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INFLATION TARGETING CHALLENGED BY FINANCIAL CRISIS *

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Abstract. *The main target accepted by many central banks is stability of prices, because there is a wide consensus that low and stable inflation is the basis of economic growth. The choice of inflation targeting has given good effects both in developed and developing countries in transition, particularly in reducing high inflation in the initial period of monetary regime implementation. In conditions of significantly disturbed economic growth it is necessary to adjust the monetary policy. In such conditions the optimum monetary policy is the one which is flexible enough to support the inflation control goals and stimulate economic growth. The global financial crisis raised many questions for monetary policy creators. The answers to these questions should determine the further "destiny" of inflation targeting. Currently, the attempts of monetary policy innovation tend to introduce "improvement" of inflation targeting regime, with financial stability and real economy stabilization maintenance, as additional targets.*

Key Words: *Inflation, financial crisis, intermediary target.*

INTRODUCTION

Starting from the widely accepted attitude that in the long-term period it is not possible to achieve an optimum trade off between the inflation and economic growth, and that the low and stable inflation is the necessary characteristic of the economic ambient, the nominal anchor strategy is imposed as the key one for achieving that goal. However, the choice of concrete monetary strategy depends on socio-economic system characteristics as well as on previously achieved results, and the best choice will be that monetary strategy, the result of which are low inflation, stable economic environment and sound economy.

The first part of this paper analyzes advantages of stable monetary policy strategy over the discretional one, by explaining the nominal anchor role in overcoming the time-lag problems.

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We particularly point out the importance and advantages of inflation targeting strategy implementation. A review of some elements and principles, important for this regime implementation, is also given. The focus is on inflation targeting apprehension, as a "framework", and not a rigid rule for monetary strategy implementation (flexible targeting of inflation).

Inflation targeting, as a framework of monetary policy carrying out, has given a lot of good results in countries which adopted it. However, the question is raised about the necessity to reconsider the selection of this regime after the global financial crisis and recession have emerged. For that reason, the second part of the work has just been devoted to the issue of the necessity to relate inflation targeting, as a framework for monetary policy carrying out, to higher responsibility of central banks for financial stability maintenance. There were listed and shortly explained open issues from the aspect of the cause of occurrence, but also from the aspect of possibility to prevent financial instability. The last part presents the formal framework of inflation targeting regime in Serbia, with a brief presentation of up-to-date experience in its implementation.

1. Inflation Targeting – Key Aspects

1.1. Price stability as a key target of central banks

The most frequently mentioned monetary policy key targets are the following: low and stable inflation, high and stable economic growth and employment rates, financial market and financial institutions stability, interest rates stability and foreign market stability [8, p. 411]. Sometimes, central banks accept specific targets, e.g. in the Charter of the Bank of England it is stated that this Institution should be active for the purpose of global promotion of national financial sector. In order to achieve proclaimed targets, central banks use various sets of instruments. When the central bank tends to achieving the harmonized targets, it, as a rule, experiences a bigger success than in case when it tends to achieve mutually contradictory targets, such as developmental and stabilization-oriented targets. For that reason, it is necessary to determine priorities on the occasion of target defining. When choosing the monetary policy key target, the dilemma is if the monetary policy should exclusively care about the price stability or if it should support with its instruments other targets, as well, such as employment and economic growth. The key target should also be legally regulated, in order to avoid frequent and voluntary change of the target function.

In practice, the key targets have been defined diversely, and in most cases they come to prices stability maintenance. Dominant orientation to stability of prices is not without a right reason. Firstly, inflation is a serious disturbance, deeply shaking financial and economic systems of every national economy. Basically, it is a multifactor process. Causes, leading to high rates of prices growth, are numerous and specific for each economy. The problem arises when at a certain moment there is expressed the effect of factors combination (trade off), initiating the inflation process, subsequently followed by secondary processes supervening. It is not easy to detect the primary inflation factor. Due to inflation process self-reproducing (so-called inflation spiral), inflation may be accelerated by various processes activation, and in case the analysis of causes is made in its advanced phase, it is more difficult to locate the primary cause.

