

**Charles University in Prague**

Faculty of Social Sciences

Institute of Economic Studies



**MASTER THESIS**

**Central Bank Communication: Comparison between the Czech  
National Bank and the National Bank of Moldova**

Author: Bc. Ecaterina Locoman

Supervisor: Doc. Mgr. Tomáš Holub Ph.D.

Academic Year: **2010/2011**

## **Abstract**

Central Bank communication has become, in the last period, a topic of increased interest both in academia, as well as in the process of conducting the monetary policy. This thesis addresses the communication of central banking and compares the Czech National Bank's (CNB) communication practices with the ones of the National Bank of Moldova (NBM) for the period of 2005 – 2010.

Communication of both central banks is analyzed by compiling a Transparency Index, based on a detailed analysis of actual information disclosure by the two banks. In order to analyze how surprising are the monetary policy decisions in the two countries, an investigation about how much the short-term money market rates change after the monetary policy decision's announcement has been made. The results of the analyses show that the CNB has achieved almost full transparency in 2010 in conducting the monetary policy, while the NBM, even though registered a gradual increase in its transparency since 2005, still needs to put more effort into improving its communication practices.

The research also reveals that the CNB manages to lower the pace of market surprises related to its monetary policy decisions, while in the case of NBM, the money market rates respond little to the policy rate changes. Also, in order to show the importance of effective communication for the success of the monetary policy, the thesis contains a series of recommendations, based on the Czech experience, for a more effective central bank communication in Moldova.

## **Declaration of Authorship**

The author hereby declares that she compiled this thesis independently, using only the listed resources and literature.

The author grants to Charles University permission to reproduce and to distribute copies of this thesis document in whole or in part.

Prague, May 6, 2011

---

Ecaterina Locoman

## **Acknowledgments**

I would like to express my gratitude particularly to Doc. Mgr. Tomáš Holub Ph.D., for invaluable assistance, support and guidance while writing my Master's Thesis.

I would also like to thank Lucia Hadârcă, Director of the Foreign Exchange Operations and External Relations Department at the National Bank of Moldova, for useful information regarding the NBM.

Thanks are also conveyed to the National Bank of Moldova and the Czech National Bank websites for valuable data provided for the research purposes of this diploma thesis.

My gratitude and love are also expressed to Ion and my family; for their understanding and endless love, through the duration of my studies.

## Contents

Table of Figures.....	7
Table of Tables.....	7
List of Acronyms.....	8
Chapter 1.....	9
1. Introduction.....	9
Chapter 2.....	12
2. Literature Review.....	12
Chapter 3.....	28
3. Main characteristics of the Central Banks.....	28
3.1 Czech National Bank.....	28
3.2 National Bank of Moldova.....	30
Chapter 4.....	32
4. Measuring Transparency.....	32
Chapter 5.....	36
5. Methodology.....	36
Chapter 6.....	39
6. How Transparent are the National Bank of Moldova and the Czech National Bank?.....	39
6.1 Political Transparency.....	39
6.2 Economic Transparency.....	46
6.3 Procedural Transparency.....	52
6.4 Policy Transparency.....	57
6.5 Operational Transparency.....	64

6.6 Analysis of the Overall Transparency Index of the NBM and CNB .....	72
Chapter 7 .....	75
7. How surprising are the monetary policy announcements in Moldova and in the Czech Republic? .....	75
7.1 National Bank of Moldova.....	76
7.2 Czech National Bank.....	79
Chapter 8 .....	83
8. Improving NBM’s communication practices based on the CNB experience.....	83
Chapter 9 .....	87
9. Concluding Remarks .....	87
References .....	89
Appendix .....	96
Transparency Index Questionnaire.....	96

## **Table of Figures**

Figure 1. A conceptual framework for the monetary policymaking process .....	34
Figure 2. The Role of Models in the Forecast Process .....	50
Figure 3. NBM's Money Market Rates 2005 - 2010 .....	79
Figure 4. CNB's Money Market Rates 2005 - 2010 .....	82

## **Table of Tables**

Table 1: The process of increased monetary policy transparency in inflation targeting countries ....	33
Table 2: Political Transparency of National Bank of Moldova and Czech National Bank.....	41
Table 3: Economic Transparency of National Bank of Moldova and Czech National Bank.....	47
Table 4: Procedural Transparency of National Bank of Moldova and Czech National Bank.....	54
Table 5: Policy Transparency of National Bank of Moldova and Czech National Bank.....	58
Table 6: Operational Transparency of National Bank of Moldova and Czech National Bank .....	65
Table 7: Overall Transparency Index of the NBM and CNB.....	72
Table 8: Change in NBM's policy rates and the corresponding changes in the 2W and 2M CHIBOR the day after and before the policy decision announcement.....	100
Table 9: Change in CNB's policy rates and the corresponding changes in the 2W and 2M PRIBOR the day after and before the policy decision announcement.....	101

## **List of Acronyms**

BOARD – Bank Board of the Czech National Bank

CA – National Bank of Moldova’s Council of Administration

CHIBOR – Chisinau InterBank Offered Rate

CNB – Czech National Bank

FED – Federal Reserve

LEU – Moldovan Currency

NBM – National Bank of Moldova

PRIBOR – Prague InterBank Offered Rate

TI – Transparency Index



# Chapter 1

## 1. Introduction

Discussing what have economists learned about monetary policy over the past 50 years, Svensson (2008) argues that the institutional framework plays a crucial role for a stable and successful monetary policy. After conducting the monetary policy for about 50 years, the economists have found that good and stable monetary policy is resting on three pillars: (I) a mandate, with priority to price stability (II) independence that is freedom from control or influence of politics, and (III) accountability, which ensures that central bankers try to reach the inflation target. Monetary economists have found that accountability improves with transparency; it provides democratic control of a powerful institution. Credibility and transparency are also very important for the efficient implementation and transmission of monetary policy. They are achieved through an effective communication of the central banks. The evidence suggests that communication can be an important and powerful part of the central bank's toolkit since it has the ability to move financial markets, to enhance the predictability of monetary policy decisions, and potentially to help achieve central banks' macroeconomic objectives (Blinder et al., 2008).

When the monetary policy objectives and strategies are clear and transparent, the communication with the markets is more efficient. Effective communication is a must for the monetary policy to be stable and produce the expected effects. Central Bank communication with

the markets is an indispensable ingredient in the process of building a reputation for valuing price stability.

There has been a growing consensus among monetary economists that better communication about central bank actions is essential in reducing the uncertainty facing economic agents (Jeanneau, 2009). Successful monetary policy is about shaping market expectations of the future evolution of key economic and financial variables (Woodford, 2003). When the market expectations are managed, monetary policy affects the economic outcomes and this gives central banks control over long-term interest rates and provides an important mechanism for influencing consumption and investment (Dincer and Eichengreen, 2009).

The central bank communication and the channels it chooses to communicate reveals the degree of accountability the central bank is willing to impose on itself. It also helps at clarifying if the decisions taken by the monetary authorities are in line with the public interest. The level of economic development of a country, its economic size or geographical location – will play a role in the monetary framework the country will adopt. This monetary framework, will contribute, in turn, to determine the main characteristics of the communications strategy the central bank will follow (Jeanneau, 2009).

Transparency and communication are of a particular importance for the central banks that implement their monetary policies within the inflation targeting regime. Since 1998, the Czech National Bank (CNB) has become one of the most effective central banks in the world regarding the communication of the monetary policy. The CNB took serious steps to increase the transparency of its policy-making process (Böhm et al., 2009). The CNB website states: “A high degree of independence must go hand in hand with a high degree of accountability to the public for fulfilling our objectives. We inform the public regularly and openly about our objectives and their fulfillment and about our opinions, plans and predictions<sup>1</sup>.” Böhm et al. (2009) mentions that in the last decade, the CNB’s efforts to become more transparent in terms of monetary policy decisions and their effects on the economy have intensified. Holub (2008) notes, related to the same topic, that during the period of 1998 – 2008, the CNB managed to lower the degree of market surprises related to its monetary policy decisions. The same author also describes that the CNB uses a wide range of communication tools and channels to communicate with the general public. Along with communication messages primarily oriented toward the financial markets and analysts, who are the

---

<sup>1</sup> CNB website. About CNB [http://www.cnb.cz/en/about\\_cnb/mission.html](http://www.cnb.cz/en/about_cnb/mission.html)

major target group of the CNB's communication on monetary policy decisions, the CNB reaches also the general public – through media articles and perceptions (Böhm et al., 2009).

The CNB can be taken as an example by other National Banks, which are striving to improve their performance in terms of communicating their policy decisions to the public. The National Bank of Moldova (NBM) is one of the national banks that since its foundation in 1991 – did not put too much effort in communicating to the public. When comparing the communications tools used by the CNB to inform the Czech people about its monetary policy decisions – with the ones of the NBM, it has to be stated that the NBM practice is poorer in the variety and diversity of channels used. The NBM has started to review its communication strategy just beginning with 2010. Namely the gap in the communication strategies and practices between these two central banks has driven the interest of studying the Czech experience with regard to its communication strategy and effort to increase transparency of its actions and compare it to the Moldovan experience. This thesis tries to give advice to the NBM how to proceed in terms of enhancing its transparency and communication strategies based on the CNB's experience.

The transparency index constructed both for the CNB and the NBM revealed that the two central banks have moved in the direction of greater transparency in the period of 2005 – 2010. Moreover, analyzing the monetary policy surprises in the two countries based on how much do short-term money market rates change after the decision's announcement, it has been found the CNB surprises the markets less often through decision announcements than the NBM does. Based on the Czech experience, recommendations like organizing press conferences after each monetary policy meeting or being more prompt when announcing the policy rate decisions have been suggested to the NBM, in order to support it in improving the monetary policy transparency, clearness and predictability.

In what follows, papers written on central bank transparency and communication strategies are reviewed, followed by general characteristics of each central bank. The methodology of the thesis is described, and the transparency index of the CNB and NBM is then constructed. The predictability of monetary policy decisions is analyzed in both countries, based on the movements of short-term money market rates after the decision's announcement. The last chapters of the thesis present several recommendations to the NBM to improve its communication strategies. The overall findings of the thesis are then gathered in the conclusion.

## **Chapter 2**

### **2. Literature Review**

The increasing emphasis on communication in monetary policy has resulted in a growing amount of research in this area over the last decade.

In the paper “Central Bank Transparency: Causes, Consequences and Update”, Dincer & Eichengreen (2009) argue that central banks are supposed to be opened about their objectives, outlooks, policy strategies, and even their mistakes. The authors argue that nowadays, there is a move in the direction of policy transparency and they are interested to find out what lies behind the trend. One aspect for which the above mentioned paper is important for this research is the analysis that the authors make of the determinants of the degree of transparency, focusing on the role of political variables. They construct a transparency index, which captures the political, economic, procedural, policy and operational aspects of monetary policy transparency. The authors have constructed the index for 100 central banks from 1998 through 2006. According to their study, the most transparent central banks in 2006 were the Reserve Bank of New Zealand, the Swedish Riksbank, the Bank of England, the Bank of Canada, the Czech National Bank, the ECB, and the Central Bank of the Hungary. The authors conclude that a large number of central banks have moved in the direction of greater transparency in recent years. Their analysis suggests also that central bank transparency has a favorable impact on inflation variability, but less evidence of an impact on inflation persistence.

Another paper that constructs a transparency index is the one of Eijffinger & Geraats (2005), who propose an index for the transparency of monetary policy that takes into account the procedural, political, economic, operational and policy aspects of central banking. Transparency of central banks has become a topic of public and academic debate on monetary policy. However, this topic encounters pitfalls, as transparency is hard to be measured, because it is a qualitative concept. The index proposed by Eijffinger & Geraats (2005) is based on information gathered from nine central Banks from 1998 until 2002. The findings of the paper reveal that the most transparent central banks in the sample data are the Reserve Bank of New Zealand, the Swedish Riksbank and the Bank of England. Another important finding is that although the most transparent central banks – target inflation, this monetary policy framework is not a necessary or a sufficient condition for transparency. The authors claim that an important advantage of this transparency index is its theory-consistent framework that distinguishes various aspects of transparency based on the role that information plays in the monetary decision making process. Also, the index makes it possible to identify how greater transparency manifests itself over time.

The Bank for International Settlements (BIS) has conducted in 2007 a survey on the communication practices of 32 members of the Central Bank Governance Network. Jeanneau (2009) reveals and comments the results of the survey in the paper “Communication of monetary policy decisions by central banks: what is revealed and why.” Lately, central banks have focused their efforts to improve the way they communicate with the public. The information is more comprehensible and is provided on a timelier basis. Central banks improved their communication strategies in order to guarantee better accountability; to enhance the public understanding of the objectives of monetary policy and to guide market expectations. Some central banks are coupling the short statements explaining the reasons for policy actions with documents containing a forecast. Through public appearances of senior officials or through official publications, the central banks also comment on the evolution of the economy in general. The paper also refers to the fact that central banks operating under inflation targeting frameworks tend to provide more information than the ones operating under other frameworks. Another finding of the survey is that central banks in developed countries tend to disclose more information than developing countries’ national banks. The author suggests that regardless of the progress made in communicating to markets, central banks should also put efforts in educating the general public about monetary policy, as an earlier

internal BIS survey on the public image of central banks revealed that there is little improvement in the public's confidence and understanding of the central banks' functions.

Eusepi & Preston (2007) analyze the importance of communication in the implementation of monetary policy. They state that the central bank is unsure about the current state of the economy. Economic agents lack the information about the values of the aggregate variables, like nominal interest rates, and must learn about their behavior using historical data. The authors argue that due to these uncertainties, when the central bank implements an optimal monetary policy, the Taylor principle is not sufficient for macroeconomic stability and for anchoring agents' expectations. In order to balance the instability, they analyze three communication strategies: (1) when the central bank communicates the precise details of the monetary policy and explains the variables and coefficients; (2) when it communicates only the variables on which monetary policy decisions are based; and (3) when the central bankers communicate the inflation target. The findings of the paper show that the first two communication strategies reinstate the Taylor principle as a sufficient condition for stabilizing expectations. However, in economies where the economic shocks appear to be constant, communicating the inflation target does not protect against expectations driven fluctuations. The authors conclude that if a central bank wants to stabilize expectations, it has to communicate the precise details of the monetary policy and explain the variables and coefficients, i.e. the systematic component of monetary policy strategy. Just announcing an inflation target is not enough – they must also announce how this target will be achieved.

Woodford (2005) stresses that “before the 1990s, central banking was shrouded in mystery.” Speaking about the Federal Reserve, the author states that one of the most important changes at the American Central Bank during the period when Alan Greenspan was a Chairman of the Board of Governors, has been the increase in the FOMC's readiness to talk openly about the policy decisions that it has made and those coming in the future. He notes that until the beginning of the Greenspan era, central bankers guarded the “mystique” of central banking as they believed it was essential to their success. The author also notes that FOMC's openness toward communicating the path of future policy has increased the ability of agents to anticipate the Federal Reserve's policy. He also concludes that this development lead to FOMC being able to achieve the effects on the economy that it desires, by keeping the expectations of market participants harmonized with its own. Despite greater transparency and increased central bank communication, many central banks are still uncertain about how a bank's own view of the likely future path of interest rates should be

communicated. According to the author's view, in the case of inflation-forecast targeting central banks, their way of conducting the monetary policy and in particular, the way they will communicate with the public their monetary policy decisions will make these banks to base the projections that are at the heart of their public explanation of their policy decisions on an explicit model of their own likely future approach to policy. Moreover, the author states the success of the monetary policy the central bank approves depends on the communication strategy that a central bank embraces. "Central banking is not like steering an oil tanker, or even guiding a spacecraft, which follows a trajectory that depends on constantly changing factors, but that does *not* depend on the vehicle's own expectations about where it is heading." The conclusion of the paper is that the challenge of the Federal Reserve in coming years remains finding an efficient channel of communicating with the markets about the future conduct of policy.

Holmes (2009) in an interesting essay, introduces the notion of "the economy of words", referring to the way central banks around the world express linguistically economic factors and measurement coefficients. The author believes that words have the crucial function of creating context, of giving a meaning to data series, statistical measures, and econometric projections. Moreover, words are used not only to express interpretative accounts or commentaries: "they create the economy itself as a communicative field and as an empirical fact." The current financial crisis stresses the role the communication practices play in formulating the monetary policy that would influence the severity and the duration of the economic meltdown.

Fracasso et al. (2005) focus on the inflation targeting central banks and analyze their practices of writing and compiling inflation reports. The authors establish a set of best practice criteria for inflation reports. They state that the key advantage of inflation targeting is that monetary policy is guided by a simple criterion: the gap between forecasted and target inflation. However, it is difficult to communicate this gap, as the inflation forecast must be unanimously perceived as committing the decision-taking committee to a particular policy decision, so it must be of the best quality. Also, the policy response to a given gap is not unique, as it depends on the policy-makers' preferences, the impact of monetary policy on output growth and unemployment, and the existing or future economic conditions. The authors state that "inflation targeting is a precise framework with imprecise policy implications, and to be understood and generally accepted, it needs to be accompanied by clear and precise communication." Even though inflation targeting central banks use a variety of communication tools, such as press releases, press conferences, written documents

and websites – Inflation Reports have become the central element of communication of these central banks. The authors’ position is that the Inflation Reports establish the bank's expertise in the area of inflation and monetary policy, that is why they must present the inputs into decisions (data, forecasts, and analyses), the decision-making process itself, and the possible risks associated with the chosen policy. Every Inflation Report, in order to be authoritative, must address issues related to the objectives of policy, the decision-making process and how conflicting objectives are treated; it must be aware of the analytical framework and information on which policies are based; an evaluation of past forecasts and policy performance, compared with the current forecast. More specifically, the Inflation Report must include output and the labor market observations, monetary and financial developments, and foreign conditions. Important components for a successful Inflation Report are the clarity of presentation and consistency over time. The authors also state that “good” Inflation Reports lead to a better understanding of monetary policy decisions.

Bernanke (2004) states that over the past fifteen years, Central Banks have become more open and transparent: new communication strategies have been adopted by policymaking committees to enhance their information sharing with the public (more informative policy announcements, post-meeting press conferences, expanded testimony before the legislative bodies, the publication of the minutes of policy meetings, and the regular publication of reports on monetary policy and the economy). Even though the increased openness is a welcome development, the Federal Reserve Chairman argues that the Fed should be as explicit as possible about its policy objectives. The author argues that without clear information about policy objectives, the public’s problem of predicting future monetary policy actions becomes more difficult and the ineffective information provided may do more harm than good to the economy.

Mohan (2009) believes that, after the financial crisis, the task of central banks has become more complex, as along with the objective of inflation targeting and economic growth, central banks have another objective, and namely maintaining the financial stability. The author believes that the more complex the mandate of central banks – the more important the role of communication. He describes the Reserve Bank of India, which has such a complex task and that requires comprehensible communication strategy with financial markets and the general public. The bank employs such communication strategies as policy announcements, reports, regulatory communications, technical advisory committees, and interactions with the media. The central bank’s website is used to maintain transparency in operations. Even though the bank uses these



communication channels, is it still difficult for the bank to maintain effective communication. The author believes that there was little understanding of the Indian Reserve Bank's actions as it directed its actions to curb financial excesses before the financial crisis. The conclusion of the paper is that complexity of policy statements puts a lot of barriers in the process of communication and makes the delivery of the message to the public more difficult. Also, policy statements that are more complex are often regarded as non-transparent, because the public, markets and analysts are used to receive simpler objectives and statements from the central bank. This makes the author to conclude that simplicity is now confused with transparency and as a result, central banks will face new communication challenges in the near future.

More authors argue about the benefits and costs of transparency and state that transparency is beneficial for society. Several authors (Dillén & Nilsson, 1998; Saxton, 1997; Mishkin, 2004; Nijathaworn, 2006), discuss the advantages and costs for a transparent monetary policy. Dillén & Nilsson, (1998) are of the opinion that namely non-central bankers argue that transparency is beneficial for society. Mishkin (2004) and Nijathaworn (2006) argue that transparency increases public support for central bank policies which is essential for winning central bank independence. Dillén & Nilsson (1998) and Saxton (1997) state that a transparent monetary policy:

- a) *Enhances central bank credibility* – a high degree of transparency makes the central bank to be more accountable of its actions, as well as increases the credibility of monetary policy. As central banks care about their reputation, they will carefully choose the tools and messages sent to the public. They will tend to communicate more, as it is more costly to cheat the public with surprise inflation (Dillén & Nilsson, 1998). Saxton (1997) believes also that enhanced credibility allows expectations to fine-tune faster with respect to changes in monetary policy, promoting more flexibility in labor markets and lowering employment and output costs of disinflation. The same author also believes that in this way, price stability can more easily be achieved, handles, and preserved.
- b) *Clarifies policy objectives* – A more open and straightforward monetary policy process creates powerful incentives for monetary authorities to vigilantly describe the primary objectives of monetary policy. This, in turn, creates incentives to keep attention focused on such goals as well as to adopt procedures, indicators, and instruments that would maximize the chances of achieving these objectives (Saxton, 1997).
- c) *Improves the workings and usefulness of financial markets* – unlike Dillén & Nilsson (1998), Saxton (1997) believes that if a central bank provides complete and timely information on its policy

decisions, the volatility of financial markets decreases significantly. Financial markets are in a better position when inflation objectives are clear and provided on time, accompanied by detailed information. Also, more information gives the private sector the chance to adjust expectations faster to changes in monetary policy. This in turn, allows the economic agents to circulate the information faster and minimize the disorder of policy change. Saxton (1997) also states that as the uncertainties premiums are reduced, interest rates will be lower, strengthening bond and equity markets. This whole process leads to improvement of the information content of financial market prices, and as a result these prices become very useful in conveying market sensitive information.

