



INFLATION TARGETING: PROVISIONAL RESULTS

PhD. Silviu CERNA*

Rezumat

Țintirea inflației - cadru de politică monetară care obligă banca centrală să realizeze o inflație scăzută - a contribuit în mare măsură la menținerea stabilității prețurilor în țările industrializate. La fel ca celelalte țări în curs de dezvoltare, țările foste comuniste au încercat și ele să aplice această strategie susceptibilă să sporească transparența politicii monetare și să determine autoritățile să efectueze reformele necesare pentru transformarea economiei planificate în economie de piață. În România, țintirea inflației a contribuit în mare măsură la temperarea creșterii prețurilor, fără a afecta creșterea economică. Cunoașterea factorilor care au determinat acest indiscutabil succes permite nu numai înțelegerea procesului de tranziție românesc, ci și desprinderea unor învățăminte folositoare prin prisma acțiunilor necesare pentru adoptarea euro.

Abstract

Inflation targeting – monetary policy framework that requires the central bank to achieve a low inflation – has contributed to price stability in industrialized countries. As well as the other developing countries, ex communist countries have also tried to apply this strategy, which was susceptible to increase monetary policy transparency and to determine authorities to make necessary reforms in order to pass from a planned to a market economy. In Romania, inflation targeting has contributed, to a large extent, to price increase

* *Univ. Prof., Faculty of Economy and Business Administration, West University, Timișoara.*

smoothing, without affecting economic growth. Knowing the factors that have determined this unquestionable success allows for not only understanding the Romanian transition process, but also draw some useful conclusions in view of the necessary actions for adopting the euro.

Keywords: monetary aggregates, central bank, exchange rate, inflation, monetary policy, interest rate

JEL classification: E52, E58

Based on sound theoretical arguments and on a vast applied experience, the academic economists and those responsible for the economic policy reached the conclusion that a high inflation (and a strong variability of the inflation) denaturalises the decisions of the private agents in terms of production, saving and investment, inducing, in the long-term, a slowing economic growth. Therefore, during the past two decades, a large number of countries bestowed on their central bank the statutory mandate to apply an economic policy oriented towards price stability and providing the institutional independence required to accomplish this goal.

1. Rules *versus* discretionary powers

After a long period of quite high inflation, the world entered during the 90s in a period of price stability. The central banks played an important role in this favourable evolution by their decision to let the public know their forecasts on the main nominal variables. Indeed, although the central bank often has, on the short-term, to choose between employment and inflation, which may produce inflationist distortions, the announcing of intermediary goals (rules) strengthens the credibility of the monetary policy, which has a favourable influence on the inflation expectations.

These operational goals fulfil two functions:

- a) prevent the endogenous or exogenous shocks to cause a permanent rise of the inflation;
- b) materialize the political will to ensure the long-term price stability.

The rules of monetary policy play therefore, the role of nominal anchors which, on the one hand compel the central bank to run a

coherent monetary policy and, on the other hand, allow the public to monitor the implementation of this policy.

2. Exchange rate targeting of monetary targeting

Setting intermediary objectives requires the definition and public announcement of a target regarding the exchange rate (exchange rate targeting) or a certain monetary aggregate (monetary targeting).

Exchange rate targeting limits considerably the monetary policy because it restrains the central bank's capacity to react to the endogenous or exogenous shocks. Thus, after giving up the Bretton Woods (1973) system, most developing countries have adopted one form or another of exchange rate targeting; however, later on most of them returned to a more flexible exchange rate system.

A certain number of developing countries continued, nevertheless, to maintain fixed or quasi-fixed exchange rates. Some of the, (Argentina, after 1991), Brazil (during 1994-1998), experienced strong inflation, which prompted them to use the fixed exchange rate as means to curb inflation rapidly.

The increasingly stronger integration of the world capital markets witnessed over the past decades, as well as the increasing volatility of the capital flows – which appeared after the 1992 crisis of the European Monetary System (EMS) and was amplified by the financial crises from Asia and Latin America – made it increasingly difficult to maintain a stable exchange rate. As a consequence, the emerging economies which tried to maintain the fixed exchange rate as nominal anchor for their monetary policy, had to chose between a more flexible system or – to the other extreme – to establish a Currency Board or, maybe, to use the US dollars for their economy.

After the fall of the communism, most Central and Eastern European countries have adopted the system of the fixed exchange rate. Romania, for instance, adopted this strategy implicitly during the early months of 1990 and maintained it until 1995. These countries were confronted rapidly, however, with the typical problem of this strategy: if inflation decreased significantly, deflation has to be stopped to prevent a strong appreciation of the national currency and, therefore, throwing the balance of payments out of equilibrium. Consequently, same as the developing countries, other former communist countries had to experiment other strategies of monetary policy.

Monetary aggregates targeting is a monetary strategy applied by some industrialised countries – with the notable exception of the EMS countries – after the current international monetary system has been implemented, system characterised by flexible exchange rates. The starting prerequisite for this approach is that, on the long-term, the main factor which determines inflation is the offer of currency. In consequence, the central bank uses instruments of monetary policy (the interest rate, for instance) to influence the evolution of the monetary aggregates (M_1 , M_2 , M_3) and, thus, to stabilise the inflation rate around the target value. Obviously, the capacity of the monetary aggregates to serve as intermediary objectives depends on their relation with the variable which is set as final goal (inflation rate) and with the instruments of monetary policy.