Although both negative and positive effects of the inflation impact may be considered, negative effects are quite bigger than positive ones, thus, the bigger the negative effects, the bigger the inflation range [18, pp. 210 – 234]. Ensuring prices stability, in long-term and mid-term, is a necessary condition for achieving all other macroeconomic targets. With low and stable inflation, it intensifies trust in domestic currency, inflation expectations are stabilized, uncertainty is reduced, and such an ambient favours sustainable economic growth. Although from the short-term point of view it may be said that economic growth is sacrificed by ensuring stable and low inflation, the practice in many countries has shown that in the long-term, expansive monetary policy may result in higher inflation only, without much significant growth [5]. Of course, the low inflation is not a sufficient condition for stable economic growth if other important preconditions have not been fulfilled.

1.2. Discretion vs. rules in monetary policy carrying out

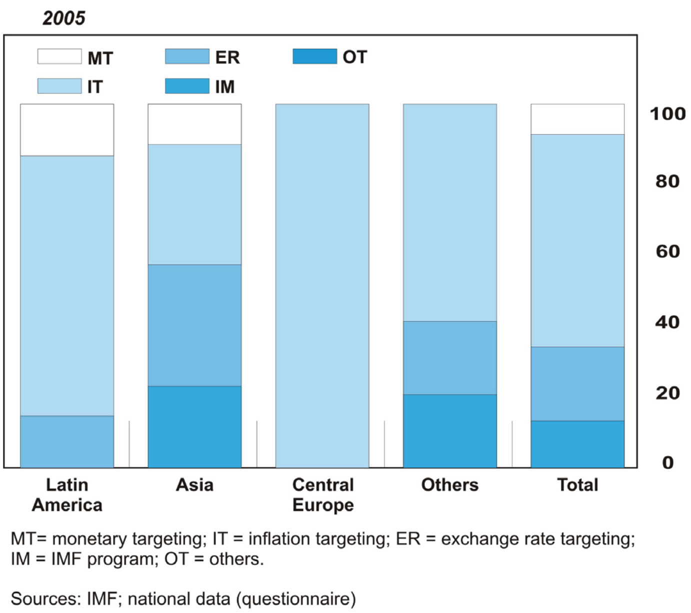
One of the proposed questions, both within the monetary theory and in the field of monetary policy implementation, is whether the monetary policy should be used as an anti-cyclic policy instrument or as a stabilization policy instrument in mid-term or long-term period, the expression of which will be the stable monetary expansion [18, p. 393].

Flexible (discretion) monetary policy, as the policy implemented more freely by the monetary authorities, can be better adjusted to economic cycle phase. In this way, endogenous and exogenous factors acting on economic activity are compensated more successfully and the policy may be directed, as necessary, to both strategic directions – expansive and restrictive. In order to avoid a possible pro-cyclic acting, a precise forecast of economic trends is necessary. Viewed in short-term, the attitude that the monetary growth rate acceleration may, to a certain extent, speed up production activity without market disturbance, is basically the justification for expansive monetary policy. Practically, by generating "surprising" inflation, apart from public promise to maintain prices stability, the central bank is trying to temporarily use "inertia" of the public and use the entire monetary expansion effect to increase real economic activity, without the accompanying expansion effect spreading to prices increase [18, pp. 427-431]. In this way there is created and used disharmony between the *real* character of monetary policy and public *perception*. Such a situation is described as "money illusion", in the sense that transactors continue to behave as if they posses equally worth money, although their wealth expressed in money has been endangered by monetary expansion. When a move like this could be repeated in an infinite, sequence of successive short-term periods, it could be expected that by money expansion in long-term, as well, there may be stimulated economic activity, without generating inflation. Transactors, however, learn on mistakes, thus, due to exceedingly frequent use, this obviously positive effect loses its power and probably, vanishes, being replaced by the opposite, now the negative effect. Disharmony between the real character of monetary policy and perception of the public gets a new form now, popularly marked as "inflation expectation". Transactors (individuals and companies) incorporate in their behaviour the expectations about future moves of monetary authorities, impacted by the past experiences. This produces a cyclic change of "money illusion" and "inflationary expectations", that is, change of efficient and non-efficient periods of expansive monetary policy. Therefore, due to problems of time (in) consistency, a policy, being made "today for tomorrow", besides the temporary favourable effects, may produce bad results in the long enough period. Stronger inflationary expectations are incorporated into inflation premiums, therefore, monetary impulses will mainly act in the way to destabilize prices, that is, they will cause relatively high inflation rates without a desired stimulation of the economic activity.