- d) *Minimizes the chances policymakers would manipulate policy for political purposes* – Saxton (1997) is of the opinion that a more transparent monetary policy diminishes policymakers' initiatives to manipulate the monetary policy for political purposes. If the policy goals and procedures are open and well-known, private analysts and financial markets will be able to monitor the central banks' actions and detect any manipulation of monetary policy for political purposes. In this way, markets can promptly react to such manipulation and can right away revise inflation expectations. Thus, everyone would be able to see these actions and the central bankers would not have the opportunity to surprise the markets with stimulative policy.
- e) *Works to improve monetary policy* – both Dillén & Nilsson (1998) and Saxton (1997) even though call this advantage in a different way; categorize it as incentives for central bankers to improve their forecast and analysis. A transparent monetary policy would foster the private sector analysts to openly discuss and criticize central bankers' actions, procedures, and justification. Such criticism, in turn, would force the authorities to defend their policy objectives, procedures, and decisions and thus urge the central bank to draw its analysis as accurate as possible. The competition of ideas and the open dialogue would lead to a monetary policy that accounts for all the participants in the process.

Malik & Din (2008) state that central banks' transparency is of a particular importance for developing countries, because in these countries wrong perceptions and lack of knowledge about monetary policy issues and implementation – are widely common. The authors believe that an important benefit in this context is that transparency can educate people about what monetary policy can and cannot do and as a consequence avoid the criticism on the monetary authorities. Another benefit of transparency for developing countries is the encouragement of public dialogue on policy issues that can be involved in bringing central bank policies in line with public's desires. Even a

more important benefit is that “a transparent monetary policy is fundamental for enforcing fiscal discipline on governments that rely heavily on seignorage revenues to meet budgetary deficiencies.” A final point stated by Malik & Din (2008) is that monetary policy transparency can allow the public to compare central bank performance with international best practices of central banks, and as a consequence can make the public to put pressure on the central banks to adopt these best practices at whatever time the performance of the central bank does not comply with the internationally accepted benchmarks.

Along with these advantages, Dillén & Nilsson (1998) research the sources of possible costs associated with a transparent monetary policy. The authors distinguish between social costs and central bank costs. Referring to central bank costs:

- a) *Goal differences* – Dillén & Nilsson (1998) explain the case when the central bank’s goal, which is usually kept secret from the general public, differs from the objective of society. They give the example when the central bank has a different short-run employment target. In this case, a high degree of transparency reduces the central bank’s possibility of attaining its own goal, which is a cost for the central bank.
- b) *Resources* – Dillén & Nilsson (1998) refer to this type of cost as to a pragmatic aspect. When the central bank decides to embrace a transparent monetary policy, it has to offer more resources to produce inflation reports, to give speeches, to organize press conferences, which all refers to communicating with the public. The social costs:
- c) *Cost of changing view* – Dillén & Nilsson (1998) believe that if the central bank’s view of the economy is publicly presented to the public and after a while it has to be changed, this revision is more costly in terms of efficiency losses under a transparent policy. The authors believe that first of all, a change of the central bank’s view may make the public think that the central bank is unqualified to make the policy and lead to criticism. Even if this criticism is unfair, it can negatively affect the central bank’s credibility. The second aspect of these costs the authors are describing, relates to the fact that a transparent policy influences economic agent’s behavior through expectations. In the case the central bank gains later new information that can change its view of the current state of the economy and as a result intends to change its monetary policy, this may cause costs in terms of efficiency, as there can arise changes in the economic agents’ behavior. Said it differently – transparency can direct to changes in private agents’ behavior that afterwards appear to be detrimental.

d) *Short-run expectation effects* – central bank’s transparency about its aims and analysis, which are based on some beliefs of how agents’ expectations are formed, may influence agents’ expectations and behavior in ways that deteriorate the strength of the analysis. Dillén & Nilsson (1998) state that even though in the long run, gains from a high degree of transparency usually dominate, it is important to be aware of these short-run costs.

There is also an important stream of literature, which warns that there are some limits to Central Banks’ transparency. Even if central bank transparency improves efficiency and accountability, some authors wonder whether central bank transparency can go too far (Dincer & Eichengreen, 2009). The same authors state that the European Central Bank has explained its refusal to publish the minutes and voting records of its board because individual members might become subject to pressure from special interests (like national interests) that might compromise their independence and lead to inefficient policy decisions.

Amato et al. (2002) in their paper “Communication and Monetary Policy” state that there are three factors due to which the central banks have decided to vociferate their decisions to the public: a higher degree of independence granted to too many central banks, which has been accompanied by a need for increased accountability. This accountability refers to the fact that the central bank’s decisions and beliefs need to be communicated to the general public, so that the performance of the monetary policy makers could be fairly evaluated. Another factor that had made central banks to increase the information provided to the public is the adoption of inflation targeting as a monetary policy objective by many industrialized and emerging market countries with New Zealand, introducing it as the first country in 1990. The adoption by central banks of formal and specific inflation targets has placed unprecedented emphasis on the communication strategies and practices of central banks. The third factor improving central bank communication is the growing importance of financial markets in many countries. Since market prices are driven by the expectations of market participants, shaping and managing these expectations is an important task of monetary policy. Anchoring agents’ expectations is done through effective communication strategies with market participants. The authors also argue that the nature of public information when used for policy purposes is double-edged. It is true that the public information is effective at influencing the actions of agents, but the problem is that sometimes it is too effective in doing so. Usually, firms and households react excessively to public information and if the public news is not correct or is mistaken – its disclosure causes more damage than good. This conclusion was later on disputed by

Svensson (2005), who states that the main findings of Amato et al. (2002) have been initially presented and interpreted as an anti-transparency result, however some scrutiny of the result shows that it is actually pro transparency: except in very special circumstances, more public information is good. Furthermore, the same author notes that for a conservative benchmark of equal precision in public and private information, social welfare is higher than in a situation without public information.

Blinder et al. (2008) define central bank communication as the provision of information by the central bank to the public regarding such matters as the objectives of monetary policy, the monetary policy strategy, the economic outlook, and the outlook for future policy decisions. The authors argue that central bank communication has become a worldwide phenomenon in the last decade. Surveying the literature on central bank communication, they have found out that in some cases central bank communications create news. This happens when the central bank's announcements influence expectations and therefore move asset prices. There are even extreme situations, when communication, used to influence market expectations, may even become the main tool of monetary policy. There are also studies that analyze how central bank communication reduces noise. This arises when central bank pronouncements increase the predictability of central bank actions, which would in turn reduce volatility in financial markets. Nevertheless, the authors also argue that poorly designed or poorly executed communications can do more harm than good to the economy that is why central banks put limits to their communications. That is why some central banks have a blackout period before each policy meeting. This is done so as to prevent any misunderstanding by the public of the monetary policy announcements. Another problem that the authors point out is when monetary policy decisions are announced by a committee rather than by a single person: the "cacophony problem." Too many voices might confuse rather than enlighten the public – especially if the messages are conflicting. However, the authors point out that the remedy for this problem is clarity, and not silence.

Ehrmann and Fratzscher (2004) investigate how effective are the different communication strategies of the Federal Reserve, the Bank of England and the European Central Bank. The authors analyze the content, timing and consistency of the communication statements by the central banks' committees and their individual members as well as their voting behavior. They argue that the three central banks are following different communication strategies: the Federal Reserve is pursuing a more individualistic communication strategy. There is dispersion in what the individual Federal

Open Market Committee (FOMC) members say, as they often tend to be more outspoken and most often provide more biased statements. On contrary, the majority of ECB Governing Council members voice out statements that are more neutral. Also, the Bank of England and the ECB have been conducting a more collegiate communication strategy and the degree of consistency among the committee members is much higher. The main finding of the paper is that there is not a single best approach to central bank communication, the best communication strategy depends on the circumstances and the environment a central bank operates in.

The same authors continue their research and analyze in another paper on how central banks should communicate. By comparing again communication policies by the Federal Reserve, the Bank of England and the ECB since 1999 until 2004, the authors conclude that, for all these central banks, a higher degree of dispersion in the communication about the monetary policy future path by committee members worsens the ability of financial markets to anticipate future monetary policy decisions and raises the degree of market uncertainty. This effect is significant, accounting for about one third to one half of the market's prediction errors of the FOMC monetary policy decisions since 1999. Although it is found to be the case only for the Federal Reserve, communicating the risks and variety of views regarding the economic stance enhances the financial markets' ability to anticipate the future path of interest rates. Moreover, the authors have found that the balance-of-risk assessment provided by the FOMC since May 1999 has helped markets anticipate the future path of interest rates. Also, a higher frequency of communication also tends to help markets predict future monetary policy decisions. These divergent findings regarding the dispersed communication suggest some policy implications and namely that central banks should distinguish between the way they communicate the monetary policy tendency and the economic stance. The authors conclude that it is the collegiality of views on monetary policy but the diversity of views on the economic outlook that appear to enhance the effectiveness of central bank communication and policy making (Ehrmann & Fratzscher, 2005).

Demertzis & Viegi (2008) in the paper "Matching" Expectations to the Target: The Role of Communication in Monetary Policy" explain the conditions under which central bank communications are important while the public forms its inflation expectations. When the private sector is expecting a certain level of inflation, it is easier for the Central Bank to achieve its inflation objective. The authors introduce the term *information game*: the public forms their expectation "based on all information available, but is also subject to the existing information noise". They

argue that in order for the public to form correct expectations – the target announced by the Central Bank has to be sufficiently credible. The authors believe that credibility and expectations are strongly tied to the target, and successful monetary policy is linked to inflation. An important input of the paper is to explain the Central Bank’s credibility. The authors explain how credibility can be gained but can also be lost: this depends on both Central Bank actions but also the shocks that hit the economy. It is easier to increase credibility when good conditions prevail while it is also easier to lose it in bad economic conditions. Another important key of the paper is the proof that having an anchor for expectations can improve Central Bank’s credibility and, by implication, contribute to the achievement of objectives more often than otherwise. The final point of the paper is that a well-defined communication framework, together with favorable circumstances – helps at fortifying credibility “but without totally sealing the Central Bank’s reputation from adverse circumstances”.

Filardo & Guinigundo (2008) explore the nature of Central Bank transparency and communication strategies in the context of Asian-Pacific central banks. They argue that despite the sophisticated set of communication strategies that emerged in the last decade and the policymakers’ efforts to communicate policy-relevant information to financial markets, the media and the public at large in that region, there are concerns regarding the way communication strategies of the central banks in the region should be improved. The authors believe that increasing the level of economic literacy of the population at large would be an important contribution in helping central banks better communicate with the public. Moreover, Central Banks should study what, how, and to what extent they should communicate with the public in the future. The authors also warn about the importance to know whether additional information provided by central bankers would improve the public’s understanding of the central banks’ objectives, economic assessments or would worsen the future economic conditions.

Blinder (2008) strongly advocates that Central Bank communication is needed for *democratic accountability* and for the *effectiveness of monetary policy*. Meanwhile, the author notifies that unclear communication is one source (but not the only one) of uncertainty in central bank communication. Other sources of uncertainty refer to inconsistent signals that arise when different members of a monetary policy committee express different messages – intentionally (by participating at public debates) or unintentionally (when the communication is uncoordinated among members of the committee). Another important point that the author makes is that central bank communication must have both a “transmitter” and a “receiver.” He states that confusion with

regard to the message transmitted by the Central Bank can originate either from the transmitter or from the receiver of the information. On the receiving end, the same message might be interpreted differently by different listeners, who may have different expectations or believe in different models. The author provides one example (using survey data) showing that the same inflation report is perceived differently by different respondents, and that interest rate surprises tend to increase with the divergence in perceptions.

Another author that warns there are some limits to transparency is Cukierman (2009), who argues that, due to limited knowledge about the economy, even central banks that are considered to be very transparent with regard to their monetary policy – are sometimes ambiguous about their measurement of the output gap and about their viewpoints regarding the effect of policy on inflationary expectations. Another idea launched by the author is that no Central Bank has made clear statements about its objective function, including in particular the relative weight on output versus inflation stabilization, the policy discount factor and the shape of losses from the inflation and the output gaps over the possible ranges of realizations of those variables. The paper also argues that there is a trade-off between full transparency and full utilization of information in setting policy because when a Central Bank is too transparent – the political pressures on that Central Bank may be intensified.

Clare & Courtenay (2001) argue that minutes describing controversial discussion among central bank board members can intensify asset price volatility. Their conclusion was that too much information only confuses investors and analysts.

Finally, there are also several papers focusing specifically on the Czech National Bank's communications strategies, which is the subject of this thesis (while the literature on National Bank of Moldova's communication is completely missing). Rozkrut et al. (2005) analyze the communications strategies of the Czech National Bank (CNB) Central Bank of Hungary (MNB) and National Bank of Poland (NBP). The paper answers from the empirical point of view the question of whether the communication strategies of these central banks send relevant information to market participants and whether it influences their behavior. The authors measure the reaction of several financial variables in periods when official monetary policy statements take place (such as communiqués, inflation reports or minutes, central bank verbal comments, decisions on interest rates), so as to assess the effectiveness of these policies. The assessment is made based on a database of policy makers' verbal comments. The findings of the paper suggest that even though these three



central banks pursue the same monetary policy, and namely are targeting inflation, they have adopted different communication styles. First of all, while the CNB statements are more balanced and more consistent with Board Members' prospective decisions on interest rates, the Hungarian and Polish central banks seem to misguide the markets, as there is a strong high inflation and positive economic outlook bias in the NBP and, to some extent, in the MNB communication. These findings suggest that the communication of the CNB is the most efficient one, while the MNB and the NBP send messages that tend to misguide the markets. Investigating whether central bank "talk" influences market expectations of future policy decisions, the authors find out that in the Czech Republic, the central bank messages are most influential when statements about monetary policy inclinations are made during the Board conference. However, testing whether central banks have any influence on the predictability of interest rate decisions, the authors conclude that that central bank statements have not yet helped to increase predictability of monetary policy decisions and to reduce the surprise component of monetary policy decisions in these three countries. Authors' hypothesis is that either markets are not very efficient in processing signals sent by central banks or policy-makers' actions are not consistent with their preceding messages. Another explanation is that there are not yet developed efficient communication strategies in these countries. So the authors' urge for these three monetary authorities is to pay more attention to the way they convey their intentions and information to the public. This would lead to the improvement of central bank credibility and thus increase its communication power.

Bulíř et al. (2007) analyze the CNB's most frequent communication tools to evaluate the clarity of its communication. The paper compares the messages contained in three communication tools: inflation targets, verbal assessments of inflation factors contained in quarterly inflation reports and inflation forecasts, and concludes that the information from the above mentioned tools is clear and offers a reliable message to the public. The paper states that inflation targeting allows for a healthy perception of monetary policy decisions and thus contributes to anchoring inflation expectations. Analyzing the inflation forecasts from the quarterly reports, the authors have found that in case of unanticipated shocks, the central bank constantly communicates economic developments and its own policy response. Thus, the public anticipated the eventual inflation outturn in a correct way.

Filáček et al. (2007) study the arguments in favor of and against the decision of publishing interest rates forecast by central banks. Using the experience of four central banks: the Reserve

Bank of New Zealand, Norges Bank, Sveriges Riksbank which publish, and Banco de la República Colombia – which used to publish interest rates forecast in the past, the authors try to review the pros and cons and to evaluate the CNB's ability to increase its transparency, accountability and credibility through publishing of its interest rates forecasts. The authors argue that in countries with inflation-targeting regime, central banks' transparency is of special interest, as the monetary policy conducted by central banks is dependent on the market perception of its policy decisions and the way it is communicated. This is because longer-term interest rates given by market expectations of future monetary policy are the factor that plays a role in the actual decision-making of economic agents. Namely these longer-term rates contribute to the macroeconomic outcomes the central bank aims to influence. The paper also argues that the publication of forecasts for the policy interest rate is a further step towards greater openness and clarity in central banks' communication and this is namely because the monetary policy makers manages to influence agents' expectations. When discussing the pros of publishing the interest rate forecast, the authors say that it helps reduce uncertainty for other decision-makers, it enhances the credibility of the monetary policy, it improves the co-ordination of macroeconomic policies and it helps a central bank to follow a consistent strategy. An argument against publishing the future interest rate path is that it may influence the actions of economic agents and if the agents over-react to public information, a central bank's imperfect judgment on the future interest rates will cause damage to the market participants. The authors conclude that once the CNB publishes the numerical values of its interest rate forecasts, the CNB will be able to influence the market expectations.

Böhm et al. (2009) in the paper from the Czech National Bank (CNB) working series "Perception is Always Right: The CNB's Monetary Policy in the Media", analyze the Czech media's perception about the central bank's monetary policy decisions in the period of 2002–2007. The paper states that it is important to assess media's awareness of the central bank's policy, as the general public is following mass media's highlights in the everyday life, and thus is indirectly reached by the bank through the media. The authors assessed media's opinion vis-à-vis the CNB's decisions using a set of articles published in the four most relevant Czech daily broadsheets immediately after monetary policy meetings. The findings of the paper are that unlike the professional audience (markets, analysts), which is directly influenced by the announcements made by the central bank and by its decisions, the media is in general indifferent to the fact that the CNB surprises the market from time to time with its interest rate decisions. Mass media writes more

sophisticated and longer articles when the CNB changes interest rates. Also, the pathos of the media articles is more evident when it comes to announcements about accelerating GDP growth or about rising inflation. In 2008, the CNB decided to start publishing the forecasted path of nominal exchange rate. In this context, announcements about the appreciation of the koruna exchange rate – are negatively perceived in the media.

## Chapter 3

### 3. Main characteristics of the Central Banks

#### 3.1 Czech National Bank

The Czech National Bank is the central bank of the Czech Republic and the institution performing financial market supervision (Act on the CNB). The supreme governing body of the CNB is the Bank Board, consisting of the CNB Governor, two Vice-Governors and four Chief Executive Directors. All Bank Board members are appointed by the President of the Czech Republic for a term of six years.

As of January 1998, the monetary policy regime of the CNB is inflation targeting (Šmídková & Hrnčíř, 1998). In order to create conditions for sustainable economic growth, the CNB focuses on creating a low-inflation environment in the economy that is achieving and maintaining price stability. Without affecting its primary objective of maintaining price stability, the CNB also supports the general economic policies of the Government.<sup>2</sup>

In accordance with its primary objective, the CNB:

- sets the monetary policy;

---

<sup>2</sup> CNB website *About the CNB*. [http://www.cnb.cz/en/about\\_cnb/](http://www.cnb.cz/en/about_cnb/) When writing this section of the paper, the CNB website was accessed during November 25 – November 30, 2010.

- issues banknotes and coins and;
- manages the circulation of currency, the payment system and settlement between banks.

It also performs supervision of the banking sector, the capital market, the insurance industry, pension funds, credit unions and electronic money institutions, as well as foreign exchange supervision. As a central bank the CNB provides banking services to the state and the public sector.

Holub (2008) states that the CNB has a wide range of communication channels, through which the bank strives to communicate to the public the monetary policy decisions:

- Immediate press release with the decision;
- Press conference after the Monetary Policy meeting with questions and answers session;
- A regular newspaper article about the forecast;
- Minutes of the Bank Board meeting. The voting ratio started to be published since 2001, and the names since 2008;
- Inflation reports describing the forecast with a verbal comment on the interest rate path since 2002, and numerically since 2008;
- Publishing the exchange rate path for CZK/EUR since 2009;
- Full transcript of discussions and situational reports published after 6 years. This practice has for the first time started in 2008;
- Press release commenting the monthly inflation figures, including forecast errors and the quarterly GDP figures;
- All strategic monetary policy documents are published;
- Publication of monthly volumes of Forex trading

The same author also notes that a volume evaluating the first 10 years of inflation targeting was prepared and also a book on the CNB's forecasting process was published.

CNB (2010) informs about improvements in the quarterly inflation reports publication that were introduced in the third quarter of 2010. Changes in the content have been introduced, consisting in the merger of the inflation report with a non-public document called the *Situation Report on Economic and Monetary Developments*. This improvement was done in order to create a single document discussed by the Bank Board and serving as a baseline for its monetary policy decisions as well as for public communication. With these changes, the inflation report offers to the public not only a more detailed description of the CNB's new macroeconomic forecast and a comparison between it and the previous forecast. It also provides sensitivity and/or alternative

scenarios which quantify the risks to the baseline scenario of the forecast and which might influence the Bank Board's monetary policy decisions.

### **3.2 National Bank of Moldova**

The National Bank of Moldova (NBM) is the central bank of the Republic of Moldova and exercises its attributions as a legal, public, autonomous person responsible to the Parliament (Law on the NBM, 2006). The NBM was set in 1991. The fundamental objective of the National Bank is the maintenance and the ensuring of price stability. It is governed by a Council of administration made up of five members. The term of each member of the Council of Administration shall be 7 years (Law on the NBM, 2006).

According to the NBM official website, the NBM is responsible for:

- formulating, implementing and promoting the monetary and foreign exchange policy;
- acting as the banker of the country;
- regulating the activity of financial institutions;
- supervising the payment system and facilitating the functioning of the interbank payment system;
- issuing the domestic currency;
- establishing, through consultations with the Government, the foreign exchange regime of the national currency;
- managing foreign the exchange reserves of the state;

As mentioned in the beginning, the NBM uses much less communications channels to inform the public about its monetary policy decisions, when compared to the CNB. The NBM has started to review its communication strategy just beginning from 2010, when it has introduced changes in its monetary policy strategy for the 2010 – 2012 period of time. First of all, the NBM Council of Administration will meet to discuss the monetary policy issues each month. The second day after this meeting, the monetary policy decisions will be published. Also, after the National Bureau of Statistics publishes the consumer prices index, the NBM will publish on a monthly basis a press release where the determinants of inflation will be analyzed and an assessment of the forecast on inflation will be carried out. The Monetary Policy Report will be published quarterly, which will

include an analysis of the macroeconomic situation and a forecast for the medium term (2 years) of inflation and of the main macroeconomic indicators (NBM, 2010). The first report was published at the beginning of February 2010.