Initially, this strategy appeared as attractive for the decision-making factors but, in the 80s it proved to be increasingly inadequate. Thus, as the financial institutions have created products susceptible to replace the currency, the demand for currency became increasingly unstable, and the correlation between the currency and inflation, although valid for the long term, ceased to manifest on the short term.

Under these conditions, during the early 90s, several OCDE members – New Zealand, Canada, Israel, Great Britain, Australia, Finland, Spain, Sweden etc. – adopted inflation targeting.

The limits of monetary aggregates targeting are even more serious for the transition countries than they are for the industrialised countries. Thus, these economies are characterised by periods of strong increase of the process determined, among other, by the wide corrections of the administered prices and by the reforms of the taxation systems which make the relation between the offer of currency and the price level to be more difficultly to forecast. In these economies the instability of the demand for currency is exacerbated by the large reforms of the financial system, which involve profound institutional changes, the emergence of new types of financial assets and of new categories of economic agents, etc. Because of all these, the mere control of the monetary mass increase turned insufficient to manage the monetary policy.

The Currency Board has been adopted by some former communist countries (Estonia-1992, Lithuania-1994 and Bulgaria-1997), because it has the advantage that it ties the price of the domestic products to the price of the similar goods in the country of

reference, which makes the inflation forecasts converge towards the prevailing forecasts from the countries of reference. This way, the exchange rate becomes a nominal anchor for inflation control. This system also is an automatic adjustment mechanism which contributes to alleviating the temporal incoherence of the monetary policy. Finally, this strategy has the advantage of simplicity and clarity, which make it easily understandable by the public. However, the Currency Board has the great disadvantage that it makes impossible an independent monetary policy, able to react to the internal and external shocks specific to that country.

Under these circumstances, as of the late 90s, some former communist countries adopted inflation targeting (the Czech Republic-1998, Poland-1998, Hungary-2001, Romania-2005). This strategy has many advantages for the transition economies because it allows both a specific national control on the monetary policy and the preservation of exchange rate flexibility, which is essential in terms of adjusting the great external imbalances of those economies. Thus, unlike the Currency Board, inflation targeting allows monetary policy focusing on the domestic necessities; the central bank can therefore react both to the internal shocks and to the external ones. Inflation targeting also has the advantage that its success doesn't depend on the stability of the relation between the monetary mass and inflation. Another advantage is that, being transparent, the direct inflation targeting is easily understandable by the public. Unlike it, monetary aggregates targeting, although visible, is hard to understand by the public, mainly because the relation between the monetary aggregates and inflation is uncertain and unstable. Finally, inflation targeting has the advantage that it directs the political debates on what the central bank can actually do (inflation control), not on what, by its nature, the monetary policy can not do (production increase, unemployment reduction, increase of the external competitiveness etc.).

3. Operational aspects of inflation targeting

Although at the conceptual level, inflation targeting has been developed after wide and long theoretical debates, in practice, this strategy has been perfected particularly by *ad hoc* solutions. For instance, in Canada and New Zealand, the use of the new strategy was mainly determined by the dissatisfaction to the results of the monetary aggregates targeting. In the European countries, the

decision to attempt a new strategy was imposed by the fact that after the EMS collapse (1992-1993) it was impossible to maintain fixed exchange rates with the German mark and with the ecu.¹ In this specific case, the new strategy was conceived as an emergency solution, which explains the strong pragmatic character of an approach whose theoretical basis had already been widely elaborated.² In the former communist countries, inflation targeting had been adopted in reaction to giving up various nominal anchors and to the institutional changes produced by the preparation to join the EU and EMU.³

Within this context, inflation targeting seems rather a framework of monetary policy which compels the central bank to ensure a low inflation, rather than giving a precise mechanism to do it. The process normally starts by issuing a joint release of the central bank and the Government (usually represented by the ministry of finances), which sets an explicit goal which is to be accomplished within a given period – for instance, in Romania, a 3.5% inflation rate by 2010. Further on, the process requires that the central bank, which must be free to choose its instruments, tries to accomplish the set goal while publishing regular information on its decisions and directions. This obligation of transparency determines a lower incertitude on the future directions of the monetary policy, thus contributing to a stronger credibility and responsibility of the central bank.

Under these circumstances, *inflation targeting can be defined as a framework for monetary policy application within a system of monitored freedom*. This framework is usually set on rules, because the adoption of explicit targets constraints the central bank to apply a rigorous policy. It leaves, nevertheless, the central bank the possibility to choose its instruments and the ways to use them, which gives the monetary authority a specific margin of manoeuvre in case of possible endogenous or exogenous shocks. Thus, in a situation of

¹ Cerna S., et al., *International monetary and financial economy*, West University Press, Timișoara, 2005, p. 110-113.

² *The theoretical basis for inflation targeting has been set by several papers which clarified the content and characteristics of this strategy* (For instance, Leiderman L., Svensson L., (ed.), *Inflation Targeting*, London, CEPR, 1995; Svensson L., *Inflation Forecast Targeting: Implementing and Monitoring Inflation Targets*, *European Economic Review*, 41, 6, 1997).

³ Beblavý M., *Monetary Policy in Central Europe*, Roudledge, London, 2007, p. 158.

typical application of this strategy, the central bank will modify its instrumental variables – for instance, the interest rate level – from a specific time and by a value that maintains the predicted inflation rate – for instance, over the next two years – at a level close to the set target. The forecast inflation thus serves as decision-making mark; the constant deviation of the predicted inflation rate from the rate set as target determines the correction to be done. This prospective approach is obviously desirable, if we consider the gaps existing between the moment of modifying the variables used as monetary policy instruments and the moment the expected effects on the final goal materialise. Unlike it, a strategy which involves a reaction to the inflation from the past period or to the current period is, by definition, a policy of accommodation which risks amplifying the inflation and/or reducing production.

