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*The purpose of this paper is to show that the monetary policy credibility and transparency represent two powerful sources for the improvement of macroeconomic performances. In order to achieve this goal, the authors adapted the methodology developed by Krause to our economic environment. We identified three time spans in our economy evolutions and we evaluated in each period the impact of monetary credibility and transparency improvement on the macroeconomic performances index. The results obtained showed that the improvement of monetary policy credibility and transparency sustained the stability and the predictability of the macroeconomic environment.*

*Keywords: monetary policy credibility, monetary policy transparency, economic performances*

*JEL Classification: E52*

### **Introduction**

Macroeconomic performances means more than just lower inflation, it involves a more stable inflation and real growth. The lack of economic shocks or more skillful monetary policy makers might be the sources of better economic outcomes<sup>342</sup>.

Regarding the evolution of Romanian economy after 1990, we can identify three time spans:

- since 1990 until 1999: as a result of the great inflation fluctuations, the Romanian economy registered a slow and unstable growth of real GDP;
- since 2000 until 2005: the inflation rate started to decrease consolidating the disinflation phenomenon. As a result the real GDP counted a positive evolution;
- since August 2005, NBR adopted a new monetary policy, namely inflation targeting. The purpose of this change was to ensure the reduction of inflation rate and, in the end, the achievement of price stability. In consequence, the economic growth consolidated and real GDP evolution became more promising.

As Krause mentioned, better macroeconomic performances might be achieved through the improvement of monetary policy process. Before 2000, the interference of different economic and political forces determined the monetary policy to follow other objectives than the improvement of economic outcomes (i.e. the NBR was obliged to sustain unprofitable sectors, lending them very cheap money). The changes in NBR Statute from 1998 and 2004 released the monetary policy from governmental influences, the result being a considerable improvement in the implementation of monetary decisions. More than that, the NBR decisions in order to adopt the inflation targeting monetary policy improved the monetary policy environment. Due to these evolutions, we believe that the way the monetary policy was conducted influenced considerably the performances of Romanian economy.

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342 Krause, S. (2004), p.1

## Methodology

According to our previous studies<sup>343</sup>, the credibility of NBR monetary policy is high, except the situation when our economy was affected by a negative supply shock (a severe drought in the summer of 2007). Also, even if the population does not perceive the monetary policy as being transparent, the NBR release periodically a high amount of information with a very good qualitative level. Moreover, we subscribe to the idea sustained in the economic literature<sup>344</sup> that the credibility and transparency enhance the efficiency of monetary policy.

In order to evaluate the role of NBR credibility and transparency in the improvement of macroeconomic performances we start from the following assumptions:

- the NBR credibility level increased during the analyzed time span. Due to inflation evolution until 2000, we consider that the level of NBR credibility was very low. The decrease of inflation rate during the time span 2000 – 2005 has improved the NBR credibility, while the adoption of inflation targeting monetary policy and the NBR commitment to ensure the price stability has strengthened the credibility;

- the NBR transparency improved also during the analyzed time span. NBR started to release the Inflation reports in 2002 with a biannual frequency. In consequence, we consider that before 2000, the transparency of NBR monetary policy was very low. The release of Inflation reports has ameliorated NBR transparency offering to society free access to information regarding inflation evolution. Since NBR adopted inflation targeting as monetary policy, the number of inflation reports released annually increased to four. Additionally, beside the presentation and the explanation of inflation evolution, the inflation reports contain forecasts for inflation evolution. In conclusion, as we studied previously<sup>345</sup>, the NBR monetary policy has a high level of transparency.

The study of macroeconomic performances of Romanian economy during these three time spans will be realized using the performance index elaborated by Krause<sup>346</sup>:

$$P = \lambda \cdot \text{Var}(\pi) + (1 - \lambda) \cdot \text{Var}(Y) \quad (1)$$

where:  $\lambda$  – coefficient that describes the trade-off between inflation and output,  $\text{Var}(\pi)$  – the variance of inflation and  $\text{Var}(Y)$  – the variance of output (real GDP). The index evaluates the macroeconomic performances using a weighted sum of inflation and output volatility.