High inflations during the 70s of the last century, made the majority of the developed countries central banks accept the targeting concept in the process of monetary policy formulation and implementation. It is to do with monetary policy, relying on nominal anchor, that is, nominal variable. A powerful nominal anchor is an intermediary target (target) through which the end goal is achieved. It helps in preventing the monetary policy time inconsistency problem, because it ensures discretion policy limitation which will not conform to long-term goal of prices stability. Observing the nominal anchor, narrows the monetary authorities' discretion, acting like a strong, binding rule of conduct [1, p. 488]. The target role may be assumed by monetary aggregates, exchange rate, interest rate, inflation rate and nominal domestic product.

1.3. Inflation targeting – choice of developed and developing countries

A relatively large number of countries has accepted the new monetary policy strategy lately – inflation targeting. The change of the target intermediary variable (intermediary target) was made as a practical response of central banks to difficulties they had encountered when using the exchange rate, or some other monetary aggregate, as the main intermediary target variable in the monetary policy implementation process. The advantages of inflation targeting, in relation to exchange rate targeting and monetary aggregates targeting are reflected in the way, ensuring the monetary policy: a) focusing on domestic economy problems, which is not always possible when exchange rate is targeted, b) in such conditions, a stable relation between the monetary stock and inflation is not crucially important for strategy success, c) the very goal is more transparent, therefore d) the public understands and accepts it more easily.



Graph 1 Choice of intermediary target – world experiences
Source: [10, p.2].

New Zealand was the first country to implement inflationary targeting in 1990. After New Zealand, there were Canada, Great Britain, Sweden and Finland. Various variants of inflation targeting were implemented by emerging market economies, such as Brazil, Israel, Korea, Mexico, South Africa and others. It was not rare that countries in transition have tendencies towards this monetary strategy. This is the case with Poland, the Czech Republic, Hungary, Slovakia, Croatia, Romania, Serbia, as well as with other countries [15].

1.4. Review of some essential elements of inflation targeting regime implementation

Inflationary targeting represents a framework for administering monetary policy, characterized by public announcement of the targeted inflation rate, for one or several subsequent time intervals, with a clearly expressed attitude that low and stable inflation are the primary long-term target [13].

Since the explicit inflationary target increases responsibility of the central bank in the inflation control, it is less probable that the central bank would leave a defined Action Plan and try to stimulate economic activity by expressively expansive monetary policy. However, monetary policy directing by clear and transparent rule may be disclaimed flexibility, which is, sometimes quite necessary. For that reason, it is better to view this regime, not as a rigid rule, but as a "frame", because then, it does not imply simple and mechanical instructions to the central bank how to implement monetary policy but it gives a reasonable discretion degree to monetary policy creators who, within limitations imposed by mid-term or long-term inflationary targets have got a significant space to respond to short-term occurrences [13, p. 22].

Box 1 Six principles of inflation targeting

The design, implementation and evaluation of inflation targeting (hereafter IT) regimes can usefully be guided by the following six key principles.

1. The primary role of monetary policy is to provide a nominal anchor for the economy and placing weights on other objectives must not be inconsistent with providing an anchor for inflation and inflation expectations.
2. An effective inflation-targeting regime will have beneficial first-order effects on welfare by reducing uncertainty, anchoring inflation expectations and reducing the incidence and severity of boom-bust cycles.
3. The success of an IT regime depends on other policies that make the task of monetary policy easier and more credible.
4. Because of the lags in the monetary transmission mechanism, and because of the concern with both the deviation of inflation from its target and the deviation of output from potential, it is neither possible nor desirable to keep inflation exactly on target and in practice inflation targeting becomes inflation-forecast targeting.
5. Given the possibility of conflict between inflation targets and other objectives, central bankers must have reasonably clear objectives and sufficient independence from the political process to achieve these objectives.
6. There must be effective monitoring and accountability mechanisms to ensure that central bankers are behaving in a manner consistent with the announced underlying objectives and that monetary policy is being based on sound practices [4, p.13].