In practice, the future orientation of the monetary policy is set by the central bank based on information from an array of indicators (for instance, predicted inflation rate calculated with structural macroeconomic models) and by simpler methods of analysis (for instance the techniques based on the auto-regressive vector) or by the results of surveys on anticipations of inflation collected from various categories of economic agents. The central bank also takes into account the evolution of the main monetary and financial variables, such as the monetary mass, volume of the credit, interest rates structure according to the due-date criterion, prices of the financial assets, labour market conditions etc. It is only obvious that if one or several such indicators suggest that inflation will probably exceed the set target, the central bank must react accordingly.

4. Inflation targeting and transparency

One of the important factors on which the efficacy of the monetary policy depends is the understanding by the market of the goals pursued by the authorities and of the relations between the taken measures and the announced objectives. Transparency also plays an important role because it allows the market to judge the responsibility of the central bank in relation to the produced results, which favours the installation of a rigorous discipline in the implementation of the monetary policy.

Transparency also plays a role in monetary aggregates targeting, showing the extent to which the final and intermediary goals are

made known to the public. The partisans of inflation targeting claim however, that the strategy they envisage is characterised by maximal transparency. Indeed, the explicit statement of an inflation target is easier to understand by the public than the announcement of a target concerning the increase of a specific monetary aggregate. Because the costs of inflation depend, among other, on its variability, the decrease of uncertainty on the future evolution of the inflation favours the adoption of correct decisions for saving and investments, which will increase productivity. Furthermore, by the fact that it lets its intentions known in good time, the central bank may contribute to the decrease of financial markets volatility and, therefore, to sizing down the risk premiums included in the interest rates.

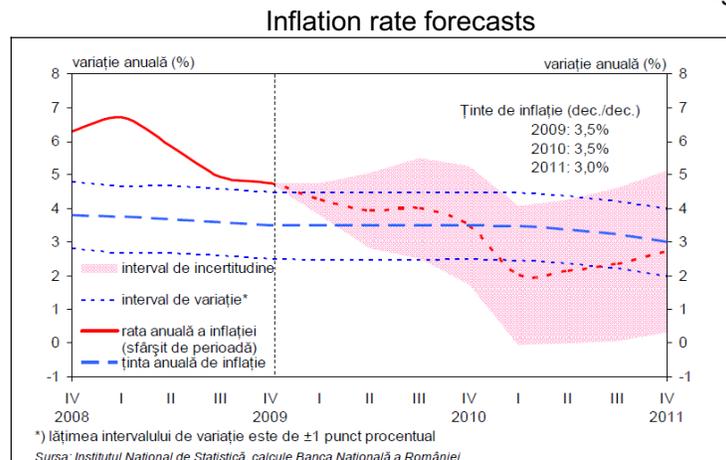
Obviously, the central bank strengthens its credibility mainly because it accomplishes the announced inflation target. That is why all the central banks using inflation targeting publish periodic "Reports" in which they explain the possible deviations of the current inflation rate from the announced target and show the future orientation of their monetary policy. To help the public understand better the analyses published by the central bank, these documents also include descriptions of the means used to forecast the inflation rate, evaluations of the possibilities for improvement or worsening, the ways in which the authorities will react in various possible scenarios, etc., because these analyses reduce the risk of erroneous interpretation of central bank's reactions in various circumstances.

Thus, NBR publishes its previsions, "Inflation forecasts", in its quarterly "Reports" on inflation, which include five main sections:

- 1) analysis of the current situation of the economy;
- 2) explanations on the monetary policy decisions taken during the surveyed period;
- 3) NBR forecasts of inflation rate evolution for the subsequent eight quarters;
- 4) uncertainties and risks associated to the prediction;
- 5) implications of this context for the future conduct of the monetary policy.

As shown in figure 1, NBR forecasts are presented as a chart showing the annual inflation targets and the associated interval of uncertainty.

Figure 1



Cf. Isărescu M., *Inflation targeting. Quarterly report on inflation, February 2010*, Press conference, NBR, <http://www.bnr.ro/Prezentari-si-interviuri--1332.aspx>

5. Technical aspects

Inflation targeting requires the adoption of several complementary decisions. First, the central bank must decide on the parameter used to measure inflation. There are two possibilities: consumer prices index (CPI) and GDP deflator. Although the latter has the advantage of reflecting better the notion of “domestic inflation”, CPI has obvious operational advantages: it is an index which the public knows rather well; it is usually calculated on a monthly basis and published rather quickly (it can therefore be monitored regularly); it is seldom the object of revisions. *CPI growth rate is known as the “inflation rate”.*

The authorities also must decide whether they will take into consideration all the inflation rate fluctuations, or will exclude the exogenous short-term fluctuations. In most cases, inflation targeting focuses on the core inflation. This type of measurement excludes from CPI some elements whose prices are subject to atypical variations due to the transient shocks pertaining to the offer, due to the corrections made to the administered prices, due to the changes in the system of the indirect taxes, etc.

