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# SUSTAINABILITY OF THE MONETARY POLICY STRATEGY OF THE NBS

#### Abstract

Monetary policy is a very important part of economic policy. However it is not omnipotent in solving problems in the financial and economic sphere. There are a lot of obstacles in monetary policy conduct. The most important of them are: gray economy and time-lag problem.

Central banks, through changing money supply, cannot directly influence basic goals (economic growth, price stability, high employment). Therefore, they are forced to use operational and intermediate targets if they want to raise their efficiency. On the central banks' menu, there are many alternatives: monetary aggregates targeting, interest rates targeting, inflation rate targeting, exchange rate targeting, nominal income targeting. Which strategy would be chosen depends on many factors: economic and financial systems' stability, the achieved economic growth, central banks' level of independence, priority goals of economic policy, monetary policy makers' credibility.

The aim of this paper is to show the efforts of the monetary authorities in Serbia to choose the optimal monetary strategy, and we will try to answer the question of whether the chosen strategy is sustainable in our circumstances.

Key words: Sustainability, Monetary Strategy, The NBS, Targets, Inflation Targeting

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## **INTRODUCTION**

In recent years, a growing consensus has emerged for price stability as the overriding, long-run goal of monetary policy. The increased importance of this goal was reflected in the December 1991 Treaty of European Union, known as the Maastricht Treaty. This treaty created the European System of Central Banks, which functions very much like the Federal Reserve System. The statute of European System of Central Banks sets price stability as the primary objective of this system and indicates that the general economic policies of the EU are to be supported only if they are not in conflict with price stability. However, despite this consensus, the following question still remains: how should monetary policy be conducted to achieve the price stability goal?

A central feature of all monetary regimes is the use of a nominal anchor in some form. A nominal anchor is a constraint on the value of domestic money, and in some form it is a necessary element in successful monetary policy regimes. Namely, a nominal anchor provides conditions that make the price level uniquely determined, which is obviously necessary for price stability. However, a nominal anchor can be thought of more broadly as a constraint on discretionary policy that helps weaken the time-inconsistency problem so that in the long run, price stability is more likely to be achieved. The time-inconsistency problem arises because discretionary policy at each point in time can lead to poor long run outcomes.

Although there are institutional differences in the ways in which central banks conduct monetary policy, there are two important similarities in recent practices. First, most central banks in industrial countries have increasingly used short-term interest rates as the operating target through which goals are pursued. Second, many central banks are focusing more on ultimate goals such as low inflation than on particular intermediate targets.

A target variable is one whose value the policy maker wants to change (Handa 2000, 286), or, targets are variables that the central bank can influence directly and that help achieve monetary policy goals (Hubbard 2005, 480). For example, the Fed has set six monetary policy goals that are intended to promote a well-functioning economy: (1) price stability, (2) high employment, (3) economic growth, (4) financial market and institution stability, (5) interest rate stability, and (6) foreign-exchange market stability. The targets can be ultimate or final goals, intermediate ones or operating ones. Since a given variable can fall into any one of these categories, there is no hard and clear-cut separation among these categories. An operating target is one on which the central bank can directly or almost directly operate through the instruments at its disposal (Đurović-Todorović et al. 2006, 183).

In the selection and use of goals, guides and operating targets by the monetary authorities, several questions arise:

- can the central bank achieve the desired levels of the operating targets through the instruments at its disposal?
- are the relationships between the ultimate goal variable, the intermediate and operating targets, and the policy instruments stable and predictable?
- what are the lags in the relationships, and it they are long, can the future course of the economy be reasonably well predicted?

### MENU OF MONETARY POLICY REGIMES

Experience in many countries shows that there are more variables which have been used for monetary policy targets. The target variables usually suggested for monetary policy are (Đurović-Todorović et al. 2006, 184):

- monetary or reserve aggregates;
- interest rates;
- exchange rate;
- the price level or the inflation rate and
- nominal GDP.

In many countries, such as the USA, Japan or the European Monetary Union, exchange rate targeting is not an option because the country or bloc of countries is too large or has no obvious country whose currency can serve as the nominal anchor. Thus these countries must turn to other monetary policy strategies, one of which is *monetary targeting*.