Regarding the output instability we subscribe to Krause and we will calculate the variance of observed values as reported to output trend. In the case of inflation instability, Krause counted the variance of observed values as reported to a reference value for inflation, 2%. We consider that this method is not suitable for our country. While an inflation rate of 2% represents the goal of monetary policy in EU (also the definition of price stability from the European Central Bank perspective), in Romania the goal of NBR is to reduce the inflation rate. In consequence, we consider more appropriate to evaluate the inflation instability reporting the observed values to their trend during the analyzed time span.

The trend of these two data series (inflation rate and output) will be computed using HP filter (Hodrick – Prescott).

Regarding the value of  $\lambda$ , we decided to evaluate them as it follows:

- during the time span 1990 – 1999 the Romanian governments supported the output and employment evolution neglecting, in the same time, the effects of its decision on inflation. In

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343 Toader, V. (2008), pp. 560 – 562; Toader, V. and Rus, R.V. (2008), pp. 456 - 457

344 Bernake, Fracasso, Genberg, Wyplosz, Krause

345 Toader, V. (2008), pp. 560 – 562

346 Krause, S. (2004), p. 9

consequence, in the performance index evaluation we assigned 40% to inflation variance ( $\lambda = 0.4$ ) and 60% to output variance ( $1 - \lambda = 0.6$ );

- during the time span 2000 – 2005, as a result of the NBR status changes, NBR sustained through its decisions the disinflation process. In consequence, in the performance index evaluation we assigned 70% to inflation variance ( $\lambda = 0.7$ ) and 30% to output variance ( $1 - \lambda = 0.3$ );

- after the adoption of inflation targeting monetary policy (August 2005) the inflation rate reduction and the price stability achievement became the main objective of NBR. In this situation, we considered appropriate to assign 90% to inflation variance ( $\lambda = 0.9$ ) and only 10% to output variance ( $1 - \lambda = 0.1$ ) in the process of performance index evaluation.

### Results and discussions

As we can see in the following figures (1 and 2), during the time span 1990-1999, the inflation rate had registered a higher volatility than the output. The ascending trend of the output shows the Romanian governments' inclination to output and employment.

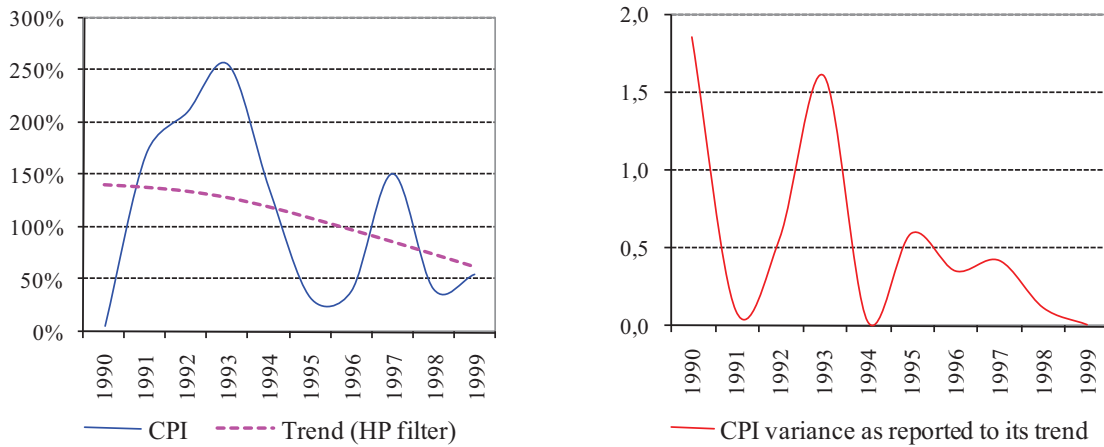


Figure 1 – Inflation rate variance (CPI) during the time span 1990 – 1999 (annually values)  
Source: NBR and authors' calculations

According to formula (1), the inflation rate variance is  $\text{Var}(\pi) = 5.65134$ , while the output variance is  $\text{Var}(Y) = 0.04313$ . Applying formula (1), the index of macroeconomic performance for the time span 1990 – 1999 is  $P = 2.28642$ . This value illustrates a great volatility of both inflation and output.