NBR, for instance, uses three measures of the core inflation:

- a) CORE1 – which presumes isolating the influence of the administered prices;
- b) CORE2 – which further eliminates the impact of the high volatility components (vegetables, fruits, eggs) and of the fuel price;
- c) CORE3 – which further eliminates (from CORE2) the influence of tobacco and beverages prices.⁴

Adopting a target for the core inflation means that the monetary policy takes into account exclusively the initial impact of these price hikes, making abstraction of the secondary effects produced by the prices-wages spiral.

Second, the authorities should set a concrete level of the target. Most industrialised countries set targets between 1 and 3%, which they consider compatible with the theoretical notion of “price stability”. It is generally admitted that a higher inflation rate affects adversely the growth and the efficacy of the economic activity, which generates social costs. However, setting a 0% inflation target is not recommended either, because the rigidity in wage and nominal prices cuts requires a positive inflation rate that may allow the adjustment of the real wages and of other relative prices. A zero inflation target would not allow the existence of a real negative interest rate, although it would possibly be necessary in a specific stage of the economic cycle. As the experience of Japan shows, which used for a long period of time the “zero interest rates policy”, a real negative interest rate might be necessary in order to stimulate the global demand. One of the advantages of inflation targeting is just the prevention of deflation and compensation of the systematic shocks which affect the global demand. This approach treats inflation and deflation symmetrically: the monetary policy must be strengthened or loosened in agreement with the real inflation which is systematically higher or lower than the target.

Third, the authorities should decide whether they operate a punctual target level or a target area level (target within an allowed margin of variation). Taking into consideration the inherent

⁴ Constantinescu C., *Ways to quantify core inflation – comparative analysis for the case of Romania*, NBR, Books of study, 19, 2007, p. 9-10.

difficulties of forecasting the inflation rate, and the uncertainties in terms of the lagged transmission of the monetary policy impulses, the risk of missing a target level (and bearing the consequences in terms of credibility) is higher. A target level requires a very fine tuning, which is difficult to accomplish, of the monetary policy.

If the choice is for the target area, then they have to decide on the amplitude of this interval of variation. A very narrow band has the same disadvantages as the punctual target. The band can not be too wide, either, because the probability of accomplishing the target increases with the band width, but the favourable effects on the inflation forecasts decrease. Despite the difficulties confronting the target area, this is the solution used by most central banks.

Fourth, the horizon of the monetary policy must be determined, that is, the speed of depressing the inflation. Practically, if the inflation rate in the initial moment is very high in comparison to the targeted rate, the speed of reduction depends on the evaluation of the deflation costs. Thus, a gradual deflation may be preferable if the society was traumatized a lot in the past, which makes the inflation forecasts to delay their adjustment, while credibility is low. At the same time, the necessity to overcome the inertia of the pessimistic forecasts and to increase credibility quickly, plead for a faster deflation. Of course, if the inflation rate is close to the optimal level, the framework of the monetary policy must ensure the indefinite maintenance of that specific rate.

In Romania, the inflation targets are annual (December / December) and are set as level and variation band of +/-1 percent point, for a two-year time horizon (Figure 1).

6. Results

So far, the accomplishments of the industrialised countries which used inflation targeting, seem promising. Focusing on price stability, these countries indeed obtained an outstanding convergence at low prices of their inflation rates. We must admit, however, that the international ambience of the past years was generally favourable and that their achievements in curbing inflation are partly explained by the globalization process. It is not certain, however, if these conditions will persist, and some analysts say that inflation targeting

has not yet been tested for a full economic cycle. Some countries using inflation targeting are confronted with multiple disturbances, including those caused by the global financial crisis and by the increasing foreign deficits.

The countries with emerging market economy and the former communist countries using inflation targeting also produced encouraging achievements. For instance, during 2001-2008, these countries achieved an overall 5.8% annual reduction of the inflation, concomitantly with a modest economic growth.⁵

Even though some developing countries using inflation targeting had outstanding achievements in curbing inflation, they have particularities which create difficulties in applying this strategy. First, because many of them still have quite high inflation rates, the authorities and the independent observers find it difficult to predict with exactness the future inflation rate. These countries run thus a higher risk to miss the inflation target than the developed countries. Second, the effects of the exchange rate variations on the prices (which, because of the Balassa-Samuelson effect anyhow tend to be high), and the existence of explicit or implicit mechanisms of indexation generate considerable inertial inflation. Third, inflation targeting excludes targeting other nominal variables. The financial securities issued by the developing countries often are labelled in foreign currency, and hence the important variations of the exchange rates of the national currencies have serious consequences on the domestic inflation in those countries. Fourth, in many developing countries, central bank's independence is rather formal than real, because its decisions are determined mainly by the necessity to finance the budget deficit and the fiscal dominance remains strong. Many developing countries have managed to cut much of the budget deficit of the central administration, but many of them still have debts – contracted by the local administrations and by the public enterprises, or which come from quasi-budgetary deficits – which put pressure on the orientation of the consolidated public budget policy. Under these conditions, the central bank can hesitate, out of budgetary reasons, to increase the interest rate, although it should normally do it in order to stop inflation. Finally, some developing countries have difficulties to publish the sophisticated information

⁵ Scott R., *Inflation Targeting at 20: Achievements and Challenges*, IMF Working Paper, WP/09/236, p. 14.

required to forecast inflation (for instance, implementation of efficient econometric models and elaboration of regular reports on the evolution of some modern indicators).

