Implications of the inflation targeting strategy in some of the European Union member countries

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Taking into consideration the necessity of stabilising the inflation rate at a level consistent with an economic policy strategy that assumes Romania will join the euro-zone at the earliest date possible the paper aims to underline the main aspects related to the implementation of the inflation targeting strategy in Romania by realising a comparatively analysis with the experience of other former socialist countries, like the Czech Republic, Hungary and Poland, which have successfully implemented this strategy, with good results in the disinflation process. The results of our paper highlight that the medium-term perspective of the monetary policy based on a direct inflation target lead to the enhancement of the flexibility of Romanian monetary policy in response to unexpected events and supported the preservation of low inflationary expectations, thus building up favourable foundations for high economic growth, despite the fact that the inflation rate hasn't been yet stabilised at a low level in order to fulfil the inflation criterion, which is one of the conditions for euro-zone membership, this still representing a challenge for the Romanian authorities.

Keywords: inflation targeting, monetary policy, price stability, disinflation process, European Union

1 Introduction

Over the last decades, the phenomenon that caused major imbalances in the national economies of many countries around the world was the high level of inflation. Thus, significantly high levels of inflation registered by different countries have made the prices of goods and services to grow faster in a short period of time, severely diminishing the real value of money. Because of the manifestation of this negative phenomenon, public authorities and especially the affected countries' central banks have given a much greater importance to the process of ensuring a domestic monetary stability, so that price stability has become the primary objective of the monetary policy.

The purpose of this research is to underline the main aspects related to the implementation of the inflation targeting strategy in Romania, in comparison with other European Union member countries: the Czech Republic, Poland and Hungary, highlighting the factors that determine the difficulties in achieving price stability encountered by our country, comparatively with the other analysed countries that have succeeded in solving the high inflation problem.

In order to achieve this purpose, the ***methodological approach*** used starts with a literature review, which establishes the role and the place of this research. Afterwards, we have performed a comparative analysis between the inflation targeting strategy adopted by Romania and the strategies adopted by the other EU member countries. In order to obtain our data, we have used mediate techniques for data gathering, like official statistics of the central banks from the analysed states and of Eurostat, different reports, studies and researches. The usage of these methods has been materialised in a series of comparative tables and graphics which are underling the way in which the monetary authorities of the analysed countries have tried to ensure the stability and efficiency of their own national currency.

The countries that have already adopted the euro have shown, by meeting the Maastricht criteria, increased capacity to manage inflation rates, achieving low levels of this indicator. Also, the European Union countries outside the euro zone that have adopted the inflation targeting strategy, like Sweden or Britain, also enjoy low levels of long-term inflation rates, this being also an effect of their long experience regarding the market economy rules, which characterizes these economies.

Therefore, we consider – and ***the results*** of our analysis will highlight this aspect - that Romania, as a new European Union member state, could learn how to apply and imbue the inflation targeting strategy using the experience of the developed countries from the European Union, and especially, the experience of former socialist countries, like the Czech Republic, Hungary and Poland which have successfully implemented this strategy, with good results in the disinflation process, and whose historical and economic development resembles with that of our country. These similarities are the reason why we have chosen the example of these countries in making the comparative analysis.

Thus, this study through its originality, good methodological approach and high quality execution, will be a good reference point both for the academic environment and policy makers alike, having thus important ***implications*** and a great ***value*** throughout enriching the literature written on this field and providing possible practical solutions for a major problem of the modern economies.

2 Literature review regarding the implementation of the inflation targeting strategy

Analyzing the inflation targeting strategy has started to become an increasingly approached topic throughout the academic literature, especially after 1988, when New Zealand became the first country that has used the implementation of such a strategy in order to achieve price stability. Taking into account the long period throughout which this strategy has been applied, the New Zealand model has become a landmark for the studies undertaken on this subject, analyzing both the economic conditions and the framework for the application of the monetary policy as well as the way of implementing this strategy and the results obtained (Brash, 1996; Brimmer, 2002; Hodgetts, 2005).

If in the case of the pioneer states of this strategy, the studies conducted have covered many aspects of the monetary policy, in the case of the new Member States of the European Union the researches' conducted are not so detailed. Moreover, the conclusions of the studies conducted for developed countries cannot be applied also in their case, because their economies are less developed, and are more vulnerable to systemic shocks.