## Chapter 4

### 4. Measuring Transparency

Dictionaries define “transparency” as (1) easily seen through or detected; obvious, candid or open, clear. Business dictionaries define “transparency” as (2) lack of hidden agendas and conditions, accompanied by the availability of full information required for collaboration, cooperation, and collective decision making. Other definitions refer to (3) maximum degree of disclosure to which agreements, dealings, practices, and transactions are open to all for verification. When referring to regulatory matters, “transparency” is defined as (4) essential condition for a free and open exchange whereby the rules and reasons behind regulatory measures are fair and clear to all participants (Business Dictionary.com).

(Saxton, 1997) states that a transparent monetary policy “is characterized by lack of secrecy, obfuscation, or ambiguity, and should be understandable to those outside the policy process including both ordinary citizens as well as legislators responsible for policy oversight.” The same author adds that transparency is a multi-dimensional concept and it includes the clarification of policy goals, of policy procedures, and the appropriateness in reporting policy decisions. Dillén & Nilsson (1998) believe that a policy is transparent when the general public is able to observe and deduce the intentions of the central bank, and especially their current intentions. They define it as an “*ex ante* calculating process”, comparing economic agents’ expectations with the announced future values for: inflation, interest rates, and nominal exchange rates (Dillén & Nilsson, 1998). The same



authors analyze the monetary policy in inflation targeting countries and state that a monetary authority increases the policy transparency in the following way:

**Table 1:** The process of increased monetary policy transparency in inflation targeting countries

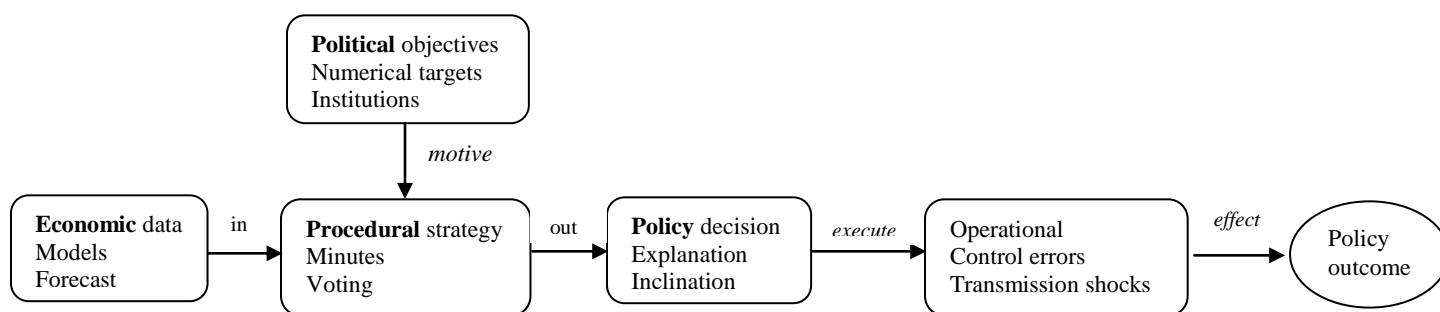
Define the goal for monetary policy in terms of a target variable	A measure of inflation
Publish a policy document, in which future paths of inflation values are presented and analyzed	Usually Inflation Reports
Develop and present the analytical tools by which inflation prediction are calculated	
Create a framework for policy analysis	Clarify what assumptions underlie the assessment of inflation prospects and describe how the policy conclusions are related to the assessment
Publish a conditional inflation forecast	A forecast conditional on unchanged monetary policy, i.e. no monetary policy actions, which typically implies unchanged nominal short term interest rates
Describe in quantitative terms how the target variable will be brought back to the target	Forecast path of actual inflation
Explain in quantitative terms what kind of monetary actions are needed to achieve the preferred path of actual inflation	

*Source: Dillén & Nilsson, 1998*

Monetary policy transparency is a broad concept that affects many aspects of monetary policymaking (Eijffinger & Geraats, 2005). These authors suggest using a conceptual framework that depicts the different phases of the decision-making process. Following their paper, one can make a distinction among five aspects of transparency: political, economic, procedural, policy and

operational transparency. These aspects match to information disclosure process about the stages of monetary policymaking illustrated below.

**Figure 1. A conceptual framework for the monetary policy making process**



Source: Eijffinger & Geraats (2005)

- **Political transparency** denotes openness about policy objectives. Eijffinger & Geraats (2005) give a more detailed explanation of political transparency. It embraces a declaration of the formal objectives of monetary policy, including an explicit prioritization so as to avoid interaction of potential conflicting goals, and quantitative targets. Political transparency is improved by institutional arrangements: central bank independence and central bank contracts, as they guarantee that there is no political influence or pressure to diverge from initially stated objectives. Another important aspect is that political transparency need not be under control of the central bank, but is often determined by political authorities (Government or Parliament).
- **Economic transparency** focuses on the economic information that is used for sketching the monetary policy. This refers the economic data the central bank uses, the policy models it applies to build the economic forecasts or assess the effects of its decisions, and the internal forecasts the central bank counts on. The internal forecasts are of a particular importance, as the monetary policy actions usually take effect with substantial time lags. Eijffinger & Geraats (2005) conclude that the central bank's actions are usually reflecting developments that the monetary authority anticipates.
- **Procedural transparency** includes openness about the way decisions are taken. It includes a clear monetary policy rule or strategy that depicts the monetary policy framework. The way the policy decision was attained is communicated through the release of minutes and voting records (Eijffinger & Geraats, 2005, Dincer and Eichengreen, 2009).

- **Policy transparency** includes openness about the policy implications. It refers to a prompt announcement of policy decisions. In addition, it also encloses an explanation of the decision and a policy suggestion or warning of the most likely future policy actions. The policy inclination is special interest, because monetary policy actions are usually made in small steps; a central bank may tend to change the policy tool, but may in the same time decide to wait until further evidence assures moving a full step (Eijffinger & Geraats, 2005, Dincer and Eichengreen, 2009).
- **Operational transparency** describes openness about the implementation of the central bank's policy actions. It comprises a description of control errors in achieving the target set in the policy decision, and describes the unexpected macroeconomic shocks that may affect the transmission of monetary policy from the instrument to the outcome. Another kind of operational transparency that could be considered for this analysis is the publication of money market interventions that are made to implement the policy decisions (Eijffinger & Geraats, 2005).

# Chapter 5

## 5. Methodology

The data is drawn from information on central banks' websites and in their statutes, annual reports, and other published documents. The information is gathered for every year from 2005 through 2010. The indices of central bank transparency and the methodological approach follow closely the work suggested by Dincer & Eichengreen (2009). Dincer and Eichengreen (2009) paper has been chosen as a guideline for the current thesis, as these authors have computed the transparency index for more than 100 central banks in the world, including the CNB and the NBM, for every year from 1998 through 2006. The present thesis takes 2005 as the starting year of the analysis, as the results and findings obtained here for the year 2005 and 2006 can be afterwards compared with the results of Dincer & Eichengreen (2009) with regard to the CNB and the NBM measure of transparency. Another reason for choosing 2005 as the starting point for this analysis, is the fact that the last part of this thesis will focus on analyzing how surprising are the monetary policy decisions in the two countries based on how much do short-term money market rates change after the decision's announcement. On the NBM website, the time series with the reference interbank market interest rates start in 2005, this being a further argument why this work focuses specifically on this period. Going back to methodological approach employed by Dincer & Eichengreen (2009), it has to be mentioned that these authors have in turn used this method suggested initially by Eijffinger and Geraat (2005), also called "independent analysis" approach to measure transparency of central banks. This approach of measuring transparency employs using a

questionnaire (see Appendix), which is developed on monetary policy issues and the researcher independently answers the questions based on information gathered from diverse central bank documents: monetary policy reports on the current state of the economy, monetary policy statements, speeches of the central bank officials, etc. The questionnaire brings information through a set of fifteen questions, with three questions on each aspect on monetary policy transparency: political, economic, procedural, policy and operational transparency. Each question has two or three options of response, with a maximum score of 1. In case of two options the central bank is awarded either 0 or 1 score but in case of three options there is a middle score of 0.5 (a case of partial transparency). In adding up the score, all the questions are given equal weight so on each aspect of transparency a central bank can get a maximum score of 3. Each type of transparency is also given the same weight so there is no preference for one type of transparency over the others. Thus, a central bank can get a maximum score of 15. Using the transparency index developed by Eijffinger and Geraat (2005) and then used for a broader number of central banks by Dincer and Eichengreen (2009) employs a certain disadvantage and namely the fact that this type of measurement of transparency focuses on a variety of communication channels and communication documents – but less on the quality of communication and on the content of these documents (Holub, 2008). On the other hand, Malik & Din (2008) describe the advantages of using this transparency index. First of all, this index is based on an independent analysis (by the researcher) of monetary policy practices, unlike survey-based techniques. Malik & Din (2008) state that this independent research is important, because in surveys – respondents (central bankers), may have an incentive to depict a favorable picture of monetary policy transparency, when the real situation may not be that favorable. A second advantage is that the index covers almost all the aspects of monetary policy and thus presents a broader measure of transparency as compared with other works that have focused on only two or three aspects. The third advantage is that the index is not restricted to any particular type of monetary policy framework. Using this type of transparency index, one can measure transparency for inflation targeting central banks, as for monetary targeting ones (Malik & Din, 2008).

In order to analyze how surprising are the monetary policy decisions in Moldova and the Czech Republic based on how much do short-term money market rates change after the decision's announcement – the money market rates (the 2 Weeks and 3 Months CHIBOR and PRIBOR) collected by each central bank from Reuters and published on their official website, are monitored for the period from 2005 – 2010. The decisions of the Council of Administration of the NBM and of

the CNB's Bank Board are also monitored. In particular, the aim is to observe whether the money market rates change after the central banks announce their monetary policy decisions. In order to observe if the markets were surprised or no, the date before the central bank's decision is announced and the day after the decision – are monitored. If after the policy decision announcement, the money market rates register a significant increase or a decrease – leads to the conclusion that the markets were not expecting the decision and that there is a gap of communication between the central bank and the public. This translates into lower transparency of the monetary policy of the respective central bank.

In the following section of this thesis, the five aspects of monetary policy transparency for the CNB and the NBM will be described, based on the papers of Dincer and Eichengreen (2009) and Eijffinge & Geraats (2005).

## **Chapter 6**

### **6. How Transparent are the National Bank of Moldova and the Czech National Bank?**

The following part of the thesis will be concerned with constructing a transparency index for the CNB and the NBM. The transparency index proposed by Eijffinger & Geraats (2005) and then followed by Dincer & Eichengreen (2009) focuses on macroeconomic aspects. In order to assess the level of transparency of the Czech National Bank and the National Bank of Moldova, the thesis focuses on describing each of the five aspects of transparency: political, economic, procedural, policy and operational transparency.

#### **6.1 Political Transparency**

The political transparency will firstly be analyzed through the examination of the Monetary and Foreign Exchange Policy Reports published on a yearly basis by the NBM and the monetary policy Strategic Documents published by the CNB from 2005 through 2010.

##### **National Bank of Moldova**

###### *a) Formal Objectives*

Analyzing the National Bank of Moldova monetary documents from 2005 through 2010 – a shift in stated objectives can be observed. If in the 2005 Monetary and Foreign Exchange Policy report it is

stated that the NBM “promotes a monetary and foreign exchange policy aimed at achieving the stability of the national currency through due insurance of a relevant degree of national economy monetization” (NBM, 2005).

The same objectives are kept through the year 2006: “the monetary and foreign exchange policy promoted by NBM provides the establishment of quantitative targets of money supply in economy.” Throughout 2005 and 2006 the NBM was focused on implementing a monetary and foreign exchange policy aimed at achieving the objective of “realization and maintenance of the stability of the national currency by establishing the monetary, credit and foreign exchange market conditions based on market economy principles” (NBM, 2006).

Starting with 2007, the fundamental objective of the National Bank of Moldova was modified from “achieving and maintaining the national currency stability” into “ensuring and maintaining the prices stability” (NBM, 2007). In 2008, the Monetary and Foreign Exchange Policy report of NBM states that the monetary and foreign exchange policy of the National Bank of Moldova will be targeted at achieving its fundamental objective (i.e. ensuring and maintaining the prices stability) – with the purpose of creating a foundation for macroeconomic stability achievement (NBM, 2008).

In 2009 and 2010 the main objective is kept and namely maintenance of price stability, but also the monetary reports contain explanations of why this objective is important and how it will be achieved. The 2005 and 2006 objective of targeting the exchange rate, in order to maintain the stability of the national currency could be even observed in the following years of implementing the monetary policy, even though formally – other objectives were stated. The NBM’s target of foreign exchange rate can be explained by the fact that most of the economic transactions in Moldova are done usually in foreign currency. The exchange rate at the commercial banks change every day and there is a high volatility with respect to the values it can take. The majority of population keeps saving mostly in euros and US dollars, rather than in Moldovan leis, that is why the NBM has to keep track of the evolution of the national currency with respect to foreign currencies.

Also, from 2005 – through 2009 – usually two objectives were cited, leading to the impression that there is no explicit statement of objectives’ prioritization. Even though prioritization was mentioned in the monetary policy reports where it is required and thus it could be argued that the statement of objectives is done in a transparent way, the uncertainty about the NBM’s actions was not entirely removed. Malik & Din (2008) argue that in order to reduce the uncertainty about



central bank actions it is important for the central bank to communicate its long-term objectives and their prioritization in case of multiple objectives.

The 2005 – 2007 NBM reports describe National Bank’s intentions and preferences for the near future, mostly for one year, however at the end of each monetary policy report there is a note that states that the NBM reserves the right to review, over the year, the monetary and foreign exchange policy, if certain macroeconomic changes within the economic and financial situation that can have an impact on the monetary and foreign exchange policy. The NBM reserves this right also in the case of changes within the financing of the Republic of Moldova from international financial institutions. These changes depending on the state of the economy increased the uncertainty about the NBM’s actions. The monetary reports for the years 2008, 2009 as well as 2010 – do not contain this note, which means that the NBM strives to make its statements as clear as possible and wants the public to gain trust in its actions. Consequently, the political transparency of NBM is awarded a half score on the issue of formal objectives for 2005 – through 2009 and 1 for 2010 (see Table 2 below).

**Table 2:** Political Transparency of National Bank of Moldova and Czech National Bank

Central Bank	National Bank of Moldova						Czech National Bank					
	2005	2006	2007	2008	2009	2010	2005	2006	2007	2008	2009	2010
Formal Objectives	0,5	0,5	0,5	0,5	0,5	1	1	1	1	1	1	1
Quantification of Primary Objectives	0	0	0	1	1	1	1	1	1	1	1	1
Institutional Arrangements	0,5	1	1	1	1	1	1	1	1	1	1	1
<b>TOTAL</b>	<b>1</b>	<b>1,5</b>	<b>1,5</b>	<b>2,5</b>	<b>2,5</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>

*b) Quantification of Primary Objectives*

Malik & Din (2008) state that announcing the targets for the monetary policy primary objectives reduces uncertainty faced by the economic agents in making economic decisions. In 2005

and 2006, the NBM states its primary objective as achieving the stability of the national currency through providing the establishment of quantitative targets of money supply growth. It states that the strategy of the NBM policy uses reserve money as operational objective and broad money as intermediary objective. Even though the NBM gives a guideline target on the amount reserve money and broad money shall increase, the announcement is not clearly specified. The reader can be easily lost around the multitude of numbers and figures the report provides and may not find the ceiling by which the reserve money and broad money shall increase throughout that year. The reports also state that the Foreign Exchange Policy of the National Bank of Moldova for 2005 and 2006 will be achieved through free floating exchange rate regime of the national currency and the establishment of the official exchange rate based on prevailing exchange rates in the Forex market.

In 2007, the formal objective of the NBM changed from “achieving and maintaining the national currency stability” into “ensuring and maintaining the prices stability”. Even though the limit within inflation rate should be kept is mentioned in the report, the NBM states as well the amount by which reserve money and broad money should be kept between throughout the year. These targets are, as in the 2005 and 2006 reports, “lost” throughout the report and a reader can hardly find the target the NBM is striving to achieve.

In 2008, the limit to maintain price stability is set into the report; however the targets for the reserve money and broad money are already missing. With regard to the foreign exchange policy, the NBM maintained a floating exchange rate regime and established the official exchange rate of Moldovan Leu (MDL) against the US dollar (USD) based on the exchange rates prevailing in the domestic foreign exchange market. The NBM reserved the right to carry out foreign exchange interventions with the purpose of mitigating the excess fluctuations of the official exchange rate and of making up the international foreign exchange reserves (NBM, 2008).

In 2009, the target for the fundamental objective of achieving and the maintaining price stability has a target stated clearly at the beginning of the report and also the NBM announced the possible deviation of the announced level of inflation.

Therefore, the conclusion is that throughout the years 2005 – 2007, the NBM failed to reduce uncertainty about its actions, however starting with 2008, the limit to maintain price stability set into the report, the decision from 2010 of publishing medium-term forecasts, together with annual ones, will help the NBM to increase awareness about its current and future actions. For the years 2005 –

2007, NBM receives 0 points and from 2008 – 2010, 1 point with regard to the quantification of its primary objectives.

*c) Institutional Arrangements*

In 2006, a new Law on the National Bank of Moldova was adopted on the modification of an older Law from 1995. This new law marked the initiation of a new stage in the activity of the NBM. Under the new Law, the NBM is an autonomous public legal entity and is responsible to the Parliament of the Republic of Moldova. Under the article 3 of this law, the NBM shall have the capacity to enter into contracts and issue obligations; acquire and dispose of property, whether movable or immovable – for the purpose of its business and institute legal proceedings and be subject to such proceedings. Regarding the cooperation with the Governmental Bodies, the NBM should cooperate with the Government in pursuing its objectives. Under the Law, the NBM shall provide information as requested by economic and financial entities of the Government with respect to monetary and financial matters. These entities, in their turn, shall provide information to the National Bank as the National Bank may request concerning macroeconomic, monetary and financial matters. The Governor of the NBM is nominated by the Parliament at the proposal of the Speaker of the Parliament and his mandate is for a period of seven years. He is also the Chair of the Council of Administration of the NBM, which is composed of 5 persons. The term of each member of the Council of Administration shall be 7 years. The Governor of the NBM or members of the Council of Administration should appear before the Parliament to explain the policies of the National Bank or to comment on proposed legislation, at the request of the Parliament (Law on NBM, 2006).

In 2006, with the aim of coordinating the monetary, foreign exchange, budget and tax policies, the NBM and the Ministry of Finance established the Committee of Liquidity Management, the objective of which was designed to ensure an efficient communication and partnership in the light of liquidities' management and monitoring (NBM, 2006).

In 2008, NBM extended its cooperation with the Ministry of Finance so as to decrease the value of the domestic state debt to the NBM. In 2010, the NBM cooperation with the Government of the Republic of Moldova and the central public authorities was done mainly in order to promote the monetary policy. This cooperation employs permanent exchange of information and dialog regarding the fiscal policy, especially tax changes, budgetary wage modifications, pensions and

other social benefits and other measures that may affect the price level. In order to establish a monetary framework necessary to achieve the primary objective, the NBM works together with the National Bureau of Statistics and the National Commission of Financial Market. Moreover, the NBM will adopt a methodology and will separate the responsibilities regarding the monthly publication of the core inflation with the National Bureau of Statistics.

In conclusion, since 2006 – more explicit contacts and institutional arrangements between the NBM and the Moldovan government have been established. For the institutional arrangements, the NBM receives 0,5 points in 2005 (the NBM did not have an explicit instrument independence or contract) and 1 point for 2006 – 2010 respectively.

## **Czech National Bank**

### *a) Formal Objectives*

In December 1997 the CNB announced a switch to inflation targeting regime and this represented a historic change in the strategy of Czech monetary policy with regard to the way in which policy reacts to economic shocks (Šmídkova & Hrnčič, 1998). Šmídkova & Hrnčič (1998) state that the Czech Republic was the first economy in transition to adopt inflation targeting as the explicit framework for its monetary policy, while most countries had switched to inflation targeting only after inflation was under control and on a decreasing path.

The primary objective of the CNB is set according to the Act on the CNB to maintain price stability. The CNB supports as well the general economic policies of the Government leading to sustainable economic growth, without prejudice to its primary objective. The objective of maintaining price stability reflects the central bank's responsibility for sustainable economic growth and entails fostering a stable environment for the development of entrepreneurial activity (Act on CNB). Price stability is defined by the inflation target. The CNB strives to hit the target by changing its monetary policy interest rates and using other monetary policy instruments and measures specified by the Bank Board (CNB Annual Report, 2005).

Another CNB key objective is to maintain financial stability. As of April 2006, the Act on CNB requires the bank to analyze the evolution of the financial system, see to the sound operation and development of the financial market in the Czech Republic and contribute to the stability of its financial system as a whole (Article 2).

The clear specification of formal objectives, their prioritization and the explanation of how these objectives would be achieved entitles the CNB to receive 1 point for all the years from 2005 – 2010.

**b) *Quantification of Primary Objectives***

In 2004, the CNB has set its inflation target for the period starting with January 2006. In the period from 2006 – 2009, the CNB's target was set in the form of annual growth in the consumer price index (CPI) of 3% with a tolerance interval of +/- 1 percentage point. The CNB has created a framework for monetary policy decision-making sufficiently in advance, so as to anchor long-term inflation expectations. The CNB has set this target as a medium-term one from which actual inflation could deviate temporarily. The CNB explains that this inflation target has been set slightly above the price stability level declared by the European Central Bank for the euro, which is "close to 2%". This small inflation differential reflects the long-term real convergence of the Czech economy towards the euro area average, which will continue for some time after the Czech Republic's accession to the euro area (CNB, 2004).