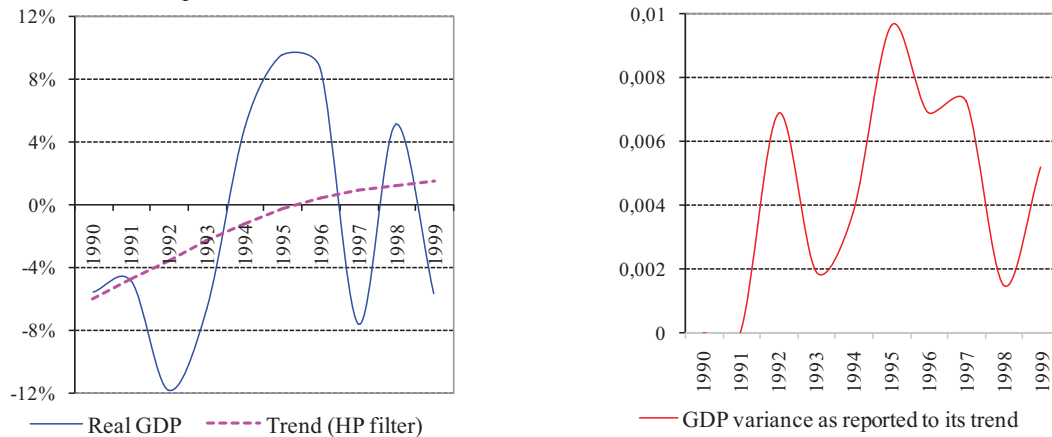


Figure 2 – Output variance during the time span 1990 – 1999 (annually values)

Source: NBR and authors' calculations

The time period 2000 – August 2005 was characterized by higher output volatility than in the case of inflation rate. As we can see in figure 3 and 4, during the analyzed time span the inflation rate and output registered a descending trend. The NBR efforts to sustain the disinflation process through restrictive monetary policy decisions had a negative influence on the real GDP evolution. Correlating the fact that the government could not maintain the economic growth using monetary policy and the lack of private investments, we obtain the premises for an economic slowdown.

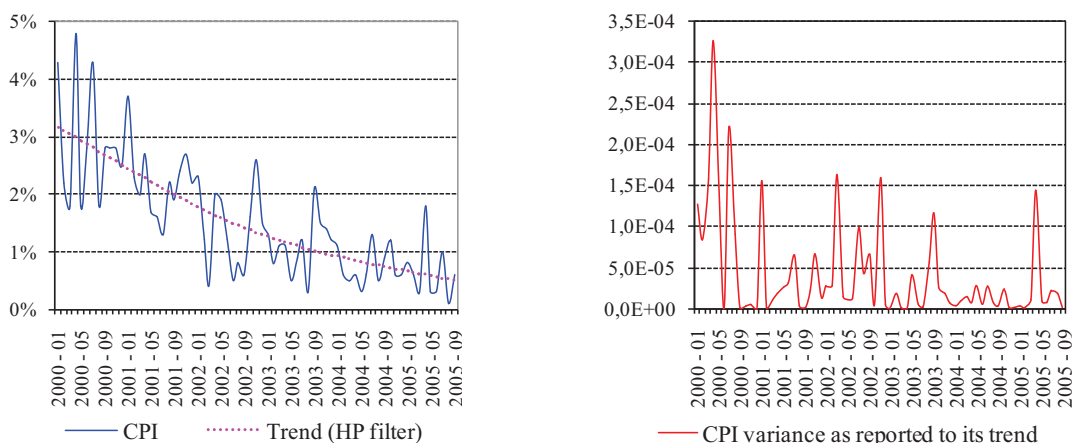


Figure 3 – Inflation rate variance (CPI) during the time span 2000–August 2005 (monthly values)