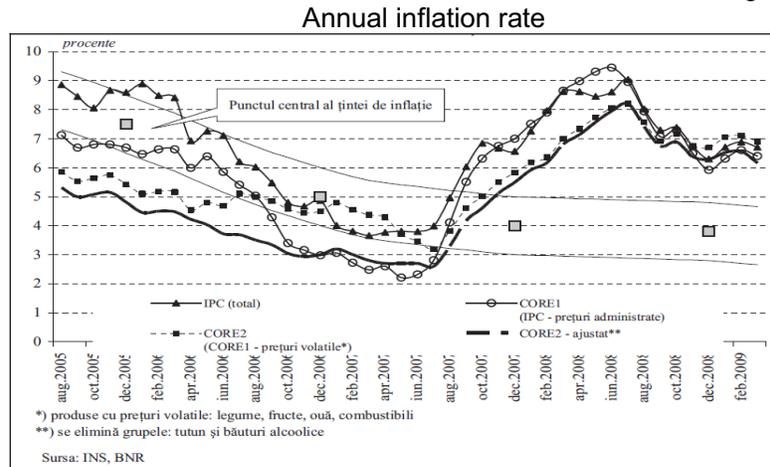
Despite these problems, inflation targeting looks promising even for the developing countries. This strategy has operational advantages and it compels the people responsible for the economic policy to go deeper with the reforms, to increase transparency and to improve the fiscal policy. In the case of the East and Central European countries, inflation targeting is even more necessary because it ensures them the perspective of convergence towards adopting the euro.

7. Inflation targeting in Romania

Romania adopted inflation targeting in August 2005, after she had managed to slow the inflation during the previous year to a one-figure level (9.3%). Thus, in agreement with the general principles of this strategy, the central bank has assumed, explicitly, the task to monitor with consistency the accomplishment of its basic goal – price stability – while the accountability for reaching the inflation target has also been better emphasized. The new framework of the monetary policy has been adopted after a long process of preparation which took 18 months and which was done with the technical assistance of the WMF.

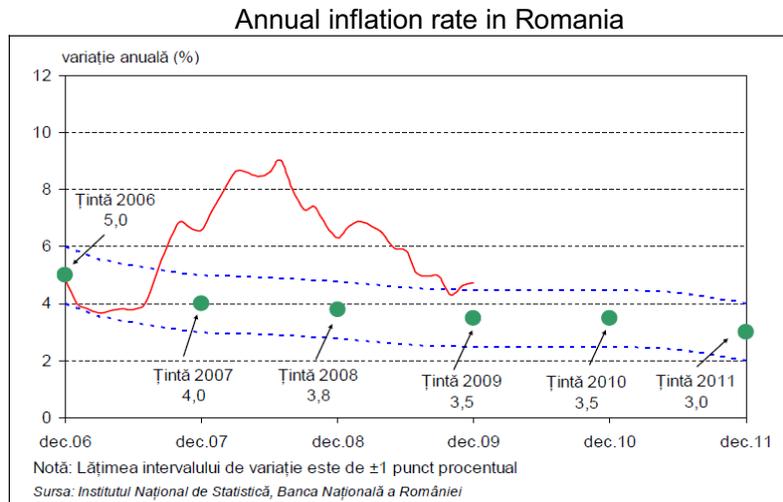
The period which elapsed from inflation targeting may be divided into two quite distinct intervals. During the first interval – which lasted about two years – the annual inflation rate generally remained within the variation band set around the central point of the target (± 1 pp), except for the end of 2005 and the beginning of 2006, when the actual inflation rate exceeded the higher limit of this margin. During the second interval, 2007-2009, the annual inflation rate was constantly above the variation limit allowed around the set target (Figure 2).

Figure 2



Cf. Popa C., (coord.), *Direct inflation targeting in Romania, Books of study, NBR, 25, 2009, p. 51.*

Figure 3



Cf. Isărescu M., *Inflation targeting. Quarterly report on inflation, February 2010, Press conference, NBR, <http://www.bnr.ro/Prezentari-si-interviuri-1332.aspx>*

The exceeding of the upper limit of the variation margin was caused by several internal and external factors which were active both on the side of the offer and on the side of the demand. Thus, on the side of the offer, the shocks have been caused by the higher oil and food prices and by the adjustments of the administered prices⁶ and of the indirect taxes (excises). The control of the direct effects of these shocks would have required a sudden and strong harshening of the monetary policy, which would have reduced the economic activity and deteriorate the social conditions. Under these circumstances, in agreement with the practice of other central banks, NBR preferred to tolerate the exceeding of the inflation target, trying to prevent the emergence of side effects to these shocks: anticipation by the economic agents of the higher inflation rate and incorporation of these pessimistic anticipations within the process of price and wage formation.

On the side of the demand, the shocks have been produced by the relaxation of the fiscal and income policy and by the fast increase of the credits, promoted by the massive inflows of capital.⁷ In this case, the task of reducing the supplementary demand to levels that are compatible with the inflation target was assumed almost entirely by the monetary policy.

The accomplishment of the inflation rate goal was further complicated by the continuous increase of the current account deficit, associated to the maintenance of a high pace of foreign debt increase, which have created the risk of a sudden and strong depreciation of the national currency.

The reaction of the central bank to these phenomena was a higher restrictiveness of the monetary policy, enforced by all the instruments in its possession. This orientation has also been accompanied by an intensification and improvement of the communication with the public, the central bank using a plurality of means to inform the public opinion on the deviations from the inflation target, on their causes and on the foreseen corrective measures. Thus, in press releases and press conferences, in declarations and interviews, NBR representatives have insistently reiterated the need

⁶ *The most important increases in prices referred to the natural gas and heating, and to the phone services.*

⁷ *Cerna S., "Fast increase of the credit: dangers and remedies", Oeconomica, 3, 2006, p. 5-20.*

for an increased coherence of the mix of economic policies, which would require, besides a much restrictive monetary policy, an even stricter fiscal and income policies, as well as more structural reforms, particularly concerning the labour market. The governance of the central bank considered this message to be essential to avoid stronger inflationist anticipations and thus, higher inflation.