In order that the expected inflation could be estimated with the necessary precision, an index should be selected, which satisfies corresponding requirements. In many countries, the inflation targeting regime implementation is based on Consumer Price Index. With that, the basic inflation concept is usually used in the very beginning, in order to avoid negative effects, or possible shocks due to food, fuels, indirect taxes and similar prices increase [15]. Further, *inflation target value* may be defined as a concrete value or as a range. The range targeting in which inflation trend is expected, may indicate uncertainty in inflationary expectations, which could lead to the central bank credibility endangering (particularly if set broadly). On the other hand, however, such a selection enables central bank flexibility in monetary policy creating, so this is the reason why most countries decide to use the range targeting.

From decisions of monetary policy creators to choose some positive value as a target inflation rate, it may be seen that in the inflationary targeting regimes negative effects of very low inflation are implicitly presumed. Such preference comes as the result of an adopted estimation that deflation is a disturbance with consequences more destructive than those of inflation. Some reasons mentioned against selection of zero inflation as the target are as follows:

a) It is increasingly probable that periods of deflation will come, because even a small shortage in a goal achieving introduces economy into a deflation ambient [10, p. 545].

b) Subsequently, this may result in natural employment rate increase. This is explained by the following argumentation. The drop of prices level would not entail the drop of earnings level, because nominal earnings are rigid to reduction (influence of a union or similar), so the cumulative effect will be the real growth of earnings, that is, profit and employment reduction. Opposite to this, low inflation provides for changes in real and relative earnings without the change in nominal earnings [12]. This described effect is a direct consequence of the fact that the pace of economic activities is determined by the decisions of employers, further manipulated by the expected profits.

c) In such conditions the interest rate efficiency, as a monetary policy instrument, is also reduced. Both real wages level and the real interest rate level impact the aptitude of entrepreneurs to investment in the same way. Real interest rate may be decreased even without nominal interest rate adjustment, that is, exclusively by inflation increasing.

d) Due to the abovementioned, zero inflation, as the target, may worsen the efficiency and activity of the real sector, which in these conditions could not count on inflationary reduction of engaged resources prices. In that sense, it is colloquially stated that low inflation is "oil which lubricates the machinery" of the real economy.

e) As a specific factor, it is mentioned that costs of zero inflation maintenance are higher, of both opportunity costs (economic growth sacrificing) and explicit costs of monetary stock sterilization, respectively.

For that reason it is not surprising that European Central Bank (ECB) defines the price stability as consumer prices annual growth in the territory of European Monetary Union of two percent. The International Monetary Fund considers the two percent inflation rate as socially acceptable optimum which does not endanger the economic growth. It is thought that the optimum inflation rate for the developed countries ranges between one and three percent, while in case of developing countries it is between four and six percent. In our country, NBS (National Bank of Serbia) and the Government define the mid-term stability of prices as an annual inflation rate, from two to four percent.

Apart from defining the monetary policy intermediary target, an important problem in monetary policy implementation is to include in calculations the *time*, as well, that will pass between the moment when it is to act and the moment when the undertaken actions are expected to show effects on monetary policy definitive (end) goals [17, p. 343]. For that reason, *determining the target horizon*, that is, the time period in which the target inflation should be achieved, is viewed from the aspect of control horizon, that is, time lag in effects which monetary policy measures implementation should have on prices. If the target horizon does not include all monetary policy transmission related lags, then the inflation is, in most part, out of control of the central bank [16]. Because of the significance of transmission channels reliable identification, as well as determination of effects transmission rate and intensity through the given channels, it becomes important to select the most efficient set of monetary policy instruments and the start of implementation of the given set of instruments. "In economic literature, the transmission mechanism is often called a "black box" because it comprises a number of parallel canals with different and changing time lag periods of end target (prices) reaction to changes in the instrument, controlled by the central bank" [5].