Also, throughout the process of analyzing the academic literature we have observed that among the several studies undertaken on the case of the new Member States of the European Union regarding this subject, the majority treats the inflation targeting strategy as part of the monetary policy applied by the Czech Republic, Poland and Hungary, without taking into consideration the case of Romania, mainly due to the fact that Romania acceded the European Union in 2007 and implemented the inflation targeting strategy only starting with 2005. Among the articles that highlight different aspects of the monetary policy implemented in the three countries mentioned above, presents a real interest the article conducted by Frederic Mishkin and Jiri Jonas (2004), which assesses the disinflation process, the conditions that led to the change of the monetary policy strategy as well as the need to establish a very accurate target. But since the work was published in 2004 it didn't capture all the changes and the results recorded in these countries, for example some countries, such as Czech Republic, subsequently changed the way of setting its inflation target.

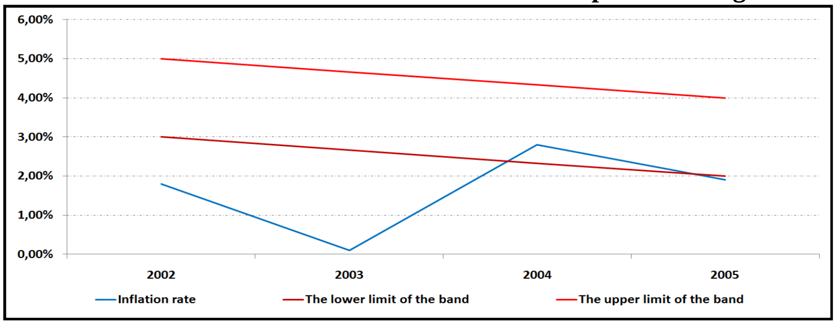
Regarding the studies related to the strategy of direct inflation targeting in the case of Romania, in 2002 and then in 2004, the National Bank of Romania has commissioned the conduct of a series of studies (Popa et all, 2002; Iorga et al, 2004) concerning the institutional and technical preconditions (indices, targets, exceptions, forecasts) required to implement inflation targeting strategy in Romania, starting from the examples of other countries with similar socio-economic conditions with our country, namely the Czech Republic, Poland and Hungary. Since then, only a few more significant studies have been conducted, analyzing the implications of the inflation targeting strategy in the case of Romania (e.g. Popa et all, 2009). In this context, *the current study could represent another step towards the possibility of filling this gap, by comparatively analyzing the implementation of this strategy in Romania with the results achieved in this matter by the other countries from the CEE.*

3 The implications of adopting the inflation targeting strategy in some countries from Central and Eastern Europe

3.1. The Czech Republic

The Czech Republic has adopted the strategy of direct inflation targeting in 1998, renouncing thus at the exchange rate targeting strategy. This change came as a result of the exchange rate turbulences from May 1997 and because of the need to achieve low inflation rates for the EU accession process. Since the adoption of the inflation targeting strategy until today, the Czech National Bank changed its way of establishing the inflation targets. Hence, in the first phase, between 1998 and 2000, the inflation target was set in terms of net inflation, and then starting with 2002 the way of establishing the inflation target has changed and has been adopted a target band set in terms of headline consumer price inflation. This change brings a better understanding of the strategy of inflation targeting by the general public and a better anchoring of inflation expectations. The established target band has registered a downward trend, aiming to get from 3% -5% at 2% -4% by the end of 2005 (see figure 1).

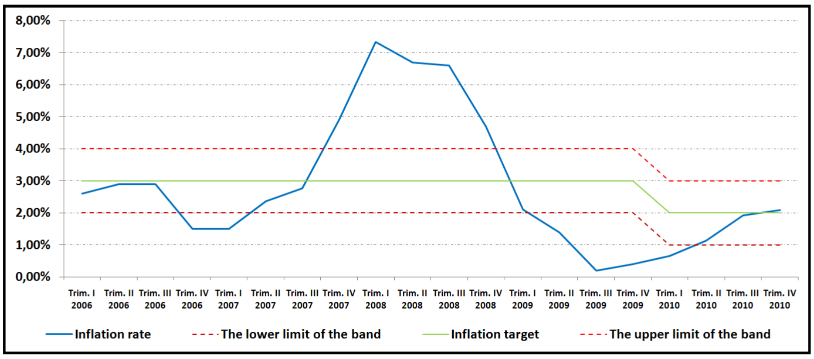
Figure 1 – The evolution of the inflation in the Czech Republic during 2002 - 2005



Source: own simulation based on the dates provided by the Czech National Bank

Thus, it may be noted that the actual values of inflation for the period 2002 - 2005 were below the band until 2004, with an upward trend starting with 2003, when the inflation rose from 0.1% to 2.8%. After registering this value, the inflation value resumed a downward trend. Afterwards, a new change is made at the beginning of 2006, when the inflation target is set in terms of headline inflation of 3%, the CNB striving to ensure that actual inflation does not differ from the target by more than one percentage point in either direction (± 1%).