A major advantage of monetary targeting is that it enables a central bank to adjust its monetary policy to cope with domestic considerations. Information on whether the central bank is achieving its target is known almost immediately. Thus, monetary targets can send almost immediate signals to both the public and market about the stance of monetary policy and the intentions of the policymakers to keep inflation in check. Monetary targets have been able to promote almost immediate accountability for monetary policy to keep inflation low and so help constrain the monetary policymaker from falling into the time-inconsistency trap.

If the relationship between the monetary aggregate and the goal variable is weak, then monetary aggregate targeting will not work. The weak relationship implies that hitting the target will not produce the desired outcome on the goal variable and thus the monetary aggregate will no longer provide an adequate signal about the stance of monetary policy.

Two countries that have pursued monetary targeting quite seriously are Germany and Switzerland. The success of monetary policy in these two countries in controlling inflation is the reason that monetary targeting still has strong advocates and is part of the official policy strategy for the ECB. Monetary targeting was less successful in the United States, Canada and the United Kingdom, partially because it was not pursued seriously but also because the relationship between monetary aggregates and goal variables, such as inflation or nominal income, broke down (Bernanke et al. 1992, 189).

There are two key lessons from monetary targeting in Germany and Swizerland. First, a targeting regime can restrain inflation in the longer run, even when the regime permits substantial target misses. Second, the key reason why monetary targeting has been reasonably successful in these two countries, despite frequent target misses, is that the objectives of monetary policy are clearly stated and both central banks actively engage in communicating the strategy of monetary policy to the public, thereby enhancing transparency of monetary policy and accountability of the central bank. At the end there are economists who suggested that German and Swiss monetary policy is actually closer in practice to inflation targeting than it is to Friedman-like monetary targeting, and thus might best be thought of as hybrid inflation targeting (Bernanke et al. 1992, 107).

*The interest rates* are currently the favourite operating targets and instruments of many central banks. It has been, historically, the most common target of monetary policy. A measure commonly used for this purpose has been the Treasury bill rate (Handa 2000, 294). This rate is a reflection of other interest rates in the economy. More recently, the USA, UK and Canada have used an overnight loan rate as an operating target.

There are two basic objections to the use of short-term nominal interest rates as the guides or intermediate targets of monetary policy. First, the observed interest rates are equilibrium rates so that changes in them could reflect either changes in demand or supply conditions or both. Changes in the equilibrium interest rates do not by themselves provide adequate information as to the causes of their rise and therefore as to the policy actions that should be undertaken. The second basic objection to the use of interest rates as guides to monetary policy arises from one's belief in the structure of the economy. In financially developed economies, the central banks believe that the interest rates are a major indicator of the performance of the economy, and tend to use them as the preferred guide and operating target of monetary policy.

A problem with using interest rates as an operational target is that the central bank can determine the general level of interest rates but not equally well the differentials among them. Spreads between different interest rates depend upon market forces and can be quite insensitive to the central bank's discount rate.

An interest rate target is to be preferred if the dominant source of shifts in aggregate demand is from money demand or supply shifts, while a monetary aggregate target is to be preferred if the dominant source of shifts is in the IS variables. These are not variables on which the central bank can operate directly, so interest rates usually remain the operating targets of monetary policy. *Exchange rate targeting* is a monetary policy regime with a long history. It can take the form of fixing the value of the domestic currency to a commodity such as gold or for currency some of low-inflation country. Exchange rate targeting has several advantages (Mishkin 1999, 581). First, the nominal anchor of an exchange rate target fixes the inflation rate for internationally traded goods, and thus directly contributes to keeping inflation under control. Second, if the exchange rate target is credible, it anchors inflation expectations to the inflation rate in the anchor country to whose currency it is pegged. Third, with a strong commitment mechanism, an exchange rate target provides an automatic rule for the conduct of monetary policy that helps mitigate the time inconsistency problem. Fourth, an exchange rate target has the advantage of simplicity and clarity, which make it easily understood by the public.

France and the United Kingdom successfully used exchange rate targeting to lower inflation by tying the value of their currencies to the German mark. This regime has also been an effective means of reducing inflation quickly in emerging market countries.