In March 2007, a new inflation target of 2% was announced with effect from January 2010 (CNB, 2007). The CNB lowered the target to 2% with an unchanged tolerance band. The decrease in target was published well in advance in order to reduce costs (CNB Annual Report, 2009).

An important detail is that the target for future inflation is presented in every Inflation Report from 2005 – till 2010. Taking all of these details into consideration, CNB receives the full score for the quantification of primary objectives.

**c) *Institutional Arrangements***

The CNB has a high degree of independence from political structures when performing its functions and tasks, since it began its activity in January 1993. The CNB webpage, at the *Central Bank Independence Section* lists that the CNB enjoys **personal independence** – there are no political pressures during the appointment and dismissal of members of the CNB Bank Board, which consists of seven members. The CNB Bank Board is appointed and dismissed from office by the President of the Czech Republic without the assistance of the government. An important aspect is also the fact that the CNB Act defines the reasons justifying the dismissal of a Bank Board member. CNB is awarded also **institutional independence**, i.e. when carrying out and implementing the monetary policy and the tasks conferred to it by law, the CNB Bank Board "may not seek or take instructions from the President, Parliament, administrative authorities or from any other body."

The **operational independence** refers to the fact that the CNB has autonomy when setting inflation targets and selecting the instruments required in achieving them. When setting the exchange rate regime, the CNB has to conduct discussions with the Government, but in such a manner so as not to affect its primary monetary objective. The CNB and the Government inform each other on issues regarding the principles and actions of implementing the monetary policy. Another type of independence the CNB is enjoying is the **financial independence**, which means that the CNB is prevented from any direct financing of the public sector or of the bodies it controls. The budget of the CNB is approved by the Bank Board. This budget is consisted in such a way, so as to make clear what are the CNB's property acquisition expenses and operational expenses. At the end of the financial year, the CNB has to compile a profit and loss account and an external auditor has to verify it. This is then used as the basis for an annual financial report, which is submitted to Parliament for review. The CNB is also required to disclose regular ten-day balance sheets on its financial position.<sup>3</sup>

In conclusion, the CNB is awarded 1 for all sub-indices and all years, as the CNB has a clear specification and a formal statement of its monetary policy objectives. It also has a quantification of the primary objective and there are explicit institutional arrangements between the CNB and the government.

## **6.2 Economic Transparency**

The economic transparency will firstly be analyzed through the examination of the Annual Reports, the Monetary and Foreign Exchange Policy Reports and the Inflation Reports published on a yearly basis by the NBM and the Inflation Reports and the monetary policy Strategic Documents published by the CNB from 2005 through 2010.

### **National Bank of Moldova**

#### *a) Economic Data*

The NBM Monetary Aggregates documents published since 2005 – 2010 contain time series with the information about the money supply in the economy. In 2005 – the data is aggregated and presented on a yearly basis, however starting with 2006 – the data is presented on a monthly basis. The 2005 – 2009 Annual Reports contain statistical data regarding the money supply evolution of

---

<sup>3</sup> CNB website *Central Bank Independence*. [http://www.cnb.cz/en/faq/faq\\_mp/cb\\_independence.html](http://www.cnb.cz/en/faq/faq_mp/cb_independence.html)

Moldova, as well as comments about this evolution. In 2005, the NBM presents the annual growth of price level, but starting with 2006 – 2009, the Annual Reports contain data on inflation on a quarterly basis. Throughout the same period of time, the NBM publishes as well information about the real GDP growth – however the data is aggregated and presented for the entire year, rather than for each quarter separately. For the year 2010 – quarterly time series for GDP, unemployment rate, inflation and money supply are published on the NBM website. Quarterly Monetary Reports started to be published from February 2010, where medium term targets are set and explanations of reduction or increase in the previous forecasted values are provided. In conclusion, the NBM receives 0 points for 2005 (none of the five variables important for the conduct of monetary policy are available on a quarterly basis: money supply, inflation, GDP, unemployment rate and capacity utilization.) Even though in the period 2006 – 2009, money supply and inflation are presented on a quarterly basis – the NBM still receives 0 points, because only 2 variables are present, the others either are missing, or are again presented on a yearly basis. For 2010 – the NBM receives 0,5, because 4 of these important variables: GDP, unemployment rate, inflation and money supply – are published on a quarterly basis.

**Table 3:** Economic Transparency of National Bank of Moldova and Czech National Bank

<b>Central Bank</b>	<b>National Bank of Moldova</b>						<b>Czech National Bank</b>					
<b>YEAR</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>
Economic Data	0	0	0	0	0	0,5	1	1	1	1	1	1
Macroeconomic Model	0	0	0	0	0	0	1	1	1	1	1	1
Macroeconomic Forecast	0,5	0,5	0,5	0,5	0,5	0,5	1	1	1	1	1	1
<b>TOTAL</b>	<b>0,5</b>	<b>0,5</b>	<b>0,5</b>	<b>0,5</b>	<b>0,5</b>	<b>1</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>

***b) Macroeconomic Models***

The NBM does not disclose the macroeconomic model it uses for policy analysis. It also does not provide publicly in its website the forecasting equations for the key variables or models. This is the reason why Moldova receives 0 for all the years since 2005 through 2010.

### *c) Macroeconomic Forecast*

In the NBM Monetary and Foreign Exchange Policy for 2005, 2006, the NBM publishes numerical forecast on inflation and GDP one year ahead. In the 2007, 2008 and 2009 NBM Monetary and Foreign Exchange Policy documents, the NBM stipulates the GDP growth in real terms.

In 2010, in order to ensure the transparency of the decision-making process, the NBM started to publish quarterly the Monetary Policy Report, which contains the analysis of the macroeconomic situation and a forecast of the medium – term inflation, annual rate of real GDP forecast, regulated prices and the volume of remittances. The NBM includes as well economic forecasts for its partner economies: the euro zone, the Russian Federation and Romania.

For the macroeconomic forecast, the NBM receives 0.5 for 2005 – 2010, as it publishes quarterly forecasts for three out of the five variables: inflation, money supply and GDP.

## **Czech National Bank**

### *a) Economic Data*

The CNB publishes statistics related to monetary and financial data, balance of payments, financial accounts, and government finance statistics. The CNB website announces that the individual statistics are compiled in accordance with international standards and standards of the European Union. The section “Statistics” from the CNB website, contains not only the data and their methodology, but also commented publications and the relevant regulations at both national and European and international level<sup>4</sup>. Moreover, the CNB disposes of a number of systems for data collection, processing and dissemination; the most important with respect to publication is ARAD, a unique system of time series of statistical data compiled by the CNB and supplemented with selected data from external sources (CNB website). On ARAD, there are monthly statistics regarding the money supply, inflation and unemployment, and quarterly data on the GDP (seasonally adjusted). Moreover, regarding the inflation statistical data, the CNB has on its website a subsection “Inflation”, where it provides information on inflation measured and released by the Czech Statistical Office, the inflation target, the inflation forecast published by the CNB and

---

<sup>4</sup> CNB website *Statistics* <http://www.cnb.cz/en/statistics/>



inflation expectations surveyed by the CNB. In addition, starting with 2008 quarterly Inflation Reports, the CNB publishes on its website the background data to all figures and tables contained in the Inflation Reports. As an example, along with the fourth Inflation Report from 2008, the CNB published on its website a subsection “Tables and charts in the text”, where it provides Excel files with statistical data for monetary conditions, demand and output, the labor market, the balance of payments, monetary developments, import prices and producer prices and inflation. As regards capacity utilization<sup>5</sup>, in the Czech Republic, it is available for the industry only and is presented in the Inflation Reports. However, the CNB publishes estimates of the output gap, which fits into the definition of the capacity utilization.

In conclusion, due to the fact that the CNB publishes all the available statistical information plus the estimates of the output gap, information which is relevant for the conduct of monetary policy, receives 1 point.

#### ***b) Macroeconomic Model***

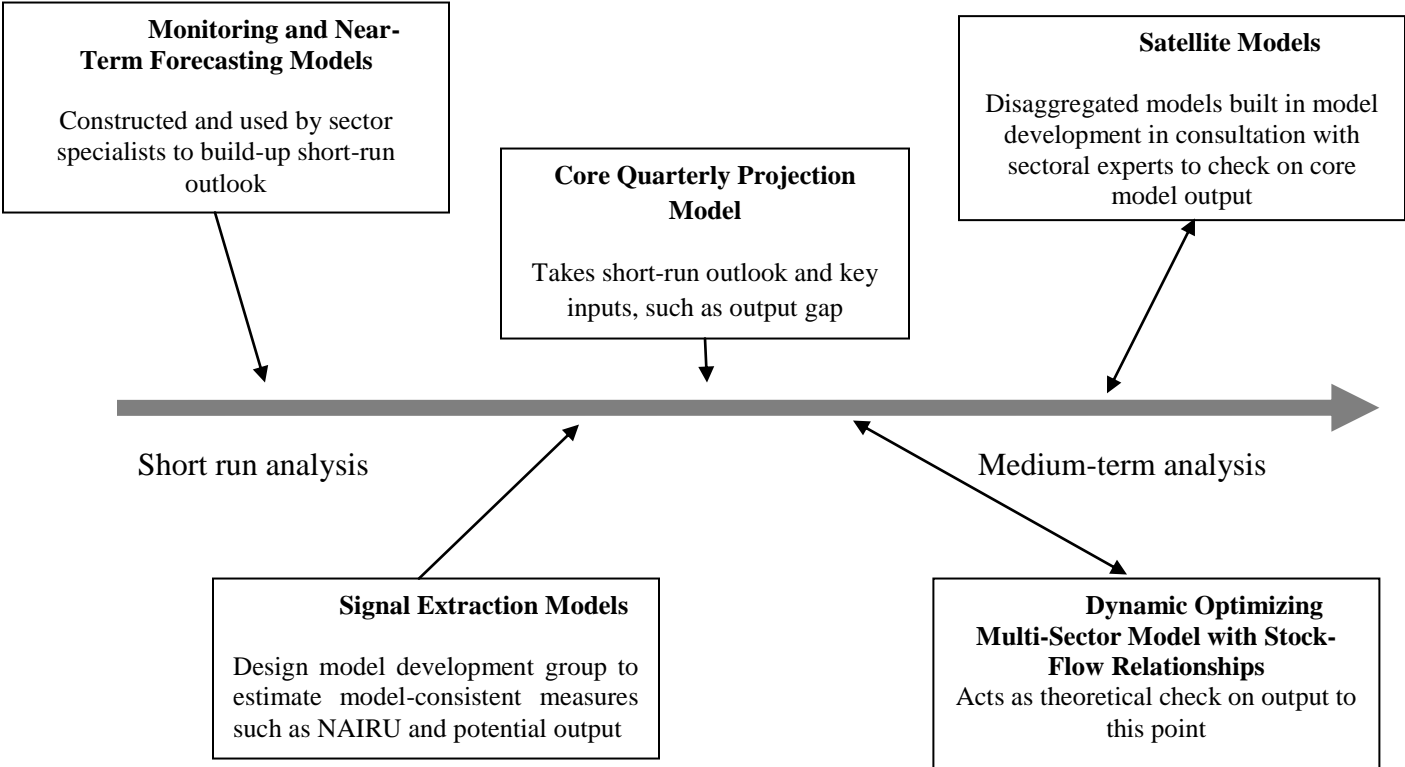
The CNB discloses the macroeconomic models it uses for policy analysis. In a work published by the CNB in 2003 “The Czech National Bank’s Forecasting and Policy Analysis System”, two authors: Stanislav Polak and David Vavra write about the “Models Used in the Forecasting and Policy Analysis System.” Polak and Vavra write that the Forecasting and Policy Analysis System (FPAS) in the CNB uses several models. There is the core quarterly projection model (QPM), which primarily serves as a disciplining device around which the forecast is constructed. It embodies the institution’s understanding of the forward looking transmission mechanisms based on a systematic reaction of policy interest rates to major disturbances. The models that complement the core QPM are the models that support the inflation forecast. Polak and Vavra state as well that when preparing a forecast, the CNB wants to paint a broad picture that starts with the question “Where is the economy now?” and moves to “What forces will drive it over the short and medium term?” This process helps the Board answer the most important question: What does monetary policy need to do to accomplish its inflation and stabilization objectives? In order to

---

<sup>5</sup>According to Business Dictionary.com, capacity utilization is the extent to which the productive capacity of a plant, firm, or country is being used in generation of goods and services and it refers to the relationship between actual output that “is” produced with the installed equipment and the potential output which “could” be produced with it, if capacity was fully used.

explain the models, the authors have arranged them in the form of a timeline, running from the short term to the medium term.

**Figure 2. The Role of Models in the Forecast Process**



Source: CNB, 2003

In the same work “The Czech National Bank’s Forecasting and Policy Analysis System” published in 2003, Polak and Vavra describe other models used by the CNB: Hermin CR, Fiscal Policy Stance Model, Trade Balance Models, Model of Optimizing IS Curve and Monetary Policy Effects, Small Linear Error-Correction Model with Model-Consistent Expectations, etc.

Another important feature of the CNB presenting its forecast – is the fact that the central bank has a special section on the website, where it explains how is the forecast created, what economic variables it takes into account and who participates in the forecast.

In the Factsheet published in June 2010, the CNB explains as well that its estimates showed how interest rate changes have their greatest impact on inflation about 12 to 18 months after the decision was taken. The CNB focuses on this time horizon in its monetary policy discussions;

however it also takes into account the developments before and after this period. The forecasts for inflation and the economy as a whole are based on past and present developments and on assumptions regarding several key economic variables. The results generated by the models are then discussed by the CNB's experts. The models are based on the CNB's knowledge of how strongly developments in the external environment (such as changes in inflation or economic growth in other countries and world prices of raw materials), price-related administrative decisions made by Czech state and local authorities, and, in particular, changes to the CNB's interest rates, pass over into various areas of the economy and eventually into inflation. The CNB also states that the two most important channels through which changes to the CNB's rates affect the economy run by client interest rates and by the exchange rate. Client interest rates move in step with changes in the CNB's rates and affect demand. The exchange rate also usually reacts to changes in the CNB's rates, especially if such changes are large and are perceived by the markets as long-term. The exchange rate strongly affects prices of imported goods and as result inflation. The exchange rate also affects exports and imports and aggregate demand. The CNB writes as well that the key model it uses for the monetary policy decisions takes as well into account the behavior of the central bank itself which is consistent with its constitutional objectives (CNB, 2010d).

Taking into account that the CNB discloses the macroeconomic models it uses for policy analysis, it receives 1 for 2005 – 2010 periods.

### ***c) Macroeconomic Forecast***

The CNB has a good practice in sharing its forecast with the public. If in the NBM's case, the forecast is somehow "hidden" in the quarterly or annual reports, the CNB publishes its forecast directly on the web site, with a link titled: "CNB forecast". Thus, there is a better access to the CNB forecast than to the NBM one. The CNB regularly publishes its forecast directly on the website starting with the third quarter of 2006. The forecasts made in 2005 can be found in the Inflation reports published by the CNB.

The CNB's macroeconomic forecast is very important, as it represents the key source material for the CNB Bank Board's decisions. The macroeconomic forecast is drawn up by the Monetary and Statistics Department in interaction with the board members. It represents the CNB experts' views of the most likely future evolution of the economy, including the behavior of the central bank itself. The forecast is based on a consistent medium-term framework taking the form of

a model approach which is supplemented with an expert opinion primarily affecting the short-term forecast horizon. The most relevant for monetary policy decision-making is the inflation forecast at the so-called monetary policy horizon (about 12–18 months ahead), which affects the interest rate settings (CNB, 2010d).

As stated before, starting with the third quarter of 2006, along with the forecast published in the quarterly Inflation Reports, the CNB started to share its forecast directly on the web site. Another important feature of the CNB forecast is the fact that along with presenting it in the Inflation Reports and on its website, the CNB organizes meetings with analysts – to present and explain CNB’s economic projections. The actual forecast is thus presented together with the presentations from these meetings.

Starting with 2008, the CNB started to publish the interest rate path in numerical form as a fan chart. Fan charts started also to be used for other variables’ forecasts.

In 2009, the CNB started to publish the forecast-consistent path of the nominal koruna-euro exchange rate in fan chart form. It took a significant step to increase its monetary policy transparency and thus, this made the CNB the only central bank in the world to publish a forecast for a nominal exchange rate in comparison with a specific currency. The CNB states that the disclosure of the exchange rate forecast in numerical form means that full transparency of the CNB forecast has been achieved, as this enhances the transparency of the Bank Board’s monetary policy considerations, giving external observers a better understanding of CNB monetary policy (CNB, 2009a).

In 2010 – the CNB, along with publishing and explaining the forecast in the quarterly inflation report, it also presents changes and risks to it. Also, the presentation of the forecast in the Quarterly Reports is improved: every macroeconomic factor being projected is presented from a new paragraph and is written in bold, which makes it much easier to read.

In conclusion, taking into account that CNB publishes quarterly numerical forecasts for inflation and output for the medium term (usually two years ahead), the CNB receives 1 for the Macroeconomic forecast indicator starting with 2005 until 2010.

### **6.3 Procedural Transparency**

The procedural transparency is about the way monetary policy decisions are taken. The procedural transparency will be analyzed through the examination of the Annual Reports, the

Monetary and Foreign Exchange Policy Reports, the Inflation Reports published on a yearly basis by the NBM. Press Releases published after the meetings of the NBM Council of Administration will also be analyzed. For the CNB, the monetary policy Strategic Documents and the Minutes of the Board Meetings published by the bank from 2005 through 2010 will be analyzed.

## **National Bank of Moldova**

### ***a) Explicit Policy Rule or Strategy***

The NBM Monetary and Foreign Exchange Policy Strategy for 2005 states that since the introduction of the national currency in 1993 NBM has promoted a monetary and foreign exchange policy aimed at achieving the stability of the national currency through insurance of a relevant degree of national economy monetization. The policy promoted by NBM is monetary targeting, providing the establishment of quantitative targets of money supply growth. The strategy of the NBM policy embodies the use of reserve money as operational objective and of broad money as intermediary objective. No clear rule has been found stating how the instrument is moved if the money growth deviates from the target.

In the year 2008, for the optimization of monetary policy operations, the National Bank created an adequate database for the analysis, modeling and forecasting framework. The data base will have the role to clarify the elaboration process of the monetary policy and to increase the public awareness about the NBM policies. It will also increase the credibility level of the civil society towards the monetary policy promoted by the NBM.

In 2009, the NBM continued pursuing the achievement of the inflation targeting strategy.

In the 2010 Monetary Policy Strategy, the NBM's primary objective is to achieve and maintain price stability so as to contribute to developing of a relatively stable macroeconomic framework that will enhance economic development and ensure a sustained growth. Setting the interval for inflation, the NBM notes that when some unforeseen shocks move or are expected to move inflation outside that declared interval, the monetary policy will have as a goal to bring inflation as close as possible to the objective during a medium-term horizon. During the same time horizon, monetary policy instruments were implemented to achieve the inflation objective without causing excessive adverse impact on the economic activity.

In conclusion, due to the fact that since 2005 – 2009, the NBM does not clearly provide an explicit policy rule or strategy, receives 0 points. In 2010 however, due to improvements in portraying the strategy, NBM receives 1.

***b) Comprehensive account of policy deliberations***

The National Bank of Moldova has its Council of Administration (CA) composed of 5 members, which meets and discusses monetary policy decisions. The NBM announces its policy decisions in press releases published on the central bank’s website. In all of its press releases since 2005 till 2010 – the NBM however does not provide a comprehensive account of policy deliberations. This is the reason why the NBM receives 0 for policy deliberations.

***c) Disclosure of reaching monetary decisions***

Analyzing the monetary documents published on the NBM website since 2005 through 2010, there is no information publicly shared regarding the way each decision was reached on the level of the NBM’s operating instrument or target. There are no voting records from the NBM’s Council of Administration’s meetings and this leads to the conclusion that the NBM receives 0 for all the years included in the independent analysis, i.e. 2005 – 2010.

**Table 4:** Procedural Transparency of National Bank of Moldova and Czech National Bank

<b>Central Bank</b>	<b>National Bank of Moldova</b>						<b>Czech National Bank</b>					
<b>YEAR</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>
Explicit Policy Rule	0	0	0	0	0	1	1	1	1	1	1	1
Account of policy deliberations	0	0	0	0	0	0	1	1	1	1	1	1
Disclosure of reaching monetary decisions	0	0	0	0	0	0	0	0	0	1	1	1
<b>TOTAL</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>3</b>	<b>3</b>	<b>3</b>

## Czech National Bank

### *a) Explicit Policy Rule or Strategy*

The CNB writes on its web site that its reaction function is represented in the g3 model by the relationship between the nominal interest rate and expected inflation. The equation is based on a modified Taylor rule. Formally, the CNB's reaction function is expressed as:

$$i_t = \rho i_{t-1} + (1 - \rho)(\tau_t + \psi \pi_{t+4}) + \varepsilon_t$$

where  $i_t$  is the monetary policy nominal interest rate,  $\rho$  is the interest rate smoothing parameter,  $\tau_t$  is the equilibrium monetary policy nominal interest rate, which is the sum of the equilibrium real interest rate and model-consistent inflation expectations,  $\psi$  is the weight of the deviation of inflation from the target,  $\pi_{t+4}$  is the expected deviation of inflation from the inflation target, and  $\varepsilon_t$  is the monetary policy shock. The parameters of the rule were calibrated to ensure that monetary policy has a stabilizing effect. Given the forward-looking nature of the reaction function, this functional form cannot be estimated by means of single-equation econometric methods based on historical data. The reaction function determines the interest rates with regard to the deviation of expected monetary-policy relevant inflation from the inflation target at the monetary policy horizon, which is set to four quarters in the g3 model. The estimate for inflation at the monetary policy horizon reflects all macroeconomic variables entering the model<sup>6</sup>.