Figure 2 – The evolution of the inflation in the Czech Republic during 2006 – 2010



Source: own simulation based on the dates provided by the Czech National Bank

The evolution of the inflation rate for the period 2006-2009 (see figure 2**)** shows the overcomes of the band in both directions, taking into consideration that for example, in the fourth quarter of 2006 the inflation exceeded the lower limit, the recorded values being 1.5%, and in the fourth quarter of 2007, the inflation exceeded the upper limit, reaching 4.9 %. The peak was reached in the next quarter, when the inflation registered the value of 7.3%, followed by a downward trend, the inflation reaching at the end of 2009 values below the band (0.4%). Afterwards, from January 2010 until the Czech Republic's entry to the euro area, the inflation target is set in terms of headline inflation of 2% and, as before, the CNB will strive to ensure that actual inflation does not differ from the target by more than ± 1%.

It can be said that ***the monetary policy strategy adopted by the Czech National Bank***, in order to meet the price stability criterion necessary for the accession to the euro area, ***is efficient***, given the fact that the inflation rate decreased from 8.5% in the moment of its adoption to values below 1% in 2009. Also, although over the 12 years of using the direct inflation targeting strategy, the values of the inflation rate have experienced increases for short-term periods, the CNB's decisions and measures have succeed to bring every time the inflation on a downward trend.

3.2. Hungary

As a prospective member of the European Union beginning with 2004, Hungary needed to adjust its inflation rate to that of the other member countries, given that until 2000 it has registered an inflation rate of two-digits. The solution was the adoption of the inflation targeting regime starting with June 2001, with the targets set for December 2001 and December 2002. Afterwards, until the end of 2006, the inflation targets were set on a yearly basis, for at least two years ahead (see figure 3). Then, in August 2005, the Magyar Nemzeti Bank (MNB) decided that it will be better to adopt an explicit medium-term inflation target for the period starting in 2007, defined as a 3% rate of increase in the Consumer Price Index (CPI).

The difference between the two regimes is high, even if the inflation targets established are close in value (see table 1). Thus, in the case of the medium-term continuous inflation targeting regime the target is not set for an undefined period of time, rather it is revised after 3–5 years, and there is the possibility of making changes in the event of major shocks, in order to meet the new circumstances, or, the inflation differential, caused by economic convergence, may change over time, like in the case of Hungary, and thus it is helpful to periodically review the medium-term inflation target.

Table 1 – The dynamics of the inflation targeting strategy implementation in Hungary during 2001 - 2007

Year	Target level	Set in date	Reference period	Actual inflation
2001	7% ±1 %	June 2001	December 2001	9.1%

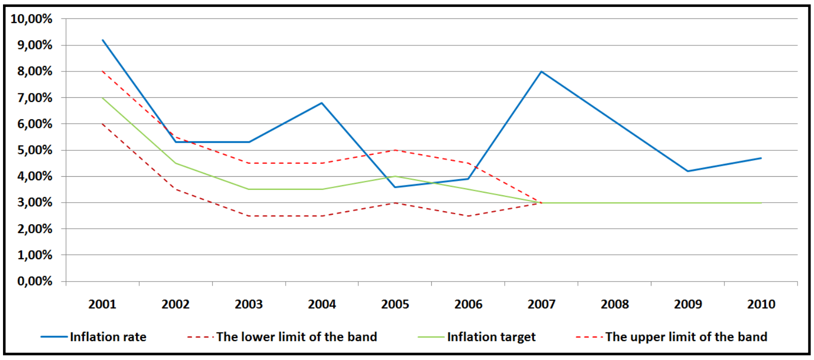
2002	4.5% ±1 %	June 2001	December 2002	5.3%
2003	3.5% ±1 %	December 2001	December 2003	5.3%
2004	3.5% ±1 %	October 2002	December 2004	6.8%
2005	4% ±1 %	October 2003	December 2005	3.6%
2006	3.5% ±1 %	November 2004	December 2006	3.9%
2007	3%	August 2005	Continuous	8%