Despite the inherent advantages of exchange rate targeting, it is not without several serious criticisms (Obstfeld et al. 1995, 73–96). First is that, with open capital markets, an exchange rate target results in the loss of independent monetary policy, since the targeting country loses the ability to use monetary policy to respond to domestic shocks that are independent of those hitting the anchor country. A striking example of these problems occurred when Germany reunited in 1990. This shock (rises in interest rates) to the anchor country was transmitted directly to the other countries whose currencies were pegged to the mark. This regime has additional disadvantage that it removes the signal that the foreign exchange market provides about the stance of monetary policy on a daily basis. Another potential danger from an exchange rate target is that by providing a more stable value of the currency, it might lower perceived risk for foreign investors and thus encourage capital inflows.

The events in East Asia and Mexico, in which the weakness of the banking sector and speculative attack on the currency tipped their economies into full-scale financial crises, illustrate how dangerous exchange rate targeting can be for emerging market countries. But in countries whose political and monetary institutions are particularly weak and therefore have been experiencing continued bouts of hyperinflation, exchange rate targeting may be the only way to break inflationary psychology and stabilize the economy. In this situation, exchange rate targeting is the stabilization policy of the last resort (Mishkin 1999, 586).

New Zealand was the first country to formally adopt *inflation targeting* in 1990, with Canada following in 1991, the United Kingdom in 1992, Sweden in 1993, Finland in 1993, Australia and Spain in 1994. This strategy adopted some transition countries, i.e. Czech Republic, Poland and Hungary. Inflation targeting is characterized by

- an explicit quantitative inflation target,
- a framework for policy decisions, inflation-forecast targeting, which uses an internal conditional inflation forecast as an intermediate target variable,
- a high degree of transparency and accountability (Svensson 1999, 624).

Inflation targeting involves several elements (Mishkin 1999, 501): (1) increased transparency of the monetary policy strategy through communication with the public and the markets; (2) increased accountability of the central bank for attaining its inflation objectives; (3) public announcement of medium-term numerical targets for inflation; (4) an institutional commitment to price stability as the primary, long-run goal of monetary policy; and (5) an information-inclusive strategy, with a reduced role for intermediate targets such as money growth.

In contrast to exchange rate targeting, but like monetary targeting, inflation targeting enables monetary policy to focus on domestic considerations and to respond to shocks to the domestic economy. This strategy also has the advantage that velocity shocks are largely irrelevant because the monetary policy strategy no longer relies on a stable money-inflation relationship. Further, inflation targeting is readily understood by the public and is thus highly transparent. Because an explicit numerical inflation target increases the accountability of the central bank, inflation targeting also has the potential to reduce the likelihood that the central bank will fall into the time-inconsistency trap in which it tries to expand output and employment by pursuing overly expansionary monetary policy. Inflation targeting also has potential for reducing political pressures on the central bank to pursue inflationary monetary policy. Another key feature of inflation targeting regimes is that they do not ignore traditional stabilization goal.

The performance of inflation targeting strategy has been quite good. Countries which use this regime seem to have significantly reduced both the rate of inflation and inflation expectations beyond that which would probably have occurred in the absence of inflation targets.

Although inflation targeting does appear to be successful in moderating and controlling inflation, it is not without potential problems. In contrast to exchange rate and monetary targeting, inflation is not easily controlled by the monetary authorities. Another potential problem with inflation targeting is that, because of the long lags of monetary policy, inflation outcomes are revealed only after a substantial lag (Đurović-Todorović et al 2008, 48). A common concern raised about inflation targeting is that it will lead to low and unstable growth in output and employment. Some economists have criticized inflation targeting because they believe that it imposes a rigid rule on monetary policymaker that does not allow them enough discretion to respond to unforeseen circumstances (Friedman et al. 1996, 112). With the shifts in the velocity of the monetary aggregates in the 1980s, the relationship between these aggregates and nominal income became unstable, so that such aggregates could not be reliably used as the targets of monetary policy (Handa 2000, 297). On the other hand, the concern that a sole focus on inflation may lead to larger output fluctuations has led some economists to propose a variation on inflation targeting in which central banks would target the growth rate of *nominal GDP* (real GDP times the price level) rather than inflation (Mishkin 2004, 508). Relative to inflation, nominal GDP growth has the advantage that it does put some weight on output as well as prices in the policymaking process.

Nominal GDP targeting has several advantages (Đurović-Todorović et al, 2006, 201). First, a nominal GDP rate forces the central bank or the government to announce a number for potential GDP growth. It may lead to an accusation that the central bank or the targeting regime is anti-growth, when the opposite is true, because a low inflation rate is a means to promote a healthy economy with high growth. Second, information on prices is more timely and more frequently reported than data on nominal GDP. Third, the concept of inflation in consumer prices is much better understood by the public than the concept of nominal GDP, which can easily be confused with real GDP.