The CNB also states that the achieving of inflation targets is the main factor determining decision-making about changes in monetary policy instruments at any specific stage. It also states that while setting the policy instruments, it will take into account the shocks and extraordinary events whose causes are outside the reach of monetary policy measures<sup>7</sup>.

Taking into account that the CNB provides an explicit policy strategy that describes its monetary policy framework, it receives 1 for 2005 – 2010.

---

<sup>6</sup> CNB website *Monetary Policy in the g3 model*

[http://www.cnb.cz/en/monetary\\_policy/inflation\\_reports/2009/2009\\_II/boxes\\_and\\_annexes/ir\\_II\\_2009\\_box\\_III.html](http://www.cnb.cz/en/monetary_policy/inflation_reports/2009/2009_II/boxes_and_annexes/ir_II_2009_box_III.html)

<sup>7</sup> CNB website *CNB Monetary Strategy Document*

[http://www.cnb.cz/en/monetary\\_policy/strategic\\_documents/c\\_dms.html](http://www.cnb.cz/en/monetary_policy/strategic_documents/c_dms.html)

***b) Comprehensive account of policy deliberations***

The CNB publishes the minutes of the Bank Board meeting, reflecting the Bank Board members' discussion. The minutes are usually published 8 days later after the meeting. However, until April 2005, they were published 12 days after the monetary policy meeting. The CNB publishes minutes from all monetary policy meetings. Starting with October, 2006 – the CNB accompanies the minutes with a presentation from the CNB press conference regarding the decisions taken by the Bank Board members. Starting with 2008 – there was a reduction in the number of Bank Board meetings to 8 from 12. Also starting with 2008, the CNB started to publish votes cast by name (CNB). In 2010, a change has occurred in the way Minutes are published by the CNB. Until the third quarter of 2010 – the CNB was publishing the Minutes from the Bank's Board meetings in the quarterly inflation reports, while in the third Inflation Report from 2010 – it decided that the minutes of the Bank's Board meetings will no longer be included in the Inflation Reports and will only be available on the CNB web site.

Due to the fact that CNB publishes comprehensive minutes 8 days after its Bank Board meetings – it receives 1 for the comprehensive account of policy deliberations indicator for 2005 – 2010.

***c) Disclosure of reaching monetary decisions***

When publishing the Minutes from the Bank Board meetings in 2005, 2006, 2007 – there are non-attributed voting records. Usually, the information about voting is given in the last paragraph of the Minutes from the meeting and it is usually formulated in the following way: “At the close of the meeting, the Board decided to leave the CNB two-week repo rate unchanged at 2.50%. All seven board members present voted in favor of this decision” (CNB, 2005) or when there is no unanimity of decisions: “After discussing the situation report, the Board decided by a majority vote to leave the CNB two-week repo rate unchanged at 3.25%. Five members voted in favor of this decision, and two members voted for increasing rates by 0.25 percentage point” (CNB, 2007c). Starting with February, 2008 – the CNB started to publish individual voting records regarding the decisions taken during the Bank Board meetings. The individual voting records are provided in every publication of the Meetings from 2008 – throughout 2010.

Thus, analyzing the CNB documents regarding the way central bank discloses how each decision on the level of its main operating instrument or target was reached, CNB receives 0.5 for



2005 – 2007, as non-attributed voting records are shared with the public. For 2008 – 2010 – CNB is awarded 1 for the disclosure of reaching monetary decisions, as it publishes individual voting records and gives the names of the person taking the decision, along with the information whether it voted against or in favor of the decision.

## **6.4 Policy Transparency**

The following part of the thesis will focus on analyzing the policy transparency, which is concerned with monitoring whether the central bank discloses its policy decision in a prompt way, together with an explanation of the decision, and an explicit policy inclination or indication of future policy actions.

### **National Bank of Moldova**

#### ***a) Announcing policy decisions***

The decisions about adjustments to the main operating instrument or target are announced promptly on the NBM's website through a press release. The NBM's Council of Administration meets each month and after the decision is taken, a press release is published.

In 2005, there are 6 published press releases on the NBM website and they announce the decisions taken by the NBM's Council of Administration. An important thing to be mentioned is the fact that the press release is published right after the meeting of the CA and it announces that the decision taken will enter into force after being published in the Official Monitor of the Republic of Moldova. As an example, the CA's decision to increase the base rate by 1.5 p.p. on February 10, 2005, entered into force on February 18, 2005 – on the day this decision was published in the Official Monitor. It is not clear whether there were no changes in policy or the NBM wanted to keep the decision secret, but the CA did not publicly share its decisions in the months of January, May, April, July, October and November, 2005.

In 2006, there are 4 press releases (no press release for January, February, April, May, June, July, August and October, 2006), in 2007 – the NBM announced its monetary policy decisions in 3 press releases (no press releases published for January, February, March, April, May, June, July, October and December 2007), in 2008 – the NBM published 5 press releases (no press release for February, March, April, June, July and October, 2008), in 2009 – there are 7 published press

releases announcing the CA's decisions (for the months of January, April, May and October – there are no published press releases) and in 2010 – 12, which means that 2010 is the only year when the NBM announced the decisions of its Council of Administration in each month.

Taking this information into account and due to the fact that the NBM announces its policy decisions, but not regularly, after each meeting of the Council of Administration – the NBM receives 0 points for the period of 2005 – 2009. In 2010, however, NBM is awarded 1 point, because it shared all its monetary policy decisions promptly, without any time lags.

**Table 5: Policy Transparency of National Bank of Moldova and Czech National Bank**

Central Bank	National Bank of Moldova						Czech National Bank					
	2005	2006	2007	2008	2009	2010	2005	2006	2007	2008	2009	2010
Announcement of Policy Decisions	0	0	0	0	0	1	1	1	1	1	1	1
Explanation of the policy decision	0	0	1	1	1	1	0,5	0,5	0,5	0,5	0,5	1
Policy inclination	0	0	0	0	0	0	0,5	0,5	0,5	1	1	1
<b>TOTAL</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2,5</b>	<b>2,5</b>	<b>3</b>

***b) Explanation of the policy decision***

Regarding the question whether the central bank provides an explanation when it announces policy decisions, the National Bank of Moldova has its Council of Administration (CA) composed of 5 members, which meets and discusses monetary policy decisions. In 2005, after the meeting of the Council of Administration from February 10, the CA decided to reduce the basic rate of the National Bank applied on commercial banks' refinancing by 1,5 p.p. The press release which announces this decision states only that the CA took this decision, because it had to be taken into account the inflation dynamics and the present conditions of money market. The press release does

not offer any other reason which stood behind that decision (NBM, February 2005). In the same year, at the next meeting of the CA, on March 24 – the NBM only announces that taking into account the inflation dynamics and the monetary and macroeconomic indicators, the CA of the NBM has decided to maintain the interest rates of the NBM at the level set on February 10, 2005. A new press release was published in June, announcing that the rates on the NBM monetary regulation instruments will be maintained at the level set in February, 2005, however there is no explanation offered for the taken decision. In August, 2005 – NBM's CA announces that the basic rate of the NBM applied on commercial banks will be reduced by 0.5 p.p. and will have the value of 12.5% per year. In September and December, 2005 – the NBM announces that the rates on the NBM monetary regulation instruments will be maintained at the level set in August, 2005.

In 2006 – the first press release was the one published in March and it announces that the rates on the NBM monetary regulation instruments will be maintained at the level set in August, 2005. The only explanation accompanying this decision is the one present at the beginning of each press release since 2005: “taking into account the inflation dynamics and the monetary and macroeconomic indicators...” The press release from June 2006 announces that the rate applied on commercial banks' refinancing will be maintained at the level from August 2005 and namely 12.5% per year. In the press releases from 2006, the NBM does not provide a clear explanation when it announces its policy decision.

An important feature of the press releases published in 2007 is the fact that they contain more explanations and justifications for the CA's decisions. For example the press release published in September, 2007 announces an increase in the base rate by 2.5 p.p. at the level of 16.0%. This decision is accompanied also by 4 paragraphs of comments and reasons of the undertaken decisions. The NBM explains that the increase was due to the NBM concern related to maintaining of the inflation indicator within the limit of 10% by the end of 2007. The press release also states that the NBM is ready to use all its available instruments with a view of maintaining and ensuring the prices stability. The NBM states as well in its press release that the drought consequences compromised the efforts to reduce inflation starting with the first semester and caused an essential increase of prices on foodstuff products, contributing to the considerable growth of inflationary expectations. Another explanation contained in the press release is that there were essential foreign currency inflows recorded over 2007 and this determined the NBM to intensify foreign currency acquisitions that led to the increase of several monetary indicators over the planned level. Another trend by

which the Moldovan economy can be characterized was the extension of credits to economy, especially of those in free convertible currency. The NBM also explains that the growth of interest rates of the NBM was done together with another prudential measure of the monetary policy undertaken by NBM – gradual increase by 5.0 p.p. of the required reserves ratio from the means attracted by banks in free convertible currency. The NBM concludes that the undertaken actions have the purpose of counteracting the inflationary pressures and of reducing the inflation rate within the scheduled limits. In the last press release from 2007 – the one from November 1 – the CA announced its decision to maintain the interest rates at the level established on September 26, 2007. The press release also contains information regarding the measures the NBM undertook in order to contribute to the stabilization of the macroeconomic situation and to prevent the increase of inflationary pressures. Namely the fact that the inflationary expectations persist – determined the NBM to intervene through monetary instruments with a view of avoiding another acceleration of the growth of CPI.

In all 5 press communiqués from 2008, the NBM announces its monetary policy decision accompanied by explanations and projections of the NBM.

In 2009 press releases the NBM continues to make public the decisions undertaken by its Council of Administration.

An interesting feature about the press releases from 2010 worth to be mentioned is that one can observe the trend and the evolution of the press releases since 2005 until 2010. If in 2005 – the press releases were shorter, some of them not longer than 2 paragraphs, the ones from 2010 – are around 2 – 3 pages long and along with the announced decisions of the CA, contain the reasoning behind the undertaken decisions. In the first press release from 2010 for example, the NBM states that the decisions of the NBM's CA have a preventive character and aim at reversing the inflation trend, which means leading it back to the medium-term declared limits. The press release also stresses out that the CA recognizes the necessity of finding the equilibrium between the achievement and maintenance of price stability and the maintenance of necessary conditions for the economic growth. A new feature that is present in the 2010 press releases and was missing from the previous ones is the announcement that a more detailed analysis of the medium term inflation forecast will be presented in the Monetary Policy Report and the date of its publication is announced, as well as the information regarding the next meeting of the CA of the NBM concerning the monetary policy.

In conclusion, due to the fact that the press releases from 2005 and 2006 – contain only the announcement of the monetary policy decision and lack a clear explanation behind that decision – NBM receives 0 points, as an explanation like “taking into account the inflation dynamics, the present conditions of money market”, or “taking into account the inflation dynamics, the monetary and macroeconomic indicators” are not sufficient and credible to explain the reason behind an increase or a decrease in the base rate. Due to the fact that starting with 2007 – 2010, the press releases contain more information regarding the reasons behind the undertaken decisions – the NBM receives 1.

***c) Policy inclination or future policy actions***

Analyzing the press releases from 2005 and 2006 – the NBM does not disclose any explicit policy inclination nor does not provide an explicit indication of likely future policy actions.

In the second press releases from 2007, the NBM states, along with the announcement of its decision that it is ready to use all its available instruments with a view of maintaining and ensuring the prices stability. In the last press release from 2007, the NBM notes that due to the persistency of inflationary expectations determines the NBM to intervene through monetary instruments with a view of avoiding another speed-up of the growth of consumer prices index.

In the first press release from 2008, the NBM states that the outlook for price stability is subject to some risks, so the NBM finds it necessary to keep the interest rates for the monetary policy instruments at the announced level until the trends of inflation moderation are set out in the course of 2008. At the same time, in the context of strengthening the process of inflation mitigation, the NBM mentions that it will continue to monitor the evolution of the macroeconomic and monetary indicators, of the money market conditions and will, upon necessity, undertake firm and prompt measures aimed at ensuring macroeconomic stability. It is important to mention that the NBM explicitly state what will be the measures aimed at ensuring the macroeconomic stability – it just states that at a general level. The same general statements about the use of all available instruments in order to ensure the maintenance of the inflation rate within certain limits are part of each press release throughout 2008. The press releases published on March 12, and on May 23, 2008 do not contain an explicit indication of likely future policy actions, however they state that the size of the base rate and that of required reserves ratio will be re-examined under the conditions of a new clear disinflation trend formation. In the press release from November 27, 2008 – the NBM states that it considers as possible in the future the adoption of some decisions aimed to the further

liberalization of the promoted monetary policy, with the purpose to support the real sector through the enlargement of the banks' lending possibilities.

In the press releases from 2009, the NBM continues to state in general terms that will carefully monitor the situation on the domestic and external, credit, foreign currency and money market, will undertake adequate and necessary measures in order to minimize the effects of the world economy on the economy of the Republic of Moldova. Some of the press releases from 2009 (as an example the one from July, 2009) contain however information about the possible concrete actions (like the possibility to decrease the level of the base rate or the level of obligatory reserves) the NBM might undertake throughout the remaining year. In the press release from August, 2009 – the NBM also notes that the CA's decision of reducing the base rate by 1.0 p.p. will have as a consequence an increase in the commercial banks' liquidity with about 480 million lei, \$11.4 million and 12.6 million euro. Thus, the level of excessive liquidity in the banking sector will increase till around 2 billion lei, which along with a reduction in the base rate, will further reduce the diminution of market interest rates and it will lead to the process of widening the credit offers to the real sector of the economy.

In conclusion, due to the fact that the NBM does not explicitly disclose the policy inclination after every policy meeting, receives 0 for the years 2005 through 2010.

## **Czech National Bank**

### ***a) Announcing policy decisions***

The CNB announces its decisions from the Bank Board's meetings immediately after the monetary policy meeting. In 2005 – 2009, the CNB used to publish press releases announcing the change in rates decided by the members of the CNB's Board immediately after the end of each monetary policy meeting. Later on, it has started to publish the Bank's Board interest rate decision, as a rule after the end of monetary policy meeting, at 1 p.m. Then a press conference follows at 2.30 p.m. During the press conference, the CNB releases a brief digest of the information which the Bank Board based its discussion on, a list of the risks pertaining to the current forecast according to the Bank Board members, and the Bank Board's decisions regarding the interest rate settings, including the ratio of the votes cast. The presentation given at the press conference is made available immediately after the press conference, usually at around 3 p.m. Since May 2007, audio recordings (in Czech only) from the press conferences have been made available and since December 2009,

also videos (also only in Czech) from the press conferences have been made available on the CNB website about one hour after the press conference<sup>8</sup>.

Taking into account that the CNB announces the decisions of the Bank Board's meetings promptly, on the day of implementation – receives 1 for this factor.

***b) Explanation of the policy decision***

On the CNB website, when analyzing the Bank's Board meetings from 2005 and 2006 (until October) – there are no presentations from the press conferences right after the monetary policy meetings offered in English. For the years 2005 and 2006 (until October) the changes regarding the policy decisions are announced through press release, without any explanation of the decision taken. For example, a press release published on January, 27 2005 – the CNB announces that the “Bank Board decided to lower the limit 2W repo rate to 2.25%, the discount rate to 1.25% and the Lombard rate to 3.25%. The new interest rates will take effect as from tomorrow, 28 January 2005” (CNB, 2005d).

Starting with October, 2006 – the CNB accompanies the Minutes of the Bank's Board by presentations, provided both in Czech and in English, from the press conference, where is presents the monetary policy decision taken and the ratio of the votes cast. Until November, 2009 – the presentation at the press conference did not include an explicit slide called “Reasons for the decision”, however the whole press conference was about explaining the decision – by presenting the forecast, assessment of its risks, etc. Starting with November, 2009 – the presentations at the press conferences contain an explicit sections where the CNB explains the reasons behind the decision. The explanation of the decision usually includes forward-looking assessments. For example, one of the presentations announcing the monetary policy decision shared with the public on May 6, 2010 – states that six out of seven Bank Board members “decided by a majority vote to lower the two-week repo rate by 0.25 p.p. to 0.75%. At the same time, it decided to cut the Lombard rate by the same amount, to 1.75%. The discount rate remains unchanged at 0.25%” (CNB, 2010a). This decision is followed by an explanation, which states that the decision was taken, while keeping in mind that headline and monetary – policy relevant inflation was expected to be slightly below the

---

<sup>8</sup> CNB website *CNB Bank Board monetary decisions*  
[http://www.cnb.cz/en/monetary\\_policy/bank\\_board\\_minutes/2007/index.html](http://www.cnb.cz/en/monetary_policy/bank_board_minutes/2007/index.html)

2% target at the monetary policy horizon. The explanation also refers to the forecast, which projects a moderate decline in market interest rates followed by stability and gradual rise in rates since 2011 (CNB, 2010a).

Taking into account that until November, 2009 – the CNB did not explicitly provide separate sections with explanations of the Board’s decision, receives 0,5 for 2005 – 2009 period. For 2010 it receives 1 point.

### *c) Policy inclination or future policy actions*

In order to detect whether the CNB discloses an explicit policy inclination after every policy meeting, the Minutes of the Bank Board meetings from 2005 – 2010 have been analyzed. Since 2008, the CNB publishes numerically the interest rate path consistent with its forecast. Before 2008, this path was commented verbally and compared to the market interest rate outlook. Reading through the Minutes, it has to be stated that in general, it is not very easy to delimit where namely the CNB discloses future policy actions. In the Minutes of the Bank Board’s meeting from February, 4 2010, for example, it is stated that “Some of the board members stated that the decision-making on monetary policy interest rates was going on in an environment of less uncertainty than in past months” (CNB, 2010). Another paragraph that contains somehow several “hidden” indications regarding the future policy actions is the one that refers to the spread between interbank market interest rates and the monetary policy rate. “The opinion was expressed that the faster-than-forecasted decline in the spread between short-term interest rates and the monetary policy rate might represent an upside risk to inflation going forward” (CNB, 2010).

In conclusion, the CNB receives 0,5 for 2005 – 2007, when the path was published only verbally, and 1 since 2008.

## **6.5 Operational Transparency**

The following part of the thesis will be concerned with analyzing the operational transparency of the NBM and CNB. The operational transparency deals with the implementation of the central bank’s policy actions. It refers to the fact whether the central bank discusses the control errors in achieving its operating targets and the unexpected macroeconomic disturbances that affect the transmission of monetary policy.



## National Bank of Moldova

### a) Evaluation of the operating targets' achievement

The NBM evaluated to what extent its main policy operating target has been achieved throughout the period 2005 – 2010. The NBM usually evaluates to what extent its main policy operating target have been achieved in the Annual Reports at the end of each year. In 2010, the NBM explains whether its monetary policy objectives have been achieved in the monetary policy reports.

Taking into account the findings in the NBM monetary policy documents, NBM is awarded 1 throughout the whole reference period: 2005 – 2010, as the NBM evaluates to what extent its main policy operating targets have been achieved on a regular basis and provides explanations for significant deviations from target.

**Table 6:** Operational Transparency of National Bank of Moldova and Czech National Bank

Central Bank	National Bank of Moldova						Czech National Bank					
	2005	2006	2007	2008	2009	2010	2005	2006	2007	2008	2009	2010
Evaluation of the operating targets' achievement	1	1	1	1	1	1	0	0	0	0	0,5	0,5
Information on (unanticipated) macroeconomic disturbances	0,5	0,5	0,5	0,5	0,5	0,5	1	1	1	1	1	1
Evaluation of the policy outcome	1	1	1	1	1	1	1	1	1	1	1	1
<b>TOTAL</b>	<b>2,5</b>	<b>2,5</b>	<b>2,5</b>	<b>2,5</b>	<b>2,5</b>	<b>2,5</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2,5</b>	<b>2,5</b>

### b) Information on (unanticipated) macroeconomic disturbances

Regarding the question of whether the central bank regularly provides information on unanticipated macroeconomic disturbances that affect the policy transmission process, it is

important to mention that NBM provides explanations regarding past macroeconomic disturbances that have affected the achievement of a proposed target.

In 2005, the NBM explains that due to the positive dynamics of macroeconomic indicators and to the intensification of its sterilization operations, the inflation rate was framed within the projected limits. Moreover, the NBM explains that the inflation rate in 2005 has been mainly affected by the consolidation of domestic demand following remittances' inflow; population's wage income expansion, as well as rises in fuel prices in the international market.

In 2006, the NBM explains that the main factors that lead to an increased inflation trend represented the increase of tariffs for energy resources and services. Due to this fact, the reserve money also diminished and the NBM explains that this reduction of reserve money was mainly determined by the diminishing trend of the net domestic assets of the NBM. It is important to mention that for the year 2006, the NBM includes discussion of past forecast errors. Initially, in the Monetary and Foreign Exchange Policy of the NBM for 2006, limits for inflation were set within the 8.0 – 10.0%, the GDP was forecasted to grow by 6.5%; the growth of broad money M2 was foreseen by 40.0% and the growth of reserve money by 20.0%. However, the central bank acknowledges that the evolution of the GDP, the situation of the state balance of payments and the prices dynamics differed from the macroeconomic forecast, so the NBM decided to rectify the Monetary and Foreign Exchange Policy for 2006 and established a limit to the inflation level within the 12.0% per year, the increase of reserve money within the ceiling of 2.0%, an increase of broad money M2 within the ceiling of 10.0%.

In 2007, the NBM explains that the increased inflation trend was determined, among other factors, by the increase of prices for foodstuff products (mainly for bakery products, meat, dairy products, fruit and vegetables) as a result of the adverse weather conditions both in Moldova and its neighboring countries. The NBM notes as well that there was a significant increase of prices for power resources in the world market; and the inflation registered on products and services with regulated prices, including for water supply and sewerage (34.4%), energy supply (31.0%), medicines (18.2%), fuel (13.0%), natural gas (10.6%), medical care (10.5%), central heating (6.6%). The last factor influencing the increase of the inflation rate is represented by inflationary expectations.