Source: own simulation based on the dates provided by the Magyar Nemzeti Bank

As it can be seen in the figure below, starting with 2005, Hungary's inflation rate value was close to 3% and, taking into consideration this result, the adoption of the medium-term continuous inflation targeting regime has been considered a good decision, even if the value of the target was slightly higher than the level of inflation defined by the ECB as consistent with price stability (below, but close to 2%). However, the medium-term inflation target will be reviewed as the convergence process moves forward.

Furthermore, it must be taken into consideration when evaluating whether the inflation target has been achieved that unanticipated shocks may hit the inflation at a time when it is too late for monetary policy to respond, due to the short time horizon. That's the reason way, MNB agreed that a maximum ±1% deviation of the CPI from the 3% inflation target is acceptable in terms of considering the objective of maintaining price stability achieved.

Figure 3 – The evolution of the annual inflation rate in Hungary during 2001 – 2010



Source: own simulation based on the dates provided by Eurostat and the Magyar Nemzeti Bank

In conclusion, taking into account ***the great effectiveness of the direct inflation targeting strategy (DIT) pursued during the period of disinflation***, we consider that the adoption of the DIT strategy was the most beneficial for the monetary policy of a country such as Hungary, ***having very positive implications and providing a solid foundation for sustained economic growth***. Furthermore, in out opinion, on the one side, in the light of increasing economic openness, deepening of financial integration process, increased usage of financial innovations as well as deteriorating external environment, the usage of the monetary aggregates control strategy couldn't have guarantee Hungary the completion of the inflation reduction process and the lasting of this process and, on the other side, the usage of the exchange rate targeting would have exposed the economy to the risk of serious distortions on the financial market.

3.3. Poland

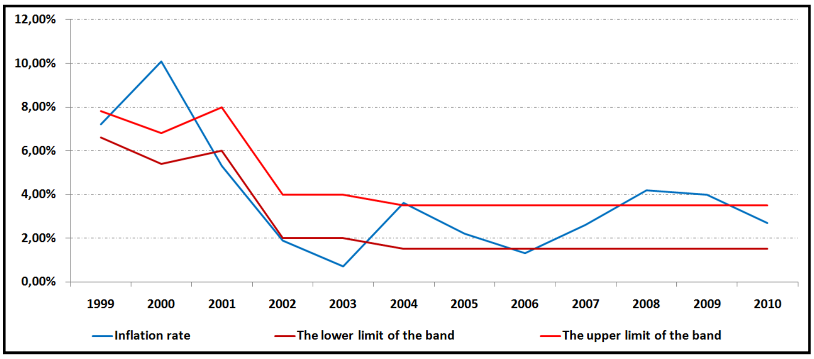
Poland is one of the former socialist states that have overcome quickly the period of transition towards a market economy, soon becoming, within the enlargement process from May 2004, a member of the

European Union. Afterwards, within the reform of the state process, has been adopted a new Constitution, which entered into force on 17 October 1997. Under the new Constitution and the National Bank of Poland (NBP) Act, it has been instituted the Monetary Policy Council which represented the new decision-making body for monetary policy. The Council decided to change the monetary policy regime and at the start of 1998 switched from exchange rate targeting to inflation targeting. Therefore, according to the Medium-Term Strategy of Monetary Policy (1998-2003) adopted by the Council in September 1998, the inflation rate was supposed to be below 4% at the end of the period and more specifically, on the short-term, the inflation rate target was set at 3% with permitted fluctuations of ±1 percentage point.

Thus, by adopting this strategy Poland's monetary policy became more flexible. In addition, the outlook for price stability, after a long period of time with two-digit inflation rates, represented a support of a long-term sustainable economic growth, as evidenced by more than a decade of economic growth and even more, by the fact that Poland was the only EU country that has avoided the current economic crisis, registering a GDP growth into 2009 of 1.7%, according to Eurostat.