The first overstepping of the inflation target was small and it occurred in late 2005, when the annual inflation rate was 8.6%, 0.1 pp higher than the higher limit of the variation margin around the revised 7.5% target. The main factors which caused this deviation were the adjustment of the administered prices (higher prices for the natural gases, heating and phone services) and higher food prices (because of the lower agricultural production due to floods). The adverse influence of the higher international prices was dampened somehow by the appreciation of the leu against the euro.

NBR reaction to these phenomena has been complicated by the higher inflow of capital determined by the liberalization of deposits in lei opened by non-resident people and by the high differential of the interest rates. Under these conditions, NBR decided for a gradual reduction of the interest rate – susceptible to deter the inflow of speculative capitals – and for the complementary use of the other instruments of monetary policy; included here were prudential and administrative measures (stricter rules to limit the credit risks for natural persons, limit the exposure of foreign currency credits granted to natural persons, change the methodology of credit classification and establishment of provisions etc.).

In 2006, the inflation target was fulfilled, the annual inflation rate decreasing even slightly below the target (4.87% compared to 5%). The reduction was determined by the more restrictive monetary policy, by the maintained austerity of the fiscal policy and by the higher competition between sellers on the retail market, which had created a pressure towards lower consumer goods prices. Thus, in the first quarter of 2006, NBR increased two times the monetary policy interest rate, which reached 8.75% in June. The central bank has at the same time increased the restrictiveness of the compulsory reserves mechanism. Other factors which supported deflation were the tempered increase of the administered prices and the consistent appreciation of the leu.

The 2006 performance has not been repeated, though, in 2007, when the inflation rate was 6.57%, overstepping again the higher limit

of the admitted margin of variation around the set target ($4\% \pm 1pp$). Deflation continued though, during the first part of the year, when the inflation rate decreased to 3.66% - the lowest level since October 1990. However, because of the powerful shocks produced by the turbulences from the international financial markets and of the higher food prices, as of August, the trend reversed. Another factor with adverse action was the depreciation of the leu, caused by the reversal of the capital flows as the international financial crisis broke out.

Confronted with these phenomena, BNR reacted and strengthened the monetary policy. Thus, the central bank stopped the trend to decrease the monetary policy interest rate which it had initiated during the early part of the year and it increased the firmness of the control over the evolution of the liquidity from the banking sector. Thereafter, NBR increased several times the monetary policy interest rate.

However, the impact of the mentioned shocks from the side of the offer was preserved and even amplified by the increase of the domestic demand, determined by the repeated wage rises, by the increase of the budget deficit and by the increase of the volume of credits for the private sector. In consequence, the effects of the restrictive monetary policy were largely annihilated and inflation fired up again.

In early 2008, NBR continued to strengthen the monetary policy increasing six times in a row the monetary policy interest rate between January – July. The inflation rate remained all around the year above the margin of variation set around the 3.8% target, reaching 6.3% by the end of the year. On the side of the offer, the shocks have been produced mainly by the increase of some food prices and of the administered prices, by the strong increase of the fuel price and by the depreciation of the leu. On the side of the demand, the main inflationist factors were determined by the fast increase of the internal absorption via the increase of the company and population income, via the increase of the non-governmental credit and via the significant increase of the budget expenditure. The larger domestic demand caused the imports to intensify, which increased the inflationist pressure on the background of a depreciating leu.

The annual inflation rate started to decrease in August 2008 due to the decreasing prices for some foods and to the decreasing

administered prices; the national currency also resumed its trend of appreciation. Deflation slowed down in the fourth quarter, though, under the circumstances in which the inflaming turbulences from the international financial market turned into a global financial and economic crisis. During this period, the central bank was confronted, on the one hand, with the risk of persisting inflationist pressures due to the additional demand, due to the exchange rate volatility and to the resulting worsening inflationist anticipations. On the other hand, the governance of the monetary policy has been further complicated by the emergence, expansion and fast aggravation of the adverse effects of the international financial crisis on the real sector and by the higher uncertainty regarding the evolution of the world economy and by the implications of the crisis on the Romanian economy. Complementary to these phenomena were the tensions on the domestic monetary market caused by the international financial turbulences and, later, by the manifestation of the first clear symptoms of slowing economic activity.

During the early months of 2009, the inflation rate continued to remain above the higher limit of the ± 1 pp margin of variation around the 3.5% target; by the end of March, the inflation rate was even higher than in December 2008 (6.71% compared to 6.3%). The faster increase of the prices has been determined by the significant depreciation of the leu in the first quarter 2009, because of the worsened perception of the investors on the vulnerability and prospects of the Central and East European economies, as the world financial and economic crisis was raging.

However, the ever clearer trend of falling economic activity and of tempering, on this background, of the inflationist pressures, determined the central bank to start, as of February 2009, a process of prudent relaxation of the monetary policy. Thus, the monetary policy interest rate was reduced by 0.25 pp in February, by 0.50 pp in May and by 0.50 pp in August. Also in May, the compulsory minimal reserves for foreign currency engagements with a due date higher than two years have been cancelled, while in August the rate of the minimal compulsory reserves for the other foreign currency engagements were decreased from 35% to 30%. In November, NBR reduced again the rate of the minimal compulsory reserves for liabilities in foreign currency, from 30% to 25%, and in January 2010, it reduced the monetary policy interest rate from 8% to 7.5%.