Source: NBR and authors' calculations

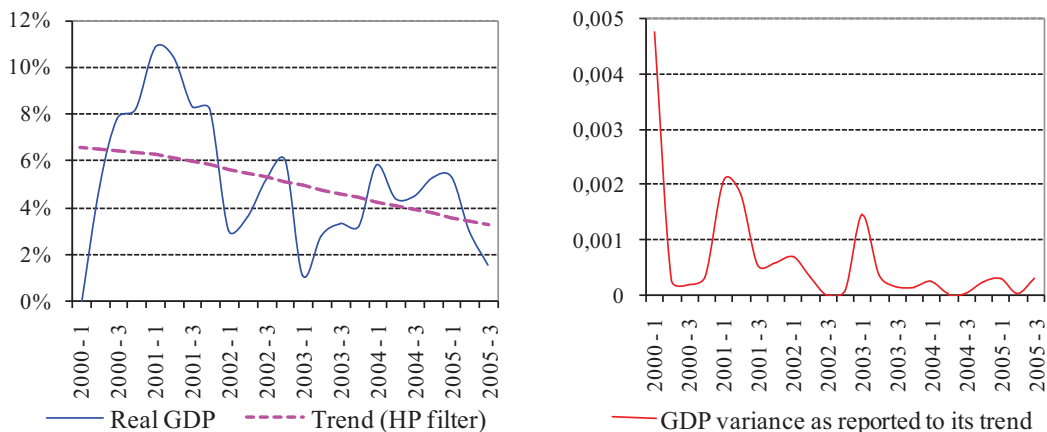


Figure 4 – Output variance during the time span 2000 – August 2005 (quarterly values)

Source: NBR and authors' calculations

Evaluating the inflation rate and output variance as reported to their trend we obtained  $\text{Var}(\pi) = 0.00281$  for inflation rate and  $\text{Var}(Y) = 0.01500$  for real output. As a result, the macroeconomic performance index was  $P = 0.00647$ . This value shows that during the time span 2000 – August 2005 the volatility of inflation rate was lower than in the case of real output. The monetary policy had an important role in this evolution, sustaining the disinflation phenomenon.

The real GDP fluctuations were also higher than inflation rate fluctuations during the time span September 2005 – December 2008. At the beginning of the analyzed time period, the real GDP recorded an ascending trend, this evolution being the result of foreign and domestic investments, not the effect of a governmental support (as it was between 1990 and 1999). Unfortunately, in

2008 the first signs of the actual economics crisis became visible and the real GDP started its decline. As a result of a negative supply shock (caused by a drought), starting from the second part of 2007, the inflation rate increased. These evolutions are presented in figures 5 and 6.

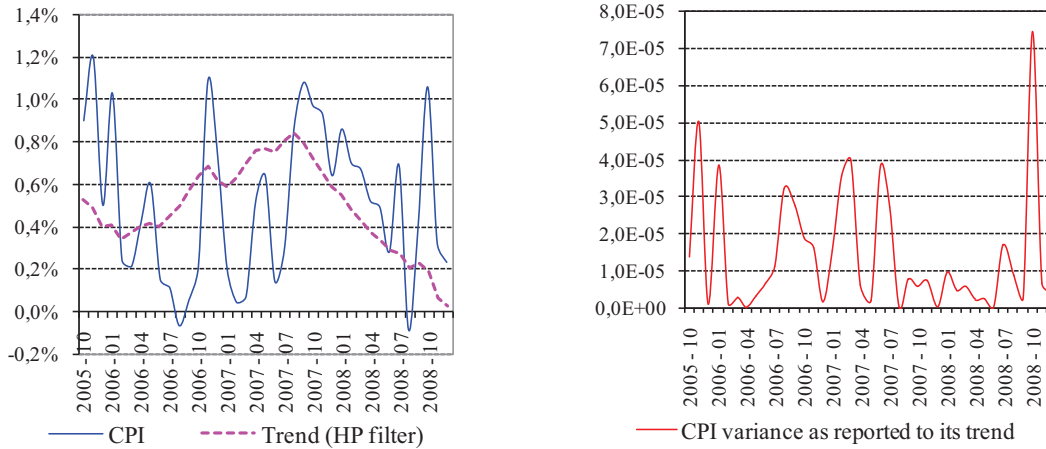


Figure 5 – Inflation rate variance (CPI) during the time span 09.2005 – 12.2008 (monthly values)  
Source: NBR and authors' calculations