Finally, inflation targeting allows considerable flexibility for policy in the short run, and elements of monetary policy tactics based on nominal GDP targeting could easily be built into an inflation targeting regime. Thus it is doubtful that, in practice, nominal GDP targeting would be more effective than inflation targeting in achieving short run stabilization.

So, while a nominal income target has the advantage of eliminating the impact of demand shocks on the economy, it does not necessarily provide a preferable solution when there are supply shocks. Further, nominal income targeting is normally an intermediate goal and not an ultimate goal, so it is a desirable procedure only if there is a stable and predictable relationship between nominal income and the final goal variables of stable prices and full employment output.

## TYPES OF INFLATION TARGETING REGIMES

In the early 1990s a large number of industrial countries (New Zealand, Canada, UK, etc.), later on followed by some transition countries (Czech Republic, Poland, Hungary), abandoned monetary policy regimes based on intermediate or multiple objectives to take up inflation targeting and leave all other objectives subordinate to stable inflation.

In literature, we may come across different and contradictory classifications of inflation targeting regimes. Most frequently, however, inflation-targeting regimes are classified as full-fledged or explicit and nonfull-fledged being either implicit or partial. A very serious job is to identify a number of variables that provide important information to forecast future inflation (De Grauwe 2007, 204). These variables include wages, the exchange rate, bond prices and the yield curve, various measures of real activity, fiscal policy indicators, price and cost indices and business and consumer surveys (ECB Monthly Bulletin 1999, 49).

Experience of other countries has shown that successful implementation of inflation targeting as a monetary policy strategy is incompatible with fiscal dominance and requires coordination between fiscal and monetary authorities, developed financial system, instrument independence of the central bank, understanding of the effects of different monetary policy transmission mechanism channels, well-developed methodology and technical capacity for inflation forecasting, as well as monetary policy transparency to enable central bank accountability and credibility.

The above list of requirements needs to comply with *full-fledged IT* if is to be pursued. In most cases, countries switch to such a regime once majority of the above requirements are met, the key requirements, however, being formal announcement of all elements of the new framework and abandoning of the fixed exchange rate policy.

Chile and Israel targeted both inflation and exchange rate (crawling exchange rate band). The fact that they kept widening the exchange rate fluctuation band, however, made it clear after a while that they were actually giving priority to inflation targeting.

Despite the fact that announcement of the inflation objective was first made in 1990, full-fledged inflation targeting in Chile began in September 1999, when the fixed exchange rate policy was officially abandoned. Israel announced its inflation objective for the first time in 1991, but did not formally adopt full-fledged IT until June 1997 when the exchange rate fluctuation band was widened to such an extent that conflict between the achievement of objectives for inflation and the exchange rate became negligible.

Given that compliance with criteria and the manner of their interpretation depends above all on the idiosyncrasies of individual economies, and that most often, the criteria are not easily quantifiable or strictly adhered to, it is difficult to draw the line between countries pursuing full-fledged IT and those still going through its interim phases. It is even more difficult to draw this line in case of transition countries. The Czech Republic, for instance, has been known to pursue FFIT from the very start of inflation targeting (1997) although its financial system was underdeveloped at the time, monetary authorities uncertain about the strength and workings of some transmission channels, and most macroeconomic projections were short-term in character. It is also difficult to make a distinction between non-full-fledged IT regimes – implicit and partial inflation targeting. *Implicit inflation targeting* can be defined as a regime under which a country sets its inflation objectives, but does not formally announce inflation targeting regime due to non-compliance with the majority of other requirements. For instance, we may say that Turkey was pursuing an implicit inflation-targeting regime prior to 2006. In this period, Turkish monetary authorities set and announced inflation objectives to anchor inflation expectations and convince the public that the period of hyperinflation was over.

Formal announcement of the new monetary policy regime is considered to mark the beginning of transition awards full-fledged inflation targeting. Transition ends once most requirements for switching to fullfledged IT are met and fixed exchange rate policy abandoned or exchange rate fluctuation band significantly widened. There are no rules as to the duration of transition period – it may be very long (Chile, Israel), or very short (Brazil, Czech Republic, Poland, South African Republic).