The period of time that elapsed from assuming inflation targeting is quite short to allow drawing up final conclusions on the role of this strategy in terms of anti-inflationist performance during the recent years. However, the conceptual clarifications involved by the elaboration and application of this strategy, the more rigorous substantiation of the monetary policy decisions, the better communication between the central bank and the public at large, are clear advantages of inflation targeting, which support its adoption by the NBR.

The current global economic context requires a flexible approach of inflation targeting, in order to consolidate the acquired deflationist performance and to allow a feasible medium-term deflationist trajectory. Inflation targeting implementation also requires increased attention to the management of the macroeconomic risks and to the securing of the financial stability.⁸

8. Inflation targeting and financial stability

The global financial crisis forced the central banks to reconsider the link between the monetary policy and the financial stability. To a certain length, the conception of the response politics depends on the analysis of the core causes of the crisis. Some authors consider that, essentially, the cause of the crisis is the long term excessively relaxed monetary policy of the USA and the euro area, which fuelled the speculative bubbles of the real estate from those areas.⁹ Other authors show that the main cause of the crisis was the excessive focus of the monetary policy from the large world economies on the medium term inflation and the little attention paid to the financial evolutions and their implications of the long-term inflation risk.¹⁰ The third interpretation claims that the deregulation of the financial sector and the financial innovations caused the monetary conditions from

⁸ Popa C., *The monetary policy and the new global economic context – speech delivered at the seminary “Monetary policy – evolutions and challenges”, hosted by the National Bank of Romania within the “Colloquia of monetary policy”, Bucharest, 17 April 2008, <http://www.bnro.ro>.*

⁹ Taylor J., *The financial crisis and the policy response: an empirical analysis of what went wrong, NBER Working Paper, 14631, 2009.*

¹⁰ Borio C., Lowe P., *Asset prices, financial and monetary stability: exploring the nexus, BIS Working Paper, 114, 2002.*

the USA and from other countries to relax, phenomenon not enough considered when the monetary policy was conceived.

The problem of the monetary policy reaction to the financial instability is similar to that of the reaction to the evolution of the exchange rate. From this perspective, one may say that it is more advantageously to answer directly to some evolutions from the financial sector such as the variation of the financial assets price, but an indirect answer also has certain advantages provided the evolutions from the financial sector create the premises for a surplus of demand and for inflation.¹¹ This approach is justified provided the macroeconomic analysis and the forecasts of the central bank reflect the evolutions from the financial sector; and there are many central banks which use inflation targeting but don't have the analytical instruments required to know the macroeconomic interactions.

At the fundamental level, the crisis showed that the countries using inflation targeting must pay more attention to the macrofinancial interactions. In most of these countries, the structural patterns used for the monetary analysis and prognosis lack elements which to reflect satisfactorily the financial sector, the mechanism of price formation for the main financial assets (for instance the price of the shares and bonds), the interaction between the financial sector and the behaviour of the population, of the enterprises, etc. These patterns don't reflect either the interactions within the financial sector. Of course, the remediation of these deficiencies is not easy, but it is important that the financial evolutions are better integrated within the monetary analysis and prognosis.

Another solution is that the central banks react directly to the indicators of financial stability.¹² In other words, some indicators of financial stability would enter directly within the goal function of the central bank.

In the hypothesis that the financial sector is already properly represented in the pattern operated by the central bank, the direct

¹¹ *Bernanke B., Gertler M., Should Central Banks Respond to Movements in Asset Prices?, American Economic Review, 91(2), 2001, p. 253–257; Bean C., Asset Prices, Financial Instability, and Monetary Policy, American Economic Review, 94(2), 2004, p.14–18.*

¹² *Borio C., Lowe P., op. cit.; Cecchetti S., Genberg H., Lipsky J., Wadhvani S., Asset Prices and Central Bank Policy, Geneva and London: International Center for Monetary and Banking Studies, 2000.*

reaction to these indicators of financial stability could bring back the macroeconomic performance, at least for some types of shocks. However, if the financial sector is not properly reflected within the pattern, the direct reaction of the central bank to the indicators of financial stability may improve the performance. As C. Walsh shows, the reaction to the indicators of financial stability improves the macroeconomic performances, particularly if the financial frictions bring about economic distortions.¹³ Further research is required in this area to determine, among other, the proper indicators of financial stability and the way they have to be included within the goal function of the central bank.

Another possibility is to expand the horizon of inflation targeting so as to take into consideration the long-term inflationist risks associated to the cycle of asset price.¹⁴ An advantage of this approach is that it is less mechanical than a direct reaction to the variation of assets price (or of other indicators of financial stability). Despite this, one must consider some practical difficulties appearing in this case. It is mainly the fact that the longer period of prognosis demands an improved capacity of the central bank to make medium-term and long-term forecasts. The measures aimed to curb the appearance of the speculative bubbles of the financial assets prices must be timed properly.¹⁵ The strategy of communication with the public must be improved so as to ensure the credibility of the engagement to maintain inflation at sustainable levels in the long run.