For the year 2008, the NBM explains that in the first period (January – May, 2008), the rapid increase of inflation up to 16.9% versus May 2007 was determined by significant prices increase of

foodstuff products, as a result of adverse weather conditions from Moldova in 2007, increase of prices on energy resources and of tariffs for services. All of these increases were conditioned by the evolution of the world prices and money supply increase, as a result of the enlargement of foreign currency flows and of the rapid growth of the banking lending.

In 2009, the NBM notes that the policy transmission process was affected by a slowdown of economic activity manifested through reduction of aggregate demand; devaluation of the Moldovan leu against currencies of the key economic counterparts of Moldova, especially against Ukrainian hryvna; high volume of harvest in 2008 and reduction of agricultural production in 2009; the last factor influencing the inflation trend was the rise of prices on fuel internationally and change of tariffs on services with regulated prices.

For 2010, the NBM explains that the increase in core inflation was influenced mostly by the developments in the foreign exchange market in the first quarter of 2010, by the increases in indirect taxes from the beginning of the year, and by the second-round effects resulting from higher prices of services with regulated prices.

In conclusion, Moldova receives 0,5 for the whole period 2005 – 2010 for the analyzed indicator, as it provides information on unanticipated macroeconomic disturbances that affect the policy transmission process, however, only through short-term forecasts and analysis of current macroeconomic developments.

### **c) Evaluation of the policy outcome in light of the Central Bank's macroeconomic objectives**

In the 2005 Annual Report, the NBM notes that due to the positive dynamics of macroeconomic indicators, intensification of sterilization operations by the NBM, as well as the tempering of non-monetary factors' impact over 2005 permitted to set the inflation rate within the initial forecasts for 2005. NBM also notes that in order to ease excessive fluctuations of the official exchange rate of the national currency against the US dollar, the NBM intervened in the domestic foreign exchange market using US dollar buying/selling operations and reverse swap transactions. Due to these interventions, and also through the acquisition of foreign currency surplus, NBM consolidated its international reserves and conducted national currency issuance. As a result of these actions, reserve money expanded and stayed in line with the initial forecast stipulated in the Monetary and Foreign Exchange Policy for 2005, the balance of currency in circulation increased,

as well as the overall banks' reserves registered a growing trend. The NBM states as well that the amplification of sterilization operations by the NBM in the foreign exchange market constituted the main factor that induced the enlargement of reserve money.

In 2006 Annual Report, the NBM notes that the inflation rate exceeding the limit initially projected for 2006 was conditioned by factors, which are not dependent upon the Monetary and Foreign Exchange Policy measures and which are beyond the control of the NBM. Also, the NBM notes that due to the need for lessening the inflationist impact and within the context of the economic situation, the Monetary Policy promoted in 2006 was featured by an enhanced restrictiveness degree. In the same year, the NBM writes that under the created conditions, the NBM actions were focused on maintaining the balance between the maximum acceptable value of the monetary emission and the non-admission of excess fluctuations of the national currency. The NBM conducted a strict control over the excess liquidity by larger sterilization operations and by increasing the interest rates on monetary policy instruments. As a result, the reserve money diminished, and M2 indicator recorded the lowest growth of the last years.

In 2007, the NBM states that the inflation rate exceeded its initially forecasted limits as a consequence of monetary and non-monetary factors, as well as due to inflationary expectations. The monetary factor included a monetary issue and namely the fact that reserve money advanced by 46.4%, as a result of significant acquisitions of foreign currency carried out by the NBM with the purpose of avoiding excess fluctuations of the nominal exchange rate of the national currency against USD.

In the 2008 Annual Report, the NBM notes that throughout the year, it increased the base rate three times, in order to reverse the inflation trend and to bring inflation in the limit of 10% in the annual value. In the same year, the NBM used the required reserves ratio as the monetary policy instrument in order to moderate the inflationary expectations and to stimulate the population to reduce consumption and encourage savings. It also noted that the inflation level recorded a downward trend as a result of certain measures applied jointly by the NBM and the Government of Moldova: the intensification of the monetary and foreign exchange policy, the promotion of the balanced budget and fiscal policy and the ensuring of the market activity based on the principles of free competitiveness.

In 2009, the NBM stresses that the monetary and foreign exchange policy did not have the intended success, due to the fact that its implementation took place in a situation of economic crisis.

The failure to achieve the intended monetary policy objectives was due to the significant deviations of the development of the macroeconomic indicators, the fierce situation and negative expectations of people. Nevertheless, the NBM notes that in these difficult conditions, the NBM managed to ensure the relative stability of prices, to maintain the stability of the banking system and to moderate the pressures on the foreign exchange market.

In 2010, in the first Monetary Policy report, the NBM notes that descendent development registered by the core inflation was due, among other reasons to the devaluation of currencies in the region (especially Ukrainian hryvna and Russian ruble) against the Moldovan leu that has taken place before February 2009 as well as in the summer of 2009 which produced positive impact onto the commercial mark up gained by the importers. Also, the NBM states that it promoted a moderate monetary policy by lowering its base rate and decreasing required reserves ratio pursued. These actions pursued the scope of reducing interest rates in the market and offering possibilities of lending to real sector of the national economy. Although the main operations of monetary policy (short term sterilization as well as injection of liquidity) were done using the NBM base rate the signals send by the NBM rates were picked up with a delay by the interbank market of loans – deposits and by the government securities market and often failed to influence the short term interest rates in these markets. The second Monetary Policy report states that the rates increase to the monetary policy instruments initiated by the NBM the beginning of 2010 was motivated by the risk of inflation increase in the medium term. In the third Monetary Policy report from 2010, the NBM writes that after the decisions taken by the NBM's CA in the second quarter, the NBM has maintained the interest rates at its monetary regulation instruments established at the end of the preceding quarter. In the fourth quarter, the NBM notes that during the preceding quarter of 2010, it has maintained the conduct of monetary policy prudent by keeping the monetary policy rates at the same level and has managed the excess of liquidity from the banking system through sterilization operations. Through the decisions of the three meetings of the CA held in the reporting quarter, the NBM considered the level of interest rates at its monetary regulation instruments appropriate, keeping them the sixth consecutive month at the same level.

In conclusion, taking into consideration that the NBM provided an evaluation of the policy outcome in light of its macroeconomic objectives, accompanied by an explicit account of the contribution of monetary policy in meeting the objectives – NBM is awarded 1 point for every year from 2005 throughout 2010.

## **Czech National Bank**

### ***a) Evaluation of the operating targets' achievement***

Regarding the to what extent to which its main policy operating target have been achieved, the CNB traditionally did not discuss very explicitly the ability to control the money market interest rates, for example. Even though the CNB has always discussed the evolution of money market rates, it started to focus on this issue more explicitly during the recent crisis, as the money market premium increased and the issue became more relevant.

Taking into account that the CNB did not evaluate the operating targets' achievement before the crisis, it receives 0 for 2005 – 2008 and 0,5 for 2009 – 2010, as full information is not disclosed in this area.

### ***b) Information on (unanticipated) macroeconomic disturbances***

The CNB provides information on unanticipated macroeconomic disturbances that affect the policy transmission process in its inflation reports for the period 2005 – 2010. It describes the monetary conditions and makes reference to the market interest rates. It explains as well why there was an increase or decrease in interest rates or why the koruna's exchange rate against the euro appreciated or depreciated.

Due to the fact that the CNB provides information on unanticipated macroeconomic disturbances that affect the policy transmission process and moreover it includes discussions of past forecast errors – the CNB receives 1 for 2005 – 2010 for the information on unanticipated macroeconomic disturbances indicator.

### ***c) Evaluation of the policy outcome in light of the Central Bank's macroeconomic objectives***

The Act on the CNB defines the CNB's primary objective as the maintenance of price stability. It also stipulates that without prejudice to this primary objective, the CNB shall support the general economic policies of the Government leading to sustainable economic growth (CNB, 2005a). This means that the CNB should set its main policy instrument, namely interest rates, at a level that will maintain inflation at a low and stable level without needlessly slowing, or excessively accelerating, the economic growth rate (CNB, 2010d).

In every Annual Report published by the CNB since 2005, there is a section in the Report, where the central bank describes its objectives and their fulfillment. It first refers to monetary policy and economic developments. In this section, the CNB analyzes whether the inflation was close to

the target, describes the trends of annual consumer price inflation, specifies whether the domestic interest rates increased or decreased. It also refers to the rate of growth of the Czech economy and compares it to the EU level, describes whether the nominal exchange rate of the koruna against the euro appreciated or depreciated and it specifies whether the CNB had to intervene in the foreign exchange market. The CNB also describes the balance of trade and explains why it had to lower, increase or leave unchanged the interest rates based on the inflation forecasts. For example, in the Annual Report published in 2005, the CNB explains that due to the inflation forecast, the CNB had to pursue tighter monetary conditions and had as well to cut the interest rates in three steps by a total of 0.75 p.p. to 1.75% during the first quarter of 2005. In the Annual Report from 2009, for example, the CNB explains that the monetary policy had to operate in difficult conditions resulting from the persisting global financial and economic crisis. Economic activity fell sharply at the beginning of 2009 and the CNB describes the trend of the GDP growth in 2009, refers to the increase of consumer price inflation and states that it responded by sharply reducing key interest rates starting in August 2008. The CNB also writes that due to the unfavorable external demand, the Czech economy registered a substantial decline in its performance, when compared to the European Union as a whole. Due to the high degree of openness of the Czech economy and its heavy dependence on external demand, exports and investment – fell sharply. The CNB also refers to employment and the number of vacancies, which fell in 2009. The unemployment, on the other hand, rose. The exchange rate of the koruna depreciated and showed considerable volatility, explains CNB, as this depreciation was fostered by the problems of some countries in the Central Europe region and by the inability of the foreign media and some analysts and financial market participants to appreciate the differences between those countries. The CNB also writes that market interest rates continued to be affected by a high credit premium, which is the spread between the CNB's key interest rate and PRIBOR money market rates (CNB, 2009).

In the period 2005 – 2010, the CNB provides even more detailed information on economic developments and monetary policy management in the quarterly Inflation Reports in the section called “Fulfillment of the inflation target.”

Regarding the regular evaluation of the policy outcome in light of its macroeconomic objectives, the CNB receives 1 for 2005 – 2010, as along with analyzing the macroeconomic development in the Czech economy, it also brings an explicit account of the contribution of monetary policy in meeting the macroeconomic objectives.

## 6.6 Analysis of the Overall Transparency Index of the NBM and CNB

Analyzing the table 7 below, that presents the Transparency Indices for the NBM and CNB, the general trend is that these two central banks have moved in the direction of greater transparency in recent years. The CNB has a stable movement throughout 2005 – 2007, its TI is 13, in 2008 and 2009 – registers a score of 14 while in 2010 – it embraces full central bank transparency, registering the maximum score: 15. The NBM witnesses a gradual increase in its transparency starting since 2005, when its Transparency Index registered a figure of 4, growing steadily till 2010 and registering a score of 8,5 in its overall transparency.

**Table 7:** Overall Transparency Index of the NBM and CNB

Central Bank	National Bank of Moldova						Czech National Bank					
	2005	2006	2007	2008	2009	2010	2005	2006	2007	2008	2009	2010
Political Transparency	1	1,5	1,5	2,5	2,5	3	3	3	3	3	3	3
Economic Transparency	0,5	0,5	0,5	0,5	0,5	1	3	3	3	3	3	3
Procedural Transparency	0	0	0	0	0	1	2	2	2	3	3	3
Policy Transparency	0	0	1	1	1	1	2	2	2	2,5	2,5	3
Operational Transparency	2,5	2,5	2,5	2,5	2,5	2,5	2	2	2	2	2,5	2,5
<b>TOTAL</b>	<b>4</b>	<b>5</b>	<b>5,5</b>	<b>5,5</b>	<b>6,5</b>	<b>8,5</b>	<b>12</b>	<b>12</b>	<b>12</b>	<b>13,5</b>	<b>14</b>	<b>14,5</b>

The NBM needs considerable improvement at all levels of the Transparency Index, except of the Political Transparency. However, areas such as Procedural transparency, Policy transparency and Economic transparency – need special attention for improvement from the Moldovan central bankers. The NBM needs to improve the quality and amount of the economic data it offers to the public. Meanwhile, it has to be more specific on the model of the economy that the NBM employs



to construct forecasts or evaluate the impact of its decisions, and the internal forecasts that the central bank relies on. The NBM registered a significant increase in the Political transparency, as for 2010 – the last year of analysis of the current thesis, it received the maximum points: 3. The Political transparency is the only indicator where NBM received the maximum points. The NBM has a lot to learn from the CNB in terms of improving the transparency of its monetary policy actions and decisions.

When comparing the results of the Transparency Index from the current thesis for the years 2005 and 2006 with the results of Dincer & Eichengreen (2009) with regard to the CNB and the NBM measure of transparency – the results from this thesis are to some extent more optimistic for the CNB. In the Dincer & Eichengreen (2009) analysis, the Czech Republic obtained a score of 11 for both 2005 and 2006, while in the current thesis – the Czech Republic has a score of 12 for these years. In an earlier version of the same paper, Dincer & Eichengreen (2007) had a score of 11,5 for the Czech Republic in 2005. In the Dincer & Eichengreen (2009), the authors have lowered the score from 1 to 0,5 at the Economic Transparency and namely at the *relevance of the economic data*. However, it is not clear why the authors lowered the score. In this thesis, the CNB receives full score for the Economic Transparency component. In 2006, at the Political Transparency, the CNB received full score both in Dincer & Eichengreen (2009), as well as in this thesis. At the Economic Transparency, as explained earlier, Dincer & Eichengreen (2009) offered a half score for the *economic data*, while this thesis offered full score. For the Procedural Transparency, Dincer & Eichengreen (2009) offer full score for *explicit policy rule* and for *account of policy deliberations*. This thesis offers as well full score for these components. However, for the *disclosure of reaching monetary decisions* component – Dincer & Eichengreen (2009) offer half score, while this thesis offers 0. At the Policy Transparency, Dincer & Eichengreen (2009) offer 1 for *announcement of policy decisions* and 0,5 for *explanation of policy decision*, trend which is followed as well in the current thesis. At the *policy inclination* component, however, Dincer & Eichengreen (2009) offer a score of 0, while the present thesis – 0,5. For the Operational Transparency, Dincer & Eichengreen (2009) offer a score of 0 for *evaluation of the operating targets' achievement*, as the current thesis does, and a score of 0,5 for *information on (unanticipated) macroeconomic disturbances*. This thesis offers a score of 1 for this component. For the *evaluation of the policy outcome*, Dincer & Eichengreen (2009) offered a score of 1, as the current thesis did.

The NBM, on the other hand registered a constant Transparency Index of 6 for both 2005 and 2006 in the Dincer & Eichengreen (2009) analysis, while in this thesis – Moldova witnessed a lower score, and namely 4 in 2005 and 5 in 2006. Nevertheless, the difference between the results obtained by Dincer & Eichengreen (2009) and the current work vis-à-vis the CNB and NBM transparency are not very big, which means that the current analysis is accurate.

## **Chapter 7**

### **7. How surprising are the monetary policy announcements in Moldova and in the Czech Republic?**

Communication has developed into a key monetary policy instrument (Rosa & Verga, 2006). The following section of the thesis will focus on analyzing the effects of each central bank's policy rate decision and monetary policy announcements – on the money market rates.

Similar analysis has been done by Kotlán & Navrátil (2005). These authors have studied to what extent the CNB's decisions were anticipated by market participants. They state that monetary policy is predictable if economic agents expect the monetary policy decisions taken by the central bank. A policy is expected when agents understand how the decisions on policy rates are reached and are able to predict the sign and size of the interest rate change. The central bank contributes to this understanding by having and stating explicit goals, by explaining its decision-making (during press conferences or through publishing of minutes) and by informing the public about the data set for the decision (Kotlán & Navrátil, 2005). In a more recent study, Abbassi & Linzert (2011), investigate the effectiveness of the ECB's monetary policy in steering money market rates during the recent financial crisis. Their findings are that market expectations about monetary policy are less relevant for money market rates up to 12 months after August 2007 compared to the pre-crisis period.

Regarding the methodology used to analyze the predictability of the two central bank decisions, the money market rates (the 2 Weeks and 3 Months CHIBOR and PRIBOR) collected by

each central bank from Reuters and published on their official website, are monitored for the period from 2005 – 2010. The decisions of the Council of Administration of the NBM and of the CNB's Bank Board are also monitored. In particular, the aim is to observe whether the money market rates change after the central banks announce their monetary policy decisions. Kotlán & Navrátil (2005) define the "interest rate change" and decide on how big it must be and how quick it must take place. They chose 12,5 basic points as the "breakpoint" of no change: if rates move by more than 12,5 b. p. it means that more than a half of participants did not expect the given policy move. This thesis will follow Kotlán & Navrátil's (2005) choice for the "breakpoint" of change in the interest rates. The second issue Kotlán & Navrátil's (2005) were concerned with was the length of the "window" to look at. The baseline case is based on the difference between rates the day after and the day before the Bank Board meeting. Kotlán & Navrátil (2005) state that this short "window" of three days minimizes the impact of other factors determining interest rates apart from the Bank Board meeting (like foreign developments, release of new data). This is the approach followed in this thesis as well.

## **7.1 National Bank of Moldova**

The NBM started to publish the money market rates only starting with December, 2005 – this means that the analysis will not be able to cover the whole 2005 year, but just the month of December. In December 2005, even though the NBM announced that it will maintain the interest rates of NBM at the level set on August 25, 2005 – the 2W CHIBOR rate decreased by 15 b. p. after the announcement of the NBM's decision.

In 2006<sup>9</sup> – the NBM announced on March, 30 – that it keeps the same level of the interest rates, as announced on August 25, 2005. The 2W CHIBOR rate increased by 11 b. p. and the 3M CHIBOR decreased by 10 b. p. On September, 2006 – when even though the NBM has announced that it increases its base rate by 0.5 p. p, the markets did not react, as neither the 2W, nor the 3M CHIBOR changed before and after the decision announcement. The 3M CHIBOR, for example, registered the same value 8 days before the announcement and 8 days after the announcement. It was not possible to analyze the reaction of the money market rates after the decision from

---

<sup>9</sup> In 2006, the NBM has published on its website only the decision announcements from March 30, June 22, September 28, November 16 and December 1.

November 26, as the NBM did not publish what values did the CHIBOR rates register on this specific day.

In 2007<sup>10</sup>, the decision from August 3 to maintain the NBM base rate at the same level of 13.5% annually – did not lead to any change on the 2W and 3M CHIBOR rates. Announcing on September 26 that it increases the base rate by 2.5 p. p, the markets reacted by an increase of 12 b. p. of the 2W CHIBOR and by 19 b. p. of the 3M CHIBOR rate after the announcement decision. On November 1, the NBM announced that it maintains the interest rates at the level established on September 26, 2007 – and the markets seemed to expect such a decision, as the 2W and 3M CHIBOR did not change before or after the decision.

In 2008<sup>11</sup>, after the decisions from January 31 and March 13, the money market rates did not register any change before and after the decision announcement. On May, 23 2008 – the NBM's CA decided to increase by 1.5 p. p. the base rate applied on the main monetary policy operations of the National Bank. Respectively, the 2W rate remained unchanged, while the 3M CHIBOR increased by 13 b. p. after the decision announcement. Before the decision from November 27, when the NBM reduced the base rate applied on the main monetary policy operations by 1.5 p. p. – the 2W CHIBOR decreased by 21 b. p., while the 3M CHIBOR increased by 15 b. p. On December 18, 2008 – the NBM announced a decrease in the base rate by 1.5 p.p. and the money market rates remained unchanged. An explanation of the fact that in the case of NBM, there is a high level of spread between the money market rates and the policy rates can be the idea that the monetary policy cannot effectively steer short term money market rates and the NBM encounters difficulties in managing the market's expectations.

In 2009<sup>12</sup> – the decision from February 5, announced a decrease in the base rate by 1.5 p. p. The 2W and 3M CHIBOR decreased by 19 b. p. and 22 b. p. respectively. The decisions from June 18 and August 7 – did not cause any fluctuations on the money market rates. In July – there was the most significant reaction of the market since December 2005, the starting point of this analysis. After the NBM announcement that it decreases its base rate by 1 p. p., the 2W CHIBOR

---

<sup>10</sup> In 2007, the NBM has published on its website only the decision announcements from August 3, September 28 and November 1

<sup>11</sup> In 2008, the NBM has published only the decisions from January 31, March 13, May 30, November 27 and December 18.

<sup>12</sup> In 2009, the NBM published the decisions from February 5, June 19, July 17, August 7 and September 8

decreased by 141 b. p. This means that the markets were very surprised by the decision and the market rate registered such a jump downward. The 3M CHIBOR decreased by 31 b. p. The decision from September 8 – lead as well to a significant surprise on the market, as the 2W CHIBOR decreased by 78 b. p. on the day of the decision announcement and by 114 b. p. the next day, after the decision was announced. The 3M CHIBOR decreased after the decision announcement by 121 b. p. An explanation of these substantial money market interest rate changes after the policy announcements can be the fact that the NBM's communication practices do not fulfill the assumptions stated by Kotlán & Navrátil (2005) for the monetary policy to be predictable. As the TI for the NBM depicts, the NBM does not always contribute to the economic agents' understanding on how the decisions on policy rates are reached or on their ability to predict the sign and size of the interest rate change. Even though the NBM has explicit goals, it fails to explain its decision-making (during press conferences or through publishing of minutes) and by informing the public about the data set for the decision through an economic forecast.