*Partial inflation targeting* involves a formal announcement of switching to inflation targeting as a monetary strategy despite noncompliance with all requirements for full-fledged inflation targeting, given that it does not pursue a flexible exchange rate policy, but a fixed one. Hungary may be classified as a partial inflation targeting country, which, for the time being, has no plans of switching to full-fledged inflation targeting. Many other central banks, such as the National Bank of Poland, practiced partial inflation targeting before shifting to fullfledged inflation targeting regime.

An alternative classification frequently found in literature is the following: full-fledged IT, eclectic IT and IT lithe. The first two regimes are practiced by countries with high credibility, the difference, however, being in the fact that eclectic inflation targeters do not officially declare inflation targeting, as is the case with the European Central Bank. Inflation targeting lithe is pursued by central banks with relatively low credibility, for whom achieving low inflation is not the principal objective.

In Serbia there are four phases in implementation of inflation targeting:

Preparation for IT (from February 2006 – September 2006),

*Implicit IT* – setting numeric objective and informal announcement (from September 2006 – December 2008,

*Partial IT* – formal announcement of IT adoption and target (from January 2009 to future) and

Full-fledged IT – list of necessary preconditions (perspective).

# EXPERIENCES OF THE NBS WITH CHOOSING MONETARY STRATEGY

The basic purpose of the National Bank of Serbia is to provide monetary and financial stability. Monetary stability means a low, stable and predictable inflation and confidence in the currency. Financial stability means a sound financial system in which banks and other financial organizations function well and responsibly safeguard their clients' money.

The highest contribution that monetary policy can make to economy consists in low, stable and predictable inflation. However, in the conditions of high dollarization (euroization) of economy, monetary policy has limited scope for achieving this objective. Key components of monetary policy in Serbia are the following: (a) managed floating exchange rate and (b) controlled inflation. A more flexible exchange rate has already been introduced earlier this year as the first step in this program and also as a response to problems under large capital inflows. In particular, the capital inflows have exposed the difficulties in simultaneous targeting of low inflation and external balance and complicated implementation of autonomous monetary policy under a fixed or highly managed FX regime pursued before. As a result of these measures, the exchange rate moves in response to the monetary policy actions and inflation began to decline in response to the monetary policy measures taken earlier this year.

On August 30<sup>th</sup> 2006, the Monetary Policy Committee of the National Bank of Serbia adopted new measures and approved of new principles of monetary policy conduct aimed at achieving inflation objectives. The main aims of policy makers in Serbia are:

- to build an environment of low and stable inflation compatible with EU accession criteria,

- to strengthen the use of and trust into the domestic currency,

- to increase the flexibility of adjustment against temporary domestic and external shocks and changes in economic fundamentals that are expected as Serbia approaches the EU and improves its income levels.

A monetary policy actively responding to shocks threatening low inflation is needed to achieve price stability in Serbia, while fluctuations of nominal exchange rate should provide the main buffer of adjustment against these shocks. In the coming years, Serbian economy is likely to experience massive structural changes, some of which can put upward pressure on the prices. In addition, the progressive opening of Serbia and a high degree of euroization make transmission of inflation shocks particularly fast. Under these circumstances, preserving a fixed exchange rate regime or targeting monetary aggregates (as it was done in the past) is unlikely to secure stable low levels of inflation. Similarly to other central banks, the NBS focuses on the stability of retail prices. Empirically, core inflation is a better indicator, but it is also one that is difficult to communicate to the public and the press. Price stability does not mean that prices never change, but rather involves moderate price growth. Price stability in the Serbian economy means a longterm net (core) inflation rate ranging from 5% to 10%. In order to accomplish this objective, the NBS uses adequate monetary instruments.

NBS monetary policy instruments are the following:

- required Reserves,
- open market operations,
- standing facilities.

The above instruments do not exert direct impact on the objectives. At times, many months may elapse before their effects become evident. That is why the NBS focuses on the accomplishment of targets, which are somewhere in between instruments and objectives. There are two "types" of targets: (a) operating and (b) intermediate. Operating targets are easy to control, but are distant from the objectives. Intermediate targets are hard to control, but are closer to the objectives. Unlike developed market economies where the reference interest rate (interbank rate on overnight loans) represents the operating target, we are used as operating targets unborrowed reserves (excess liquidity), and reserve money (net foreign and net domestic assets). In developed market economies the long-term interest rate represents the intermediate target, but in our country this function is reserved for monetary aggregates ( $M_1, M_2, M_3$ ).