A potential or complementary alternative is to expand the horizon of the monetary policy so as to target a specific price level.¹⁶ Indeed, within the academic debates, there is a distinction made between price level targeting and inflation targeting.¹⁷ Having in view the algebraic relation between the formula calculating the general price

¹³ Walsh C., *Using monetary policy to stabilize economic activity*, Jackson Hole Symposium on Financial and Macroeconomic Policy, August 20-22, 2009.

¹⁴ Borio C., Lowe P., *op. cit.*

¹⁵ Bean C., *op. cit.*; Gruen D., Plumb M., Stone A., *How Should Monetary Policy Respond to Asset-Price Bubbles?*, in: Richards A., Robinson T., (eds.), *Asset Prices and Monetary Policy*, Sydney: Reserve Bank of Australia, 2003, p. 260–280.

¹⁶ Svensson L., *Price Level Targeting vs. Inflation Targeting: A Free Lunch?*, *Journal of Money, Credit and Banking*, 31, 1999, p. 277-295; Ambler S., *Price-Level Targeting and Stabilization Policy: A Review*, Bank of Canada Discussion Paper, 11, 2007.

¹⁷ Svensson L., *op. cit.*

level and the formula of the rate of variation of this level, the difference between the two approaches is not obvious: the objective of a constant price level involves zero inflation rate. Actually, the reason for the distinction between a constant price level and “zero inflation” resides in the widely accepted convention that price level targeting is a medium-term and long-term strategy, while inflation targeting is a short-term strategy.¹⁸ Therefore, price level targeting would implicitly lead to an enlargement of the monetary policy horizon in a way which, on the one hand, would facilitate the observation of the considerations of financial stability, and on the other hand, would be a commitment to ensure long-term price stability. Furthermore, as C. Walsh shows, price level targeting influences favourably the way in which the anticipations form, which should compensate the adverse effects of the zero nominal interest rate, phenomenon which happens during recessions (liquidity trap).¹⁹

References

1. Ambler S., *Price-Level Targeting and Stabilization Policy: A Review*, Bank of Canada Discussion Paper, 11, 2007.
2. Bean C., *Asset Prices, Financial Instability, and Monetary Policy*, *American Economic Review*, 94(2), 2004.
3. Beblavý M., *Monetary Policy in Central Europe*, Roudledge, London, 2007
4. Bernanke B., Gertler M., *Should Central Banks Respond to Movements in Asset Prices?*, *American Economic Review*, 91(2), 2001.
5. Borio C., Lowe P., *Asset prices, financial and monetary stability: exploring the nexus*, BIS Working Paper, 114, 2002.
6. Cecchetti S., Genberg H., Lipsky J., Wadhvani S., *Asset Prices and Central Bank Policy*, Geneva and London: International Center for Monetary and Banking Studies, 2000.
7. Cerna S., *Creșterea rapidă a creditului: pericole și remedii* (Fast increase of the credit: dangers and remedies), *Oeconomica*, 3, 2006.

¹⁸ Edey M., *Costs and Benefits of Moving from Low Inflation to Price Stability*, *OECD Economic Studies*, 23, 1994 p. 118; Goodhart C., *What Should Central Banks Do? What Should Their Macroeconomic Objectives and Operations?*, *Economic Journal*, 104, 1994, p.1428; Svensson L., *op. cit.*

¹⁹ Walsh C., *op. cit.*

8. Cerna S., Donath L., Șeulean V., Bărglăzan D., Boldea B., *Economie monetară și financiară internațională* (International monetary and financial economy) West University Press, Timișoara, 2005.
9. Constantinescu C., *Modalități de cuantificare a inflației de bază-analiză comparativă: cazul României* (Ways to quantify core inflation – comparative analysis: the case of Romania), NBR, Books of study, 19, 2007
10. Edey M., *Costs and Benefits of Moving from Low Inflation to Price Stability*, OECD Economic Studies, 23, 1994.
11. Goodhart C., *What Should Central Banks Do? What Should Their Macroeconomic Objectives and Operations?*, Economic Journal, 104, 1994.
12. Gruen D., Plumb M., Stone A., *How Should Monetary Policy Respond to Asset-Price Bubbles?*, în: Richards A., Robinson T., (eds.), *Asset Prices and Monetary Policy*, Sydney: Reserve Bank of Australia), 2003.
13. Leiderman L., Svensson L., (ed.), *Inflation Targeting*, London, CEPR, 1995.
14. Popa C., *Politica monetară și noul context economic global* (Monetary policy and the new global economic context), speech at the seminary *Monetary policy: evolutions and challenges*, hosted by the National Bank of Romania within the “Colloquia of monetary policy”, Bucharest, 17 April 2008, <http://www.bnro.ro>.
15. Popa C., Boțel C., Antohi D., Udrea I., Grosu T., Copaciu M., Gălățescu A., *Țintirea directă a inflației în România* (Direct inflation targeting in Romania), NBR, Books of study, 25, 2009.
16. Scott R., *Inflation Targeting at 20: Achievements and Challenges*, IMF Working Paper, WP/09/236.
17. Svensson L., *Inflation Forecast Targeting: Implementing and Monitoring Inflation Targets*, European Economic Review, 41, 6, 1997; *Price Level Targeting vs. Inflation Targeting: A Free Lunch?*, Journal of Money, Credit and Banking, 31, 1999.
18. Taylor J., *The financial crisis and the policy response: an empirical analysis of what went wrong*, NBER Working Paper, 14631, 2009.
19. Walsh C., *Using monetary policy to stabilize economic activity*, Jackson Hole Symposium on Financial and Macroeconomic Policy, August 20-22, 2009.