assumes a monetary policy stance identical to that in the baseline scenario. The specific assumptions differ significantly from those incorporated in the baseline scenario and refer to:

(i) a weak agricultural output over the upcoming two years on account of adverse weather conditions (e.g. drought, flooding, etc.), as a result of which volatile food prices (of vegetables, fruit and eggs) would increase faster than assumed in the baseline scenario. Moreover, there might be an additional impact in this case: since domestic demand for food products could be satisfied through imports, cumulated with the effects of assumption (iii), the inflationary impact in terms of the annual CORE2 inflation rate would be even higher;

(ii) a significant adjustment of administered prices for a broad category of goods and services amid the occurrence of events not included in the baseline scenario assumptions: (a) a larger increase in the costs incurred by distributors/producers in the energy sector amid the worsening of their financial situation, as a result of the contraction in domestic economic activity, (b) the unfavourable influence exerted by higher international oil price [see assumption (iii)] on the domestic natural gas price**, (c) the need to bring public utilities (water, sewerage, sanitation) in line with European quality standards through additional investment;

(iii) a larger-than-forecasted hike in oil and other commodity prices (agricultural produce included) on international markets on the back of stronger global demand.

N.B.: (1) The scenario described herein serves an illustrative purpose only; although the underlying assumptions are deemed to have a reasonable degree of plausibility, the specific values associated with the shocks in the risk scenarios are randomly chosen (i.e. they do not represent forecasts). (2) Depicting an upside deviation of the inflation rate from the baseline scenario trajectory does not necessarily imply a higher likelihood attached to such slippages (compared to opposite movements); Section 1.4 dwells further on the relevant considerations for the reference period regarding the symmetrical/asymmetrical nature of the risk factors depicted in this box. (3) Results may not be used in calculating average elasticities. The magnitude of the estimated impact hinges explicitly on the current macroeconomic environment, while the same shocks may lead to different results in other circumstances. Moreover, applying shocks of an equal magnitude, but of an opposite direction, under the same initial conditions will not yield numerically-symmetric results.

	Baseline scenario		Risk scenario		Change (p.p.)	
	2010	2011	2010	2011	2010	2011
Assumptions						
Annual inflation rate of volatile food prices (%, Q4 current year/Q4 previous year)	2.2	3.1	8.6	10.0	+6.4	+6.9
Annual inflation rate of administered prices (%, Q4 current year/Q4 previous year)	5.7	3.8	7.0	5.1	+1.3	+1.3
International oil price (annual average, USD per barrel)	80.3	85.6	85.9	100.2	+5.6 USD per barrel	+14.6 USD per barrel
Results						
Annual CPI inflation rate (%, end of period)	3.7	2.8	4.7	3.7	+1.0	+0.9
Annual CORE2 inflation rate (%, Q4 current year/Q4 previous year)	2.8	1.7	2.9	2.0	+0.1	+0.3
Annual fuel price inflation (%, Q4 current year/Q4 previous year)	9.4	8.9	12.3	10.7	+2.9	+1.8

* For further details, see Box 3 - *Building the uncertainty interval associated with the baseline scenario inflation forecast* in the November 2008 Inflation Report.

** According to the Romanian Energy Regulatory Authority (ANRE), any change in the international oil price feeds through into natural gas import prices with a lag of around 6-9 months.