The figure 4 shows that, even if the Council set the 1999 target in the range of 8% to 8.5%, the tolerance band being relatively narrow considering comparable approaches of other countries, the inflation rate stood right in the centre of this range, NBP proving in that way its strong commitment for achieving price stability (NBP, 1998, p.12). In the next year the established inflation target hasn't been achieved, the polish monetary authorities explaining that they have relaxed the monetary policy because they have anticipated a tighten of the fiscal policy, which it never really happened, as well as a depreciation of the balance of payments account. Afterwards, between 2001 and 2003, it followed a period of accelerated reduction of the inflation rate, which has cancelled the bad impression left to the general public by the poor management of the monetary policy in 2000. This decrease in the level of inflation is appreciable, especially because a reduction from the level of 10% to 1.9% in just two years is much more difficult to achieve in practice, than a reduction of the inflation level from 246% to 60%, as it happened in Poland as well during 1990-1991. Hence, the NBP's objective of reducing the inflation rate below 4% was achieved, reaching thus the level observed in developed economies.

Figure 4 – The evolution of the annual inflation rate in Poland during 1999 - 2010



Source: own simulation based on the dates provided by Eurostat and the National Bank of Poland

Regarding the period 2004-2010, the Council set the inflation target in terms of headline inflation of 3,5%, the NBP striving to ensure that actual inflation does not differ from the target by more than one percentage point in either direction (± 1%). Despite of the fact that in four out of six years the inflation target was not achieved, the deviations were not significant at all. Thus, we may conclude that although since the adoption of this strategy have been only three years in which the inflation target was within the range established, ***the NBP's capacity to ensure price stability has been proven to be more efficient than in the previous monetary policy strategy***, demonstrating in this way the improved central bank's capacity to manage and representing a strong argument in support of Poland's capacity to adopt the euro.

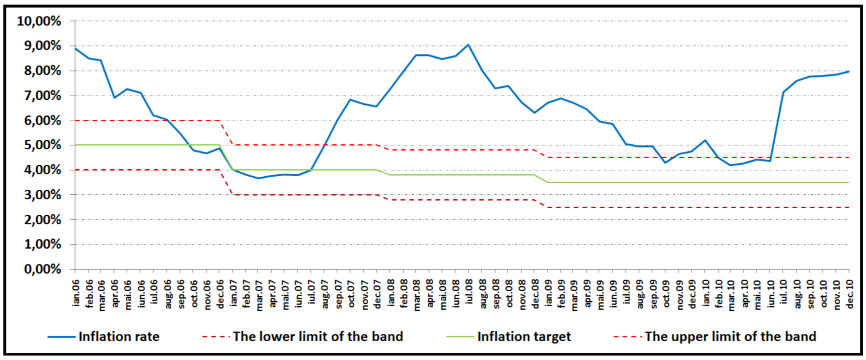
3.4. Romania

The National Bank of Romania (NBR) has adopted the strategy of direct inflation targeting in August 2005. The shift from the usage of the monetary aggregates control strategy to the usage of the direct inflation targeting strategy (DIT) was the NBR's response to the instability of monetary aggregates, to their poor correlation with the inflation rate and also to the poor results achieved by the countries that have applied the monetary aggregates strategy strategy since 1988, including the transition countries like Czech Republic, Poland and Hungary.

The strategy implemented by NBR falls within the category flexible inflation target (Svensson, 2000, p.155-183) and, taking into consideration the general public's awareness, the inflation target is based on the Consumer Price Index (CPI), being set as a midpoint within a target band of +/-1 percentage point. Just like in the case of the other new EU member states, the set inflation target must take into account both the requirements of the monetary policy and of the direct inflation targeting strategy as well as those regarding the nominal and real convergence of the economy.

On the other hand, the set inflation target must also comply with the consolidation of the disinflation process that is determined by the calendar set for the adoption of the euro currency, which requires the achievement of a comparable level of inflation with the one stated in the Maastricht Treaty requirements (Socol, 2009). In this respect, from 2005 to date, the level of this target was gradually descended, the central bank aiming to set realistic and feasible targets and to allow, through the implementation of this strategy, public verification of the direction and effectiveness of the monetary policy, enhancing thus its credibility.