Achieving low and stable inflation will be a gradual process requiring coordination between the NBS and Government. In Serbia, inflation is a matter of shared responsibility between the NBS and the Government. In the environment where a large proportion of prices is controlled by administrative regulations, the NBS can effectively control only the part of inflation that is market determined. On the other hand, the Serbian Government is responsible for the other part of inflation stemming from adjustments in administered prices and tariffs.

For start, the NBS has declared short-term inflation objectives for the end of 2006 (December 2006: 7-9% interyear growth) and 2007 (December 2007: 4-8% interyear growth) defined in terms of 'core inflation', i.e. the retail price inflation under the influence of NBS instruments. The first objectives for the end 2006 and 2007, though short-term, reflect the aim of the NBS to gradually lower inflation in Serbia, a course that is going to continue in the future, until the achievement of the level of inflation compatible with price stability. The declared inflation objectives for the end of 2008 is 3-6%.

In December 2008, the Monetary Policy Committee of the National Bank of Serbia adopted a Memorandum on Inflation Targeting as Monetary Strategy, which defines formal implementation of the inflationtargeting regime as of January 1<sup>st</sup> 2009. The inflation target, defined in terms of the annual percentage change in the consumer price index, is the only numerical guideline for the monetary policy implemented by the National Bank of Serbia. The National Bank of Serbia will achieve the inflation target by changing the interest rate applied in the conduct of its main monetary policy operations (currently, the interest rate on two-week repo operations). This interest rate will be its main monetary policy instruments will have supporting roles, as they should contribute to a smooth transmission of the key policy rate to the market and balanced development of financial markets without threatening the stability of the financial system.

Inflation targets will be set by the National Bank of Serbia, in cooperation with the Government, on the basis of an analysis of current and expected macroeconomic movements and the plan of changes in prices under direct or indirect regulation of the Government. CPI is divided into three basic components:

- core inflation,
- non-core inflation excluding petroleum products and
- petroleum products (see table 1).

	2008		2009		
	Q2	Q3	Q4	Q1	Q2
Consumer prices	4,1	0,2	1,1	3,8	3,0
Core inflation	2,9	1,3	1,1	1,2	0,8
Prices of agricultural products	0,6	-1,8	0,8	0,4	1,0
Regulated prices <sup>1</sup>	0,6	0,5	-0,8	2,3	1,1
Others	0,1	0,0	0,0	0,0	0,1

Table 1. Contribution to consumer prices growth (by quarter, in %)

Source: Inflation report August 2009, National bank of Serbia, Belgrade, p.11

By changing the key policy rate, monetary authorities primarily aim to affect core inflation. This rate influences prices through both the nominal channel (exchange rate) and the real channel (real exchange rate and output gap, i.e. demand).

The targets will be set for several years ahead as a continuous headline inflation band with a midpoint, and defined in terms of the annual percentage change in the consumer price index.

<sup>&</sup>lt;sup>1</sup> Regulated prices are complex phenomenon, which consist of next prices: Electricity, Petroleum products, Gas for households, Utilities, Social welfare services, Transport services (regulated), Postal and telecommunications services, Bread, Cigarettes, Medications and Other.

Annual percentage changes in the CPI for the period 2009-2011 are: -2009 starting level: 8-12% with a midpoint of 10%,

-2009 end level: 6-10% with a midpoint of 8%.

-2010 end level: 4-8% with a midpoint of 6%,

-2011 end level: 3-6% with a midpoint of 4.5%.

Achieved level on inflation in September 2009 was 7,3%. From these data we can see that the level of inflation is inside the planned band for this year. For the whole year, the achieved level of inflation is 6.6%.

The key advantages of defining the target in the above-described manner are (Memorandum on Inflation Targeting as Monetary Strategy 2008, 2):

- Defining the target in terms of headline inflation allows for more transparency, while measuring the target by the consumer price index ensures consistence with the international practice and comparability with a majority of other countries.

- The band indicates the comfort zone for inflation and provides for the fact that there will occasionally be smaller shocks causing shortterm volatility of inflation, but not requiring a monetary policy response.