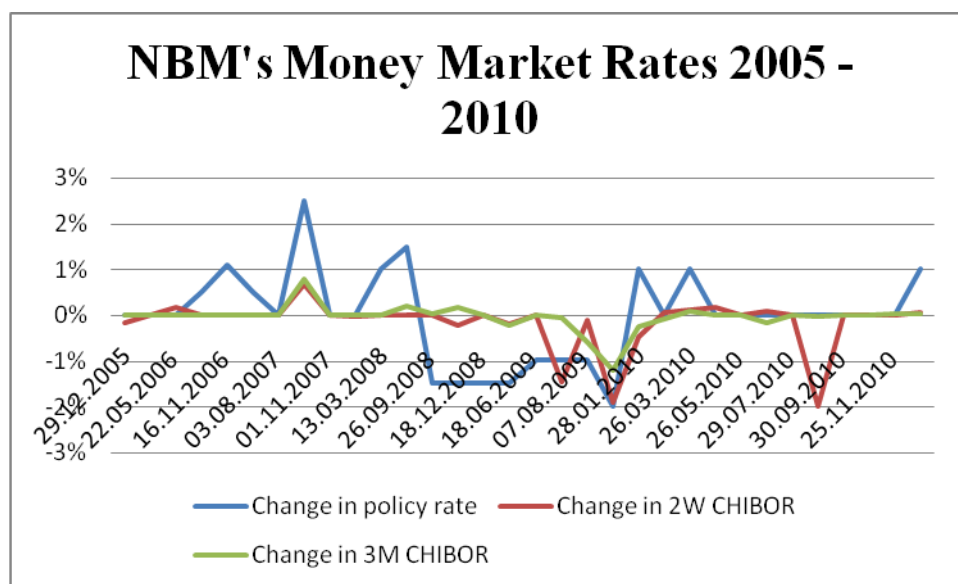
In 2010 – the decision announced on January 28 to increase the NBM base rate – did not lead to a significant change to the 2W CHIBOR, which decreased only by 1 b. p. The 3M CHIBOR decreased by 10 b. p. On February 25, when the NBM announced that it maintains the base rate on the main short-term monetary policy operations at the level of 6% per year – lead to no fluctuations of the 2W CHIBOR and to a decrease of the 3M CHIBOR by 9 b. p. The decision from March 26, to increase the base rate applied to the main monetary policy operations on short term by 1 p. p. – lead to an increase of the 2W and of the 3M CHIBOR by 11 b. p. and 7 b. p. respectively after the decision announcement. On May, 26 – the NBM announced that it maintains the base rate at the same level announced on April 29. The markets expected this decision and did not react in surprise, as more days (9 for 2W and 12 for 3M) after the decision was taken – both the 2W and the 3M CHIBOR kept the same value. The decision from June 24, when the NBM announced that it maintains the same level of 7 % annually of the base rate, the markets reacted by an increase in the 2W CHIBOR by 10 b. p. and to a decrease in the 3M CHBIR by 17 b. p. After the decisions from July 29, August 26, September 30, October 28, November 25 and December 30 – the money market rates (2W and 3M CHIBOR) did not register significant changes in their values: nor before the decision, neither after it.

In conclusion, there are two aspects that need to be mentioned. First, after monitoring the effects of the NBM's policy decision announcements on the money market rates fluctuations before

and after the decision announcement, it can be stated in some cases, the NBM registered substantial money market interest rate changes after the policy announcements. Fluctuations of 141 b. p. in the value of the 2W or of 121 b. p. in the 3M CHIBOR – are an evidence of this fact. As stated before, an explanation of these substantial changes might be the fact that the NBM is not always managing at communicating with the public the way it conducts its monetary policy and as a result, the public reacts in surprise when the NBM announces its policy rate decisions. Second, by analyzing the Graph 1 picturing the changes of the policy decisions and the responses of the short-term markets rates – an observed trend is how little the money market rates respond to the policy rate changes (except for the year 2009). This could mean that the monetary policy transmission through the money market does not work well and given the high level of spread between the money market rates and the

**Figure 3.** NBM's Money Market Rates 2005 - 2010

policy rates, which is present in Moldova (unlike in the Czech Republic), this explanation may be plausible.



Source: Own computations

## 7.2 Czech National Bank

For the CNB, the money market information and the yearly history of PRIBOR 2W and 3M rates, published on the CNB website – have been analyzed. The CNB has published information on the money market rates since 1992, thus there is information for 2005 – 2010 period. Also, an

important input for this analysis represented the Minutes of the CNB's Bank Board published on the CNB's website.

In January 2005, after the CNB announced that it lowers the 2W repo-rate and the Lombard rate, the markets reacted by a reduction in the 2W PRIBOR rate by 34 b. p., while the 3M PRIBOR decreased by 20 b. p. The decision from April 28 to lower the two-week repo rate, the discount rate and the Lombard rate by 0.25 p.p. – lead to a decrease in the 2W PRIBOR by 24 b.p., while the 3M PRIBOR decreased by 23 b. p. On May 26, 2005 – the CNB decided to maintain the same level of the 2W repo-rate. Looking at the behavior of the markets – they were not very surprised by this decision, as the 2W and 3M PRIBOR decreased only by 1 b. p. on the day of decision announcement, as compared to the day before. The decisions from February 24, March 31, June 30, July 28, August 25, September 29, October 27, November 24 and December 22 – did not cause significant changes in the 2W and 3M PRIBOR rates.

In January, 2006 – after he CNB announced that it maintains the same level of the 2 weeks repo-rate, the markets reacted slightly by a decrease in the 3M PRIBOR by 4 b. p. on the day of the decision announcement, as compared to the day before. The decision from February 23 to leave the two-week repo rate unchanged at 2%, lead to an increase in the 2W PRIBOR by 9 b.p. and in the 3M PRIBOR by 11 b. p. The decisions from March 30, April 27, May 25, June 29, July 27, August 31, October 26, November 30, December 20 – did not lead to significant changes if the 2W and 3M PRIBOR rates. On September 27, when the CNB decided to raise the two-week repo rate by 0.25 p.p. – the PRIBOR 2W reacted by a slight increase on the next day by 8 b. p.

In 2007, after the CNB Board meetings and announcements from January 27, March 1, March 29, May 31, June 28, September 27, October 25 and December 19 – the markets did not change the 2W and 3M PRIBOR rates, so there was no sign of surprise. After the decision from April 26 – to leave the two-weeks repo-rate unchanged, only the 3M PRIBOR rate reacted by a slight increase of 3 b. p. The decision from July 26, where the CNB announced that it increases its two-week repo rate by 0.25 p.p. – the 2W PRIBOR remained unchanged, while the 3M PRIBOR decreased by 6 b. p. After the decision from August 30, when the CNB decided that it increases the two-week repo rate by 0.25 p. p. – the markets' reaction was more visible, as the 2W PRIBOR increased by 20 b. p. on the next day. After the same decision, the 3M PRIBOR increased by 6 b. p. The decision from November 29 had as well a more visible impact on the money market rates. After the decision to increase the CNB two-week repo rate by 0.25 p.p. – the 2W PRIBOR rate increased



by 5 b. p. from November 28 – November 29 and then again by 6 b. p. on November 30. The 3M PRIBOR rate increased by 8 b. p. from November 28 until November 29, the day of the decision announcement.

In 2008, after the CNB Board meetings and announcements from March 26, May 7, June 26 – the markets did not register changes in the 2W and 3M PRIBOR rates. The CNB Board announcement from February 7 – has caused the 2W PRIBOR rate to increase by 8 b. p.: with 6 b. p. on the day of the decision announcement and with 2 b. p. after the decision announcement. The 3M PRIBOR rate did not register a significant change. The decision from August 7 had as well a certain impact on the money market rates – as the 2W PRIBOR decreased by 16 b. p. The decision from September 25 – lead to an increase of the 2W and 3M PRIBOR rates by 4 b. p. and 7 b. p. respectively. The decision from November 6, when the CNB announced that it will lower the two-week repo rate by 0.75 p.p. – significantly surprised the markets, as the 2W PRIBOR rate decrease by 57 b. p. after the decision announcement. The 3M PRIBOR decreased as well by 22 b. p. after the decision announcement. On December 17, when the CNB announced that it lowers the two-week repo rate by 0.50 p. p. – the markets reacted again, by a decrease in the 2W PRIBOR by 10 b. p. on the day of announcement and by 15 b. p. the next day, after the decision announcement. The 3M PRIBOR decreased as well by 20 b. p. after the decision was made public.

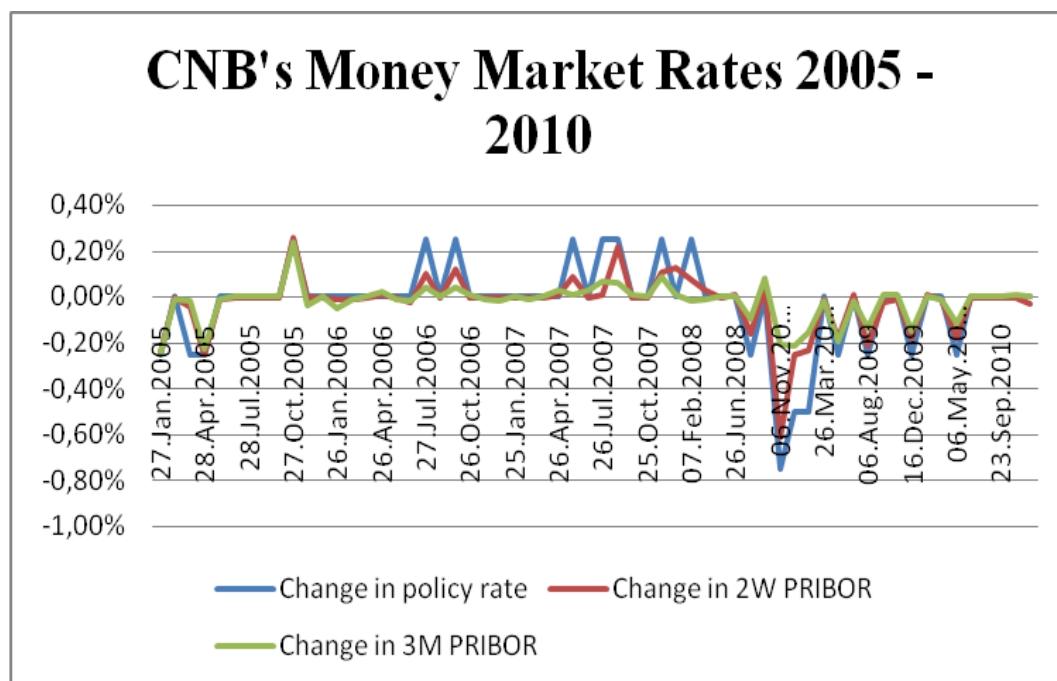
After the decision from February 5, 2009 – when the CNB announced that it lowers the two-week repo rate by 0.50 p.p. – the markets reacted again by an increase in the 2W PRIBOR by 16 b. p. and by a decrease in the 3M PRIBOR of 13 b. p. The decision from May 7, when the CNB decided to lower the two-week repo rate by 0.25 p.p. – lead to a reduction of the 2W PRIBOR by 17 b. p., and of the 3M PRIBOR by 14 b. p. after the decision announcement. After the decision from August 6, when the CNB again announced that it lowers its two-week repo rate by 0.25 p. p., the 2W PRIBOR decreased by 21 b. p. after the decision announcement, while the 3M PRIBOR decreased by 13 b. p. After the CNB announced on December 16 that it lowers the two-week repo rate by 0.25 p. p., the markets reacted by an increase in the 2W and in the 3M PRIBOR by 18 b. p. and 15 b. p. respectively. The decisions from March 26, June 25, September 24 and November 5 – did not register an impact on the money market rates.

In 2010, the CNB decisions from February 4, March 25, June 23, August 5, September 23, November 4 and December 22 – did not have a significant impact on the money market rates

considered in this thesis. After announcing on May 6 that it lowers the two-week repo rate by 0.25 p. p. – the 2W and the 3M PRIBOR decreased by 18 b. p. and by 12 b. p. respectively.

In conclusion, the changes of the 2W and 3M PRIBOR after monetary policy announcements were smaller in comparison to the 2W and 3M CHIBOR, in the analyzed period. This means that the market is not that surprised when the CNB's Bank Board announces its policy rate decisions. The number of CNB's surprises has declined over time. Holub (2008) states that the CNB surprised the market on a few occasions and it typically prefers to act when deemed necessary. This idea is supported by the Graph 2 picturing the CNB's money market rates. The CNB is Thus, the CNB is more transparent and the markets can anticipate a policy rate decision, the fluctuations of the money market rates being lower.

**Figure 4.** CNB's Money Market Rates 2005 - 2010



*Source: Own computations*

## Chapter 8

### **8. Improving NBM's communication practices based on the CNB experience**

Communication plays an important role in explaining to the public the instruments and the goals of the monetary policy, as well as the reasons behind the decisions made by the authorities (Winkler, 2000). The following section of the thesis will suggest some recommendations, based on the Czech experience, of how NBM should improve its communication practices, in order to further increase its transparency, clarity and predictability of monetary policy.

Since the CNB has become one of the most progressive institutions concerning the openness of monetary policy (Böhm et al., 2009), the recommendations for the NBM are based on the CNB.

To improve its Economic Transparency, the NBM should consider presenting on a quarterly basis the five variables important for the conduct of monetary policy: money supply, inflation, GDP, unemployment rate and capacity utilization. In 2010, the NBM published the information on GDP, unemployment rate, inflation and money supply; however the capacity utilization variable is missing. To the same extent, the NBM should put more effort into making public its methodological approach it uses when conducting the monetary policy. The forecasting equations for the key variables or models should be also disclosed to the public. In order to improve its Procedural Transparency, the NBM should follow the CNB's experience and give a comprehensive account of policy deliberations within a reasonable amount of time. This implies that the NBM should provide comprehensive minutes from the meetings of its CA. Another recommendation would be for the

NBM to disclose how each decision on the level of its main operating instrument was reached, by providing the individual voting records. At this stage, however, it might be as well enough to start publishing the voting ratio.

In order for the NBM to improve its Policy Transparency, it should disclose an explicit policy inclination after every policy meeting or an explicit indication of likely future policy actions, in order to provide the public with a basis for its expectations formation.

Along with the fact that the NBM publishes press releases after the meetings of the Council of Administration, the NBM could also organize press conferences after each meeting. During the press conference, the Governor would explain the main monetary policy decision and the implications of the decision on the economy. This practice is being used by the CNB – after each meeting of the Bank’s Board, the Governor organizes a press conference and addresses to the public, announcing a brief digest of the information which the Bank Board based its discussion on, and a list of the risks pertaining to the current forecast according to the Bank Board members. Another important practice used by the CNB, which could be also useful to the NBM – is the publishing of the video and audio versions of the press conference on the central bank’s web site, along with a power point presentation – where the central bankers summarize the policy decisions and the economic forecasts.

Another gap in the NBM’s communication practices is the fact that sometimes it publishes the press releases on the monetary policy decisions several days after the meeting of the CA. In March 2008, the CA took the policy rate decision at the meeting from May 23; however the press release announcing the decision was published on May 30, with a gap of 7 days. In September, 2009 – the CA gathered for the monthly meeting on September 3, while the policy rate decision was announced on September 8, with a gap of 5 days. In 2010, there was an improvement in this practice: the press release started to be published on the day when the decision was taken. An exception was only the month of March, when the CA held its meeting on March 25; however the press release was published on March 26. The fact that the press releases are published later than the decision was taken, confuses markets and may not lead to the desired effect of the policy rate decision. The NBM could as well improve its practice of announcing the policy decisions, following the CNB’s practice. On the CNB’s website, at the section “CNB Board Decisions”, the central bank announces the concrete time when the decision is going to be announced: “The Bank Board’s

interest rate decision is published after the end of monetary policy meeting, at 1 p.m. This is followed by a press conference at 2.30 p.m. The presentation given at the press conference is made available immediately after the press conference, usually at around 3 p.m. Since May 2007 audio recordings and since December 2009 also videos from the press conference have been made available on the CNB website about one hour after the press conference. The minutes of the meeting, reflecting the Bank Board members' discussion, are usually published 8 days later. Detailed transcripts of the monetary Bank Board meetings and the inputs for the Bank Board's decisions on monetary issues (the Situation Report on Economic and Monetary Developments and the Monetary Policy Recommendations) are published six years later."<sup>13</sup>

Another recommendation is directed to improve the NBM's website. Rather than publishing all the documents as an attachment, the information would be more accessible if it was directly published on the site, without the need of the user to download the file on the computer. It would be also very useful to have a specific section in the NBM's website devoted to the media and public relations. Another important practice observed on the CNB's website is that it regularly gathers all the media articles, TV or audio reportages featuring the CNB. This could be a good practice for the NBM as well. Also, while working on the thesis, no contact person responsible for the media and public relations has been discovered on the website. A good start in improving NBM's communication practices – would be namely publishing the name and contact information of the spokesperson.

Finally, a minor recommendation to the NBM inspired from the CNB's experience is organizing a NBM "Open Day" event. The CNB organizes this occasionally for the general public. From 9 a.m. to 4 p.m., the visitors have the opportunity to visit otherwise inaccessible areas of the Czech National Bank. The public is guided through a route within the CNB's headquarters, providing a comprehensive picture of monetary policy decision-making. In 2010, the visitors had as well the chance to see the conference room in which the Bank Board decides interest rates, and even the door of the Governor's office was open for the visitors. Even if the NBM has its museum, where the public can see commemorative coins and find out historical data about the Moldovan Leu, it

---

<sup>13</sup> CNB website, CNB Board Decisions [http://www.cnb.cz/en/monetary\\_policy/bank\\_board\\_minutes/](http://www.cnb.cz/en/monetary_policy/bank_board_minutes/)

could as well “import” the practice of organizing an “Open Day” event, in order to bring the public closer and increase the awareness about its day to day activity.

# Chapter 9

## 9. Concluding Remarks

The old paradigm of central banking secrecy has been largely replaced by one of openness (Jeanneau, 2009). The increasing literature on central bank communication reveals the fact that central banks around the world have put a lot of effort in recent years to improve their communication practices when explaining their decisions relating to the monetary policy. The trend toward greater central bank autonomy (Jeanneau, 2009) encouraged the tendency of public to demand more transparency, so as to make the central banks more accountable for their actions and decisions. (Eijffinger & Geraats, 2005).

The CNB's success in improving its transparency and predictability of monetary policy was taken as an example in this thesis, in order to compare the CNB's communication practices with the ones of the NBM and help the National Bank of Moldova in its efforts to improve its communication strategy.

In evaluating the transparency of monetary policy of the two central banks, a detailed analysis of various monetary documents and actual information disclosure has been done and a transparency index for both countries has been constructed. The transparency index revealed that both central banks have moved in the direction of greater transparency in the period 2005 – 2010. The CNB achieved in 2010 almost full central bank transparency. The NBM registered a gradual increase in its transparency since 2005 until 2010 and needs to put more effort into improving the quality and amount of the economic data it offers to the public and it has to be more specific on the model of the economy that it employs when constructing economic forecasts.

Analyzing how surprising are the monetary policy decisions in the two countries based on how much do short-term money market rates change after the decision's announcement, it has been found that CNB achieves a lower degree of market surprises related to its monetary policy decisions. The NBM situation is rather unclear, as the money market rates respond little to the policy rate changes (except of the year 2009). An explanation could be that due to the high level of spread between the money market rates and the policy rates, the monetary policy transmission through the money market does not work well.

Finally, based on the Czech experience, several recommendations have been suggested to the NBM, in order to support it in its endeavor to further increase the monetary policy transparency, clarity and predictability. Among these recommendations are: presenting on a quarterly basis the five variables important for the conduct of monetary policy, making public its methodological approach it uses when conducting the monetary policy, giving a comprehensive account of policy deliberations within a reasonable amount of time, organizing press conferences after each monetary policy meeting, be more prompt when announcing the policy rate decisions, and suggestions to improve the readability and accessibility of the official web site.