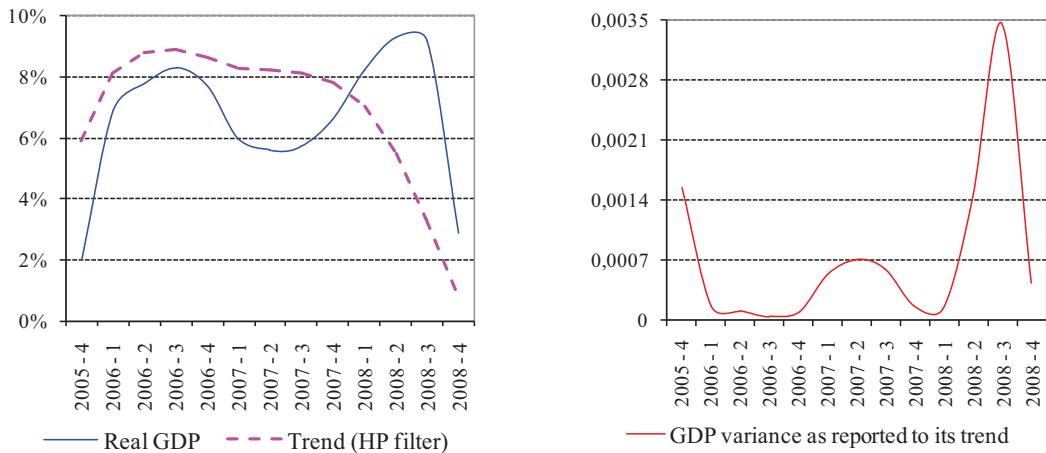


Figure 6 – Output variance during the time span 09.2005 – 12.2008 (quarterly values)  
Source: NBR and authors' calculations

As a result of these evolutions, the inflation rate volatility ( $\text{Var}(\pi) = 0.000308$ ) was lower than in the case of real GDP ( $\text{Var}(Y) = 0.00268$ ). In consequence, the macroeconomic performance index was  $P = 0.00054$ . The results obtained illustrates that the inflation rate and output volatility was lower than in the previous two time spans. We consider the adoption of inflation targeting monetary policy, which improved the confidence of the economic agents in our economy development, as being the main cause of the improvement of macroeconomic performance. These results could not be obtained if the economic agents would not believe in the NBR capacity to fulfill its commitments.

The values obtained for the macroeconomic performance index are not so relevant, more important being their evolution. Due to the fact that the values of the macroeconomic performance index counted an accelerate decrease, we can affirm that, in Romania, the economic environment registered a significant improvement. In the following table we have the values computed for the macroeconomic performance index in Romania:

Table 1 – The macroeconomic performance index in Romania

	<b>Time span</b>	<b>CPI Variance</b>	<b>Real GDP Variance</b>	<b>Macroeconomic performance index</b>
1.	1990 – 1999	5,65134	0,04313	2,28642
2.	2000 – August 2005	0,00281	0,01500	0,00647
3.	September 2005 – December 2008	0,00055	0,00938	0,00143

Source: NBR and authors' calculations

The most important progress was registered by the inflation rate volatility that decreased as reported to the first period approximately 10.000 times. Even if the evolution of real GDP volatility was not so spectacular, its performance shows that the improvement of the monetary policy and a better fiscal discipline contributed to the economy stabilization.

### **Conclusions**

The NBR monetary policy credibility and transparency had a significant role in the process of macroeconomic stabilization. After the release of the first Inflation Report and especially after 2006, NBR, through a more transparent activity, has tried to convince the economic agents that the Romanian economic environment is stable and it worth to invests here. The purpose of information released was to make the economic environment more predictable and to reduce the risks. Beside that, the confidence of the economic agents in the NBR capacity to control inflation and to reach its commitments sustained the economic recovery from our country.

In conclusion, in an economic environment with weak macroeconomic performances, the monetary policy credibility and transparency have represented the main source to gain the economic agents confidence regarding the economic growth perspectives in our country.

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