- Setting a midpoint will help better anchor inflation expectations.

- The target will be continuous, enabling inflation to be monitored at all times and not only at a particular point in time (end of year).

- Targets will be set for several years ahead to ensure focus on medium-term price stability, account for the lags in the transmission of the impact of monetary policy instruments on inflation and help anchor inflation expectations.

The key policy rate will be the main monetary policy instrument in the inflation-targeting regime. Other monetary policy instruments, including interventions in the foreign exchange market, will only have supporting roles. The key policy rate is the interest rate applied in the conduct of main monetary policy operations (currently, two-week repo operations). It is an operational objective for short-term money market interest rates. Its role as an operational objective will be supported by a corridor of interest rates on lending and deposit facilities and other open market operations. Adjustments in the key policy rate will be based on the assessment of the current economic situation, inflation developments and their projections. 2W repo rate is supported by a corridor of O/N standing facilities linked to the key rate:

- Deposit facility interest rate: 2W - 2,5 pp (currently 7%),

- Lending facility interest rate: 2W + 2,5 pp (currently 12%).

As we can see from table 2, orientation of NBS monetary policy to the end of 2008 was restrictive, but from begining 2009 to this days monetary policy is expansionary, because the 2w repo rate was decline from 17,75% to 9,50%. Intention of the NBS is stimulation of economic activity of our enterprises.

Date of changes	Key policy rate -	Deposit facility	Lending facility
	2w repo	interest rate	interest rate
06.02.2008.	10,75	8,25	13,25
29.05.2008.	15,75	13,25	18,25
03.11.2008	17,75	15,25	20,25
22.01.2009	16,50	14,00	19,00
06.04.2009.	15,00	12,50	17,50
22.04.2009	14,00	11,50	16,50
08.06.2009.	13,00	10,50	15,50
10.07.2009	12,00	9,50	14,50
08.10.2009	11,00	8,50	13,50
05.11.2009	10,00	7,50	12,50
30.12.2009.	9,50	7,00	12,00

Table 2. Changes in interest rates of the NBS in 2008 and 2009

Source:

http://www.nbs.rs/export/internet/cirilica/30/30\_4/30\_4\_5/istorijski\_pregled.pdf

In an inflation-targeting regime, foreign exchange interventions are an infrequent secondary instrument used to support the achievement of the inflation target only after the potential for influencing inflation effectively through changing the key policy rate is exhausted. The exchange rate is an indicator of monetary policy transmission.

The National Bank of Serbia will resort to foreign exchange interventions with a view to:

 limiting excessive daily oscillations in the exchange rate for the dinar, but without accumulating pressures in a single direction over a longer period of time,

- containing threats to financial stability, and

- safeguarding an adequate level of foreign exchange reserves (Memorandum on Inflation Targeting as Monetary Strategy, 2008, 3).

Data from table 3 show that participation of the NBS in the IFEM to the Q4 2008 was minor, but after that it was significant.

	Q3 2008	Q4 2008	Q1 2009
IFEM	100	100	100
NBS - Banks	0,15	14,29	26,55
Bank - Bank	99,85	85,71	73,45

*Table 3. Composition of trade in the IFEM*<sup>2</sup> (in % of total trade)

Source:

http://www.nbs.rs/export/internet/cirilica/30/30 4/30 4 5/istorijski pregled.pdf

<sup>2</sup> IFEM – Interbanks Foreign Exchange Market

The causes for that situation we can find in a widespread world economic crisis, which has attacked Serbia, too. In this period, the depreciation of Serbian national currency was about 15%. The NBS has spent about 1 billion euro for intervention for dinar protection. So, generally, this job of the NBS is on the line of stabilizing Serbian economy and its currency.

#### CONCLUSION

Monetary policy conduct is very difficult and complex work. One of the most important decisions for policy makers is choosing the monetary strategy. There are several alternatives, but one is optimal in current conditions.

In the past, the monetary authorities in Serbia have tried to control exchange rates, but it has not brought desirable results. In 2006, policy makers made changes and chose inflation targeting as the monetary strategy. But until the end of 2008, it was an unofficial strategy. The NBS expects that the recent decline in inflation will not be reversed and that the disinflation will continue in line with the declared objectives. This should help anchor public's inflation expectations at the declared inflation objectives, thereby further supporting the creation of the low inflation environment.