## References

1. Abbassi, P., Linzert, T. (2011): "The Effectiveness of Monetary Policy in Steering Money Market Rates During The Recent Financial Crisis." *European Central Bank Working Paper Series No. 1328*
2. Act on the Czech National Bank (1993): "Act No. 6/1993 Coll. on the Czech National Bank"
3. Amato, J. D., Morris, S., Shin, H. S. (2002): "Communication and Monetary Policy." *Oxford Review Of Economic Policy*
4. Bernanke, B. (2004): "Fedspeak." *Remarks at the meetings of the American Economic Association San Diego, California*
5. Blinder, A. S. (2008): "Talking about Monetary Policy: The Virtues (and Vices?) of Central Bank Communication." *Center for Economic Policy Studies, Princeton University. Working Paper No. 164*
6. Blinder A. S., Ehrmann, M., Fratzscher, M., De Haan, J., Jansen, D.J. (2008): "Central Bank Communication and Monetary Policy: a Survey of Theory and Evidence." *National Bureau of Economic Research. Working Paper No. 13932*
7. Böhm J., Král, P., Saxa, B. (2009): "Perception is Always Right: The CNB's Monetary Policy in the Media." *Czech National Bank Working Paper Series No. 10*
8. Bulíř, A., Šmídková, K., Kotlán, V., Navrátil, D. (2007): "Inflation Targeting and Communication: Should the Public Read Inflation Reports or Tea Leaves?" *Czech National Bank Working Paper Series No. 14*
9. Clare, A., Courtenay, R. (2001): "Assessing the Impact of Macroeconomic News Announcements on Securities Prices under Different Monetary Policy Regimes." *Bank of England Working Paper No. 125*
10. Cukierman, A. (2009): "The Limits of Transparency." *Economic Notes by Banca Monte dei Paschi di Siena SpA. Vol. 38, No. 1/2 – 2009, pp. 1 – 37*
11. Czech National Bank (CNB) (2004): "The CNB's inflation target from January 2006" *Czech National Bank, Prague, Czech Republic*
12. Czech National Bank (CNB) (2005): "Inflation Report" *January*
13. Czech National Bank (CNB) (2005a): "Inflation Report" *April*
14. Czech National Bank (CNB) (2005b): "Inflation Report" *July*

15. Czech National Bank (CNB) (2005c): “Inflation Report” *October*
16. Czech National Bank (CNB) (2005d): “Change in rates: 2W repo rate 2.25 %, discount rate 1.25 %, Lombard rate 3.25 %” *Press Release January, 27*
17. Czech National Bank (CNB) (2006): “Inflation Report” *January*
18. Czech National Bank (CNB) (2006a): “Inflation Report” *April*
19. Czech National Bank (CNB) (2006b): “Inflation Report” *July*
20. Czech National Bank (CNB) (2006c): “Annual Report”
21. Czech National Bank (CNB) (2007): “Inflation Report” *January*
22. Czech National Bank (CNB) (2007a): “Inflation Report” *April*
23. Czech National Bank (CNB) (2007b): “Inflation Report” *July*
24. Czech National Bank (CNB) (2007c): “Inflation Report” *October*
25. Czech National Bank (CNB) (2007d): “Annual Consumer Price Index Growth” *April*
26. Czech National Bank (CNB) (2007e): “Annual Consumer Price Index Growth” *July*
27. Czech National Bank (CNB) (2007f): “Annual Consumer Price Index Growth” *October*
28. Czech National Bank (CNB) (2007g): “The CNB’s new inflation target and changes in monetary policy communication.” *CNB Press Conference, March, 8 2007*
29. Czech National Bank (CNB) (2007h): “The CNB’s new inflation target and changes in monetary policy Communication.” *CNB Press Conference, March 8, 2007*
30. Czech National Bank (CNB) (2007i): “Annual Report”
31. Czech National Bank (CNB) (2008): “Inflation Report” *I*
32. Czech National Bank (CNB) (2008a): “Inflation Report” *III*
33. Czech National Bank (CNB) (2008a): “Annual Report”
34. Czech National Bank (CNB) (2009): “Annual Report”
35. Czech National Bank (CNB) (2009a): “Inflation Report” *II*
36. Czech National Bank (CNB) (2009b): “Inflation Report” *IV*

37. Czech National Bank (CNB) (2010): “Minutes of the Bank Board Meeting on 4 February 2010” *CNB Board Decisions*
38. Czech National Bank (CNB) (2010a): “3rd Situation Report on Economic and Monetary Developments” *Press Conference on the CNB Bank Board* May 6
39. Czech National Bank (CNB) (2010b): “Inflation Report” *IV*
40. Czech National Bank (CNB) (2010c): “Inflation Report” *III*
41. Czech National Bank (CNB) (2010d): “Monetary policy of the Czech National Bank. Principles, procedures, instruments.” *Fact Sheet*
42. Czech National Bank (CNB) (2003): “The Czech National Bank’s Forecasting and Policy Analysis System.” Edited by Warren Coats, Douglas Laxton and David Rose
43. Demertzis, M., Viegi, N. (2008): “Matching” Expectations to the Target: The Role of Communication in Monetary Policy” *De Nederlandsche Bank and University of Amsterdam, University of Cape Town*
44. Dillén, H., Nilsson, J. (1998): “Transparency, uncertainty and monetary policy” *Economics Department, Sveriges Riksbank*
45. Dincer, N., Eichengreen, B. (2007): “Central Bank Transparency: Where, Why, and With What Effects?” *National Bureau of Economic Research, Working Paper 13003*
46. Dincer, N., Eichengreen, B. (2009): “Central Bank Transparency: Causes, Consequences and Update.” *National Bureau of Economic Research*
47. “Does It Pay To Be “Talkative”?” *National Bank of Poland*
48. Ehrmann, M., Fratzscher, M. (2004): “Central Bank Communication: Different Strategies, Same Effectiveness?” *European Central Bank*
49. Ehrmann, M., Fratzscher, M. (2005): “How should Central Banks Communicate?” *European Central Bank Working Paper Series, No. 557*
50. Eijffinger, S., Geraats, P. M. (2005): “How Transparent Are Central Banks?” *University of Cambridge*
51. Eusepi, S., Preston, B. (2007): “Central Bank Communication and Expectations Stabilization.” *National Bureau of Economic Research. Working Paper No. 13259*

52. Filáček, J., Komárek, L., Král, P. (2007): “Why Central Bankers Should Disclose Interest Rate Forecast.” *Finance a úvěr – Czech Journal of Economics and Finance*. No. 11-12
53. Filardo, A., Guinigundo, D. (2008): “Transparency and Communication in Monetary Policy: A Survey of Asian Central Banks.” *Bank for International Settlements, Bangko Sentral ng Pilipinas*
54. Fracasso, A., Genberg, H., Wyplosz, C. (???) “How Do Central Banks Write? An Evaluation of Inflation Targeting Central Banks” *International Center for Monetary and Banking Studies*
55. Holmes, D. R. (2009): “Economy of Words.” *Cultural Anthropology*, Vol. 24, Issue 3, Pp. 381–419
56. Holub, T. (2006): “CNB’s New Forecast” *Monetary and Statistics Department, Presentation exposed during the Meeting with Analysts, Czech National Bank; August 4, 2006*
57. Holub, T. (2008): “Trends in Monetary Policy Transparency. Comments and the Czech experience.” *Presentation exposed at the Bank of Canada, May 26, 2008, Ottawa, Canada*
58. Jeanneau, S. (2009): “Communication of monetary policy decisions by central banks: what is revealed and why.” *Bank For International Settlements*. No. 47
59. Kotlán, V., Navrátil, D. (2005): “The CNB’s Policy Decisions – Are They Priced in by the Markets?” *Research and Policy Notes; CNB*
60. Malik, W. S., Din, M. (2008): “Monetary Policy Transparency in Pakistan: An Independent Analysis” *Pakistan Institute of Development Economics, Islamabad*
61. Mishkin, F. S. (2004): “Can Central Bank Transparency Go Too Far?” *The Future of Inflation Targeting. Reserve Bank of Australia*
62. Mohan, R. (2009): “Communications in Central Banks: A Perspective.” *Stanford Center for International Development Working Paper No. 408*
63. National Bank of Moldova (2006): “Law on the National Bank of Moldova.” *The Parliament of the Republic of Moldova, Chisinau*
64. National Bank of Moldova (NBM) (2005): “Monetary and Foreign Exchange Policy of the National Bank of Moldova for 2005”, *Chisinau, Moldova*
65. National Bank of Moldova (NBM) (2006): “Monetary and Foreign Exchange Policy of the National Bank of Moldova for 2006”, *Chisinau, Moldova*

66. National Bank of Moldova (NBM) (2007): “Monetary and Foreign Exchange Policy of the National Bank of Moldova for 2007”, Chisinau, Moldova
67. National Bank of Moldova (NBM) (2008): “Monetary and Foreign Exchange Policy of the National Bank of Moldova for 2008”, Chisinau, Moldova
68. National Bank of Moldova (NBM) (2009): “Monetary and Foreign Exchange Policy of the National Bank of Moldova for 2009”, Chisinau, Moldova
69. National Bank of Moldova (NBM) (2010): “Monetary and Foreign Exchange Policy of the National Bank of Moldova for 2010”, Chisinau, Moldova
70. National Bank of Moldova (NBM) (2011): “Economic and Financial Data for the Republic of Moldova.” Chisinau, Moldova
71. National Bank of Moldova (NBM) (2005a): “Annual Report”, Chisinau, Moldova
72. National Bank of Moldova (NBM) (2006a): “Annual Report”, Chisinau, Moldova
73. National Bank of Moldova (NBM) (2007a): “Annual Report”, Chisinau, Moldova
74. National Bank of Moldova (NBM) (2008a): “Annual Report”, Chisinau, Moldova
75. National Bank of Moldova (NBM) (2009a): “Annual Report”, Chisinau, Moldova
76. National Bank of Moldova (NBM) (February 2005): “Rates on NBM Monetary Regulation Instruments.” *Press Release*, Chisinau, Moldova
77. National Bank of Moldova (NBM) (March 2005): “Rates on NBM Monetary Regulation Instruments.” *Press Release*, Chisinau, Moldova
78. National Bank of Moldova (NBM) (March 2005): “Rates on NBM Monetary Regulation Instruments.” *Press Release*, Chisinau, Moldova
79. National Bank of Moldova (NBM) (June 2005): “Rates on NBM Monetary Regulation Instruments.” *Press Release*, Chisinau, Moldova
80. National Bank of Moldova (NBM) (August 2005): “Rates on NBM Monetary Regulation Instruments.” *Press Release*, Chisinau, Moldova

81. National Bank of Moldova (NBM) (September 2005): "Rates on NBM Monetary Regulation Instruments." *Press Release*, Chisinau, Moldova
82. National Bank of Moldova (NBM) (December 2005): "Rates on NBM Monetary Regulation Instruments." *Press Release*, Chisinau, Moldova
83. National Bank of Moldova (NBM) (March 2006): "Rates on NBM Monetary Regulation Instruments." *Press Release*, Chisinau, Moldova
84. National Bank of Moldova (NBM) (June 2006): "Rates on NBM Monetary Regulation Instruments." *Press Release*, Chisinau, Moldova
85. National Bank of Moldova (NBM) (September 2006): "Rates on NBM Monetary Regulation Instruments." *Press Release*, Chisinau, Moldova
86. National Bank of Moldova (NBM) (November 2006): "Rates on NBM Monetary Regulation Instruments." *Press Release*, Chisinau, Moldova
87. National Bank of Moldova (NBM) (December 2006): "Rates on NBM Monetary Regulation Instruments." *Press Release*, Chisinau, Moldova
88. National Bank of Moldova (NBM) (September 2007): "Communiqué of the National Bank of Moldova." Chisinau, Moldova
89. National Bank of Moldova (NBM) (November 2007): "Communiqué of the National Bank of Moldova." Chisinau, Moldova
90. Nijathaworn, B. (2006): "Are There Limits to Transparency?" *Paper presented at the IMF Conference on Central Bank Communication, 23-24 January 2006, Mumbai, India.*
91. Petruš M. (2010): "CNB issues Inflation Report III/2010" *LexisNexis*
92. Rosa, C., Verga, G. (2006): "The Impact of Central Bank Announcements on Asset Prices in Real Time." *LSE Research Online*
93. Rozkrut, M., Rybiński, K. Sztaba, L., Szwaja, R. (2005): "Quest for Central Bank Communication.
94. Saxton, J. (1997): "Transparency and Federal Reserve Monetary Policy." *Joint Economic Committee Study*

95. Šmídková, K., Hrnčář, M. (1998): „Inflation Targeting in the Czech Republic“ Czech National Bank
96. Svensson, L. E. (2005): “Social Value of Public Information: Morris and Shin (2002) Is Actually Pro Transparency, Not Con.” *Princeton University*
97. Svensson, L. (2008): “What have economists learned about monetary policy over the past 50 years?” *Sveriges Riksbank*
98. Syrighas, G., Karamanou, P. (2004): “Monetary Policy and Central Bank Communication: the Case of Cyprus.” *Mediterranean Workshop Central Bank Governance*; Frankfurt
99. Thenuwara, H. N. (2006): “Communication Policy of Central Banks. The Case of Sri Lanka” Staff Studies. Journal of the Central Bank of Sri Lanka. *Vol. 36, No. 1&2, p. 1 – 14*
100. Winkler, B. (2000): “Which Kind of Transparency? On the Need for Clarity in Monetary Policy Making.” *ECB Working Papers Series*, No. 26
101. Woodford, M. (2003): “Interest and prices: foundations of a theory of monetary policy.” *Princeton University Press*
102. Woodford, M. (2005): “Central-Bank Communication and Policy Effectiveness.” *Columbia University*

# Appendix

## Transparency Index Questionnaire

This questionnaire contains the exact formulation of the central bank transparency index, based on Dincer & Eichengreen (2009). The Transparency Index is the sum of the scores for the answers to the fifteen questions below (min = 0, max = 15).

### 1. Political Transparency

Political transparency refers to openness about policy objectives. This comprises a formal statement of objectives, including an explicit prioritization in case of multiple goals, a quantification of the primary objective(s), and explicit institutional arrangements.

- a) Is there a formal statement of the objective(s) of monetary policy, with an explicit prioritization in case of multiple objectives?

No formal objective(s) = 0.

Multiple objectives without prioritization = 1/2.

One primary objective, or multiple objectives with explicit priority = 1.

- b) Is there a quantification of the primary objective(s)?

No = 0.

Yes = 1.



- c) Are there explicit institutional arrangements or contracts between the monetary authorities and the government?

No central bank, contracts or other institutional arrangements = 0.

Central bank without explicit instrument independence or contract = 1/2.

Central bank with explicit instrument independence or central bank contract (although possibly subject to an explicit override procedure) = 1.

## 2. Economic Transparency

Economic transparency focuses on the economic information that is used for monetary policy. This includes economic data, the model of the economy that the central bank employs to construct forecasts or evaluate the impact of its decisions, and the internal forecasts (model based or judgmental) that the central bank relies on.

- a) Is the basic economic data relevant for the conduct of monetary policy publicly available? The focus is on the release of data for the following five variables: money supply, inflation, GDP, unemployment rate and capacity utilization.

Quarterly time series for at most two out of the five variables = 0.

Quarterly time series for three or four out of the five variables = 1/2.

Quarterly time series for all five variables = 1.

- b) Does the central bank disclose the formal macroeconomic model(s) it uses for policy analysis?

No = 0.

Yes = 1.

- c) Does the central bank regularly publish its own macroeconomic forecasts?

No numerical central bank forecasts for inflation and output = 0.

Numerical central bank forecasts for inflation and/or output published at less than quarterly frequency = 1/2.

Quarterly numerical central bank forecasts for inflation and output for the medium term (one to two years ahead), specifying the assumptions about the policy instrument (conditional or unconditional forecasts) = 1.

## 3. Procedural Transparency

Procedural transparency is about the way monetary policy decisions are taken. It involves an explicit monetary policy rule or strategy that describes the monetary policy framework, an account of policy deliberations and how the policy decision was reached.

- a) Does the central bank provide an explicit policy rule or strategy that describes its monetary policy framework?

No = 0.  
Yes = 1.

- b) Does the central bank give a comprehensive account of policy deliberations (or explanations in case of a single central banker) within a reasonable amount of time?

No, or only after a substantial lag (more than eight weeks) = 0.  
Yes, comprehensive minutes (although not necessarily verbatim or attributed) or explanations (in case of a single central banker), including a discussion of backward and forward-looking arguments = 1.

- c) Does the central bank disclose how each decision on the level of its main operating instrument or target was reached?

No voting records, or only after substantial lag (more than eight weeks) = 0.  
Non-attributed voting records = 1/2.  
Individual voting records, or decision by single central banker = 1.

#### 4. Policy Transparency

Policy transparency means prompt disclosure of policy decisions. In addition, it includes an explanation of the decision, and an explicit policy inclination or indication of likely future policy actions.

- a) Are decisions about adjustments to the main operating instrument or target promptly announced?

No, or after a significant lag = 0.  
Yes, at the latest on the day of implementation = 1.

- b) Does the central bank provide an explanation when it announces policy decisions?

No = 0.  
Yes, when policy decisions change, or only superficially = 1/2.  
Yes, always and including forwarding-looking assessments = 1.

- c) Does the central bank disclose an explicit policy inclination after every policy meeting or an explicit indication of likely future policy actions (at least quarterly)?

No = 0.  
Yes = 1.

#### 5. Operational Transparency

Operational transparency concerns the implementation of the central bank's policy actions. It involves a discussion of control errors in achieving operating targets and (unanticipated) macroeconomic disturbances that affect the transmission of monetary policy. Furthermore, the

evaluation of the macroeconomic outcomes of monetary policy in light of its objectives is included here as well.

- a) Does the central bank regularly evaluate to what extent its main policy operating targets (if any) have been achieved?

No, or not very often (at less than annual frequency) = 0.

Yes, but without providing explanations for significant deviations = 1/2.

Yes, accounting for significant deviations from target (if any); or, (nearly) perfect control over main operating instrument/target = 1.

- b) Does the central bank regularly provide information on (unanticipated) macroeconomic disturbances that affect the policy transmission process?

No, or not very often = 0.

Yes, but only through short-term forecasts or analysis of current macroeconomic developments (at least quarterly) = 1/2.

Yes, including a discussion of past forecast errors (at least annually) = 1.

- c) Does the central bank regularly provide an evaluation of the policy outcome in light of its macroeconomic objectives?

No, or not very often (at less than annual frequency) = 0.

Yes, but superficially = 1/2.

Yes, with an explicit account of the contribution of monetary policy in meeting the objectives = 1.

**Table 8:** Change in NBM's policy rates and the corresponding changes in the 2W and 2M CHIBOR the day after and before the policy decision announcement

<b>Date</b>	<b>Change in policy rate</b>	<b>Change in 2W CHIBOR</b>	<b>Change in 3M CHIBOR</b>
29.12.2005	0%	-0,15%	0%
06.03.2006	0%	0%	0%
22.05.2006	0%	0,19%	0%
28.09.2006	0,50%	0%	0%
16.11.2006	1,10%	0%	0%
01.12.2006	0,50%	0%	0%
03.08.2007	0%	0%	0%
28.09.2007	2,50%	0,69%	0,78%
01.11.2007	0%	0%	0%
31.01.2008	0%	-0,03%	0%
13.03.2008	1%	0%	0%
30.05.2008	1,50%	0%	0,18%
26.09.2008	-1,50%	0%	0,03%
27.11.2008	-1,50%	-0,21%	0,15%
18.12.2008	-1,50%	0%	0%
05.02.2009	-1,50%	-0,19%	-0,22%
18.06.2009	-1%	0%	0%
17.07.2009	-1%	-1,45%	-0,06%
07.08.2009	-1%	-0,09%	-0,59%
08.09.2009	-2%	-1,92%	-1,21%
28.01.2010	1%	-0,46%	-0,26%
25.02.2010	0%	0,07%	-0,09%
26.03.2010	1%	0,11%	0,07%
29.04.2010	0%	0,17%	0%
26.05.2010	0%	0%	0%
24.06.2010	0%	0,10%	-0,17%
29.07.2010	0%	0%	0%
26.08.2010	0%	-0,02	-0,03%
30.09.2010	0%	0%	0%
28.10.2010	0%	0%	0%
25.11.2010	0%	0,01%	0,02%
30.12.2010	1%	0,08%	0,02%

**Table 9:** Change in CNB's policy rates and the corresponding changes in the 2W and 2M PRIBOR the day after and before the policy decision announcement

<b>Date</b>	<b>Change in policy rate</b>	<b>Change in 2W PRIBOR</b>	<b>Change in 3M PRIBOR</b>
27.Jan.2005	-0,25%	-0,24%	-0,25%
24.Feb.2005	0%	0%	-0,01%
31.Mar.2005	-0,25%	-0,04%	-0,02%
28.Apr.2005	-0,25%	-0,25%	-0,23%
26.May.2005	0%	-0,01%	-0,01%
30.Jun.2005	0%	0%	0%
28.Jul.2005	0%	0%	0%
25.Aug.2005	0%	0%	0%
29.Sep.2005	0%	0%	0%
27.Oct.2005	0,25%	0,26%	0,24%
24.Nov.2005	0%	0%	-0,04%
22.Dec.2005	0%	0%	0%
26.Jan.2006	0%	-0,01%	-0,05%
23.Feb.2006	0%	-0,01%	-0,01%
30.Mar.2006	0%	0%	0%
26.Apr.2006	0%	0,01%	0,02%
25.May.2006	0%	0%	-0,01%
29.Jun.2006	0%	-0,02%	-0,02%
27.Jul.2006	0,25%	0,10%	0,04%
31.Aug.2006	0%	0%	0%
27.Sep.2006	0,25%	0,12%	0,04%
26.Oct.2006	0%	0%	0,01%
30.Nov.2006	0%	0%	-0,01%
20.Dec.2006	0%	0%	-0,02%
25.Jan.2007	0%	0%	0%
01.Mar.2007	0%	0%	-0,01%
29.Mar.2007	0%	0%	0%
26.Apr.2007	0%	0,01%	0,03%
31.May.2007	0,25%	0,09%	0,01%
28.Jun.2007	0%	0%	0,03%
26.Jul.2007	0,25%	0,01%	0,07%
30.Aug.2007	0,25%	0,22%	0,06%
27.Sep.2007	0%	0%	0,01%
25.Oct.2007	0%	0%	0%
29.Nov.2007	0,25%	0,11%	0,09%
19.Dec.2007	0%	0,13%	0,01%
07.Feb.2008	0,25%	0,08%	-0,02%
26.Mar.2008	0%	0,03%	-0,01%
07.May.2008	0%	0%	0%
26.Jun.2008	0%	0,01%	0%

07.Aug.2008	-0,25%	-0,16%	-0,10%
25.Sep.2008	0%	0,05%	0,08%
06.Nov.2008	-0,75%	-0,61%	-0,21%
17.Dec.2008	-0,50%	-0,25%	-0,22%
05.Feb.2009	-0,50%	-0,23%	-0,16%
26.Mar.2009	0%	-0,01%	-0,02%
07.May.2009	-0,25%	-0,18%	-0,20%
25.Jun.2009	0%	0,01%	-0,02%
06.Aug.2009	-0,25%	-0,21%	-0,14%
24.Sep.2009	0%	-0,02%	0,01%
05.Nov.2009	0%	-0,01%	0,01%
16.Dec.2009	-0,25%	-0,18%	-0,15%
04.Feb.2010	0%	0,01%	0%
25.Mar.2010	0%	-0,01%	-0,01%
06.May.2010	-0,25%	-0,18%	-0,12%
23.Jun.2010	0%	0%	0%
05.Aug.2010	0%	0%	0%
23.Sep.2010	0%	0%	0%
04.Nov.2010	0%	0%	0,01%
22.Dec.2010	0%	-0,03%	0%