Figure 5 – The evolution of the annual inflation rate in Romania during 2001 - 2010



Source: own simulation based on the dates provided by Eurostat and the National Bank of Romania

As we can note from figure 5, the inflation rate framed within the target range only for short periods of time, especially until August 2007, after that moment undergoing an upward trend and even reaching, in July 2008, the value of 9.04%, while the target was set at 3.8% ± 1%. However, the central bank hasn't revised the target, but decided that would be better to decrease the monetary policy rate in order to bring the inflation rate on a downward trend and as close as possible to the target. The downward trend lasted until July 2010, when the value of the inflation registered a significant increase, from 4.38% in June 2010 to 7.14% in July 2010, and then to 8,01% in March 2011. In the light of these evolutions, Romania has at the moment the highest inflation rate from all the European Union member states (Nuţă, A.C., Nuţă, F.M., 2010). Even if it has been discussed the possibility to modify the inflation target, in the end it has been decided to not change it since it has been considered that it is only a temporary increase, determined especially by the increase of the VAT from 19% to 24% in July

2010, and since NBR is planning to adopt a flat multi-annual inflation target of 2.5 percent ±1 percentage point starting with 2013.

In general, the time elapsed since the adoption of the direct inflation targeting strategy is relatively short in order to enable the development of an empirical analysis which would be able to draw firm conclusions about its contribution to the economic performance, over the last years. However, ***the conceptual clarifications realized within the new regime, the more rigorous foundation of the monetary policy decisions, and not lastly, the improved central bank's communication with the general public are unquestionable assets that can be directly related to the implementation by NBR of this monetary policy strategy.***

4 Conclusions

Analyzing all the four new EU member states our study emphasized that *there are differences in the expression of inflation targets*. Hence, while Romania has continued with a target set as a midpoint within a target band of +/-1 percentage point, descending gradually the level of this target, some countries, such as Hungary, have changed the regime and have adopted a continuous inflation target. Also, while Poland set the inflation target in terms of headline inflation from the very beginning, the Czech Republic has twice changed the expression of its inflation target, from the inflation target set in terms of net inflation to a target band set in terms of headline consumer price inflation, and then to a inflation target set in terms of headline inflation of 3%, the CNB striving to ensure that actual inflation does not differ from the target by more than 1% in either direction. Another issue that is underlined by our study is that *all the analysed countries have set targets for inflation over the medium term*, emphasizing thereby the focus of their monetary policy on medium-term developments, and *all the four countries are enforcing a transparent monetary policy*, through quarterly reports on inflation. In general, when the central banks have had to decide on a type of inflation target, they have chosen the target type that they considered could better assure the highest transparency and understanding by the general public and the most effective monetary policy in order to meet the Maastricht criterion regarding inflation. But, each of the modalities of expression the target has advantages and disadvantages. For example, a target set as a midpoint within a target band, like in the case of Romania and Poland, brings for the problem of choosing the size of the band. Thus, on the one hand, a possible application of a narrow band would imply a stronger commitment of the central bank to reduce inflation, but would also led to the decrease of the central bank credibility if the inflation rate will be outside the set band, and on the other hand, a wider band would imply a weaker commitment of the central bank to reduce inflation. Also, the option for a target band offers a higher possibility to achieve the target then the case of a target set as a fixed point, but also in the first case the credibility of the central bank is much more affected if the target is not achieved than in the second case.

Regarding the results obtained by applying the strategy of direct inflation targeting, our research highlights that, from its adoption until December 2010, *the rate of inflation has decreased in all the analyzed countries*. However, in the case of Romania, inflation has registered quite diversified values during 2005-2010, recording sometimes much lower values than in August 2005, but other times recording values close to or even higher. For example, at the end of 2009 the inflation rate value was of 4.74%, unlike the value of 9% in August 2005, but in 2010 the annual medium rate of inflation registered an increase, especially as a result of the increase of the VAT value, reaching 6.1%.

Table 2 – *The evolution of the annual inflation rate when compared with the moment of the adoption of the direct inflation targeting strategy (DIT)*

Country	Effective DIT adoption date	Inflation at the moment of the adoption of DIT	Inflation in 2010	Stable DIT period

Czech Republic	Dec. 1997	9.7%	1.2%	Jan. 2002-present
Hungary	Jun. 2001	9.1%	4.7%	Jan. 2007-present
Poland	Oct. 1998	7.2%	2.7%	Jan. 2004-present
Romania	Aug. 2005	9%	6.1%	-

Source: own simulation based on the dates provided by Eurostat and by Roger S. (2009).

Concluding, ***the implementation of the direct inflation targeting strategy was effective in all the four countries analyzed***, the brief periods of time when inflation was outside the set target being due to shocks or factors which could not be influenced by the monetary policy, but in general the adoption of this strategy led to improved communication between the policy makers and the general public and provided monetary discipline.

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