In pursuing the inflation objectives, the NBS shall implement its policies in a sustainable, consistent and transparent manner to avoid unnecessary fluctuations in output, interest and exchange rates. The NBS has been remaining transparent and accountable to the public in pursuing the inflation objectives. In particular, the NBS has been regularly informing the public on how the inflation objectives are being fulfilled, explaining the reasons behind the developments as well as policy actions taken to ensure meeting the inflation objectives in the future. The Inflation Report has became the main tool of communication with the general public. At the end, NBS provides for a flexible and sustainable framework in the period of the EU accession and helps to rebuild the trust in the national currency.

From January 1<sup>st</sup> 2009, the NBS uses only one target of monetary policy. That is the inflation targeting, because the main task of the NBS is price stability. Now this strategy is official. If we look at its first results, we can conclude that the situation in price stability is much better, because the rates of inflation were under 10% in this period. But we have to point out that the monetary authorities in Serbia have to stay on this course and continue this kind of policy regimes.

#### REFERENCES

- Bernanke, Ben S. and Frederik S. Mishkin. 1992. Central Bank behavior and the strategy of monetary policy: Observations from six industrilized countries. Cambridge: MIT press.
- De Grauwe, Paul. 2007. *Economics of monetary union*, seventh edition. New York: Oxford university press.
- Đurović-Todorović, Jadranka i sar. 2006. *Monetarni i fiskalni menadžment*. Niš: Ekonomski fakultet u Nišu.
- Đurović-Todorović, Jadranka and Marina Đorđević. 2008. Experiences with different monetary strategies. In *Central banks and inflation management – a global perspecite*, edited by A. K. Sohani, and Katuri Nageswara Rao, 38–52. India: The Icfai university press.

ECB Monthly Bulletin, January 1999.

- Friedman, B. M. and K. Kuttner. 1996. A price target for US monetary policy? Lessons from the experience with money growth targets. Brookings Papers on Economic Activity 1.
- Handa, Jagdish. 2000. Monetary economics. London: Routledge.
- Hubbard, Glen R. 2005. *Money, the financial system and the economy*. Boston: Pearson. *Inflation report*, August 2009. Belgrade: National bank of Serbia.
- 2008. Memorandum on inflation targeting as monetary strategy. Belgrade: National bank of Serbia.
- Mishkin, Federick S. 1999. International experiences with different monetary policy regimes. *Journal of monetary economics* 43(3):579–607.
- Mishkin, Frederick S. 2004. *The economics of money, banking and financial markets*. Boston: Pearson.
- Obstfeld, M. and R. Rogoff. 1995. The mirage of fixed exchange rates. *Journal of economics perspectives* 9:73–96.
- Svensson, Lars E. O. 1999. Inflation targeting as a monetary policy rule. Journal of monetary economics 43(3):607–55.

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# ODRŽIVOST STRATEGIJE MONETARNE POLITIKE NARODNE BANKE SRBIJE

#### Apstrakt

Monetarna politika je važan deo ekonomske politike. Međutim, ona nije svemoćna u rešavanju problema u finansijskoj i ekonomskoj sferi. Postoji mnogo problema koji ometaju vođenje monetarne politike. Najznačajniji su siva ekonomija i problem kašnjenja.

Centralne banke preko promene novčane mase ne mogu direktno da utiču na bazične ciljeve (ekonomski rast, cenovna stabilnost, visoka zaposlenost). Zato su one prinuđene da koriste operativne i intermedijarne ciljeve, ukoliko žele da povećaju svoju efikasnost. Na meniju centralne banke nalaze se brojne alternative: targetiranje monetarnih agregata, kamatnih stopa, stope inflacije, deviznog kursa ili nominalnog BDP-a. Koja strategija će biti izabrana zavisi od mnogih faktora: stabilnosti ekonomskog i finansijskog sistema, dostignutog ekonomskog rasta, stepena nezavisnosti centralne banke, prioritetnih ciljeva ekonomske politike, kredibiliteta monetarne vlasti.

Cilj ovog rada je da ukaže na napore koje monetarne vlasti u Srbiji čine prilikom izbora optimalne monetarne strategije, gde će akcenat biti stavljen na traženje odgovora na pitanje da li je izabrana strategija održiva u našim uslovima.

Ključne reči: održivost, monetarna strategija, NBS, targeti, targetiranje inflacije.