According to the monetary theory, prices and economic growth may be influenced by monetary policy via the following canals: (a) interest rates, (b) credit canals, (c) prices of some key investment assets, (d) exchange rate and (e) expectation canal. Their significance varies depending on financial market development. Istruments of fine regulation will give better results in conditions of developed financial market. Monetary policy implementation is getting more complex by the empirical fact that once confirmed effect of corresponding instrument, in one economic ambient may be changed in the following period, simply because of the changes affecting the very economic ambient.

2. Monetary Policy and Global Financial Crisis

If the inflation targeting is an acceptable framework for monetary policy carrying out in relatively stable times, can we expect the same efficiency degree in the ambient of global financial crisis and general economic recession induced by it? The key issue, we would like to open here are the challenges that monetary policy is faced with by such development of circumstances, that is, whether the time has come to reconsider inflationary targeting as one of the possible choices.

The world economic crisis emerged in 2007 in the USA, in the real estate market, and then transferred to the European banking sector. The effects to the financial sector reached the climax at the end of the third quarter of 2008 by affecting the entire capital market. Finally, the crisis was expressed through the overall global recession [6].

On that basis, some issues developed, which are actively debated, and they are to do with further development of monetary policy strategy [9]. The first issue is related to monetary policy, as one of possible causes of crisis. As the main argument of the viewpoint that the monetary policy is partly responsible for the crisis, it is underlined that the policy of low interest rates, carried out in the USA in the period 2001-2005, contributed to the exceeding growth of the credit activity and to generating a speculative bubble in the real estate market [13]. Parallel with "relaxation" of conditions for getting a credit, there is growth in the share of sub-prime lending in the total mortgage lending portfolio. *C*redit resources are directed for the purpose of speculative profiting, which leads to further increase of real estates prices. The problem becomes obvious when a major drop of real estates prices occurs, or when it comes to credit capacity fall, caused by big macroeconomic shocks [6]. In the period from 2006 to 2008, the world economy was hit by a negative shock, caused by the crude oil and agricultural products prices growth. In order to prevent this prices growth to be shifted to the growth of prices in general, the leading central banks reacted by increasing the basic interest rates. Interest rates growth in the inter-bank market initiated the interest rates increase in the Mortgage market, which endangered the normal credit repayment. After the collapse of big investment and commercial banks, the crisis was transferred to banking sector. Sudden increase of interest rates initiated the world recession trends. From the second half of 2005 and to the end of 2007, FED carried out restrictive monetary policy, reflected in reference interest rate level rising. From the end of 2007, faced with increasingly severe crisis, FED was forced to relax the monetary policy by lowering the reference interest rate, aimed at the emerged crisis effects alleviating. [2]. ECB, as well as many other central banks, lowered their reference interest rates in order to reduce the costs of borrowing and protect the liquidity of economy.

Having in mind the aforementioned, there is the question whether FED higher interest rates would have produced a different outcome. Which level of reference interest rate could impact decrease of credit demand? What would be the possible negative impact of very high interest rates to real sector? Specific circumstances and many other factors that are not directly related to monetary policy but are in the root of global financial crisis, make the importance of precise answers to these question relative. However, these call for reconsideration of the inflationary targeting strategy in general. If we start from the fact that FED carried out the interest rate policy that was conformant with the inflation projections, i.e., in accordance with the "rule" of inflationary targeting, then what was happening in the Mortgage market remained "beyond the horizon", but also beyond the responsibility of monetary strategy implemented. Advocates of inflationary targeting thought that responsibility of the central bank for financial stability was minimal, thus the financial stability has not been explicitely defined as the basic target of central banks.

The next question is how central banks should respond to non-justified price growth of corresponding investment asset (asset markets inflation), e.g. real estate prices or stock prices. The real estate market has traditionally been neglected in monetary policy projections. Frequent crises in real estate and stock markets, caused growing interest of central banks in such events when monitoring inflation, because in essence, they represent specific inflation of investment assets prices [6]. However, the essence of this question is whether banks should react to investment assets prices, beyond the effects that may be expected, to consumer goods prices. It is the opinion of some authors that central banks should limit the assets prices "bubble" because a burst of "price bubble" may cause financial instability. The reason used to justify central banks acting in this direction, is certainly the fact that unfavourable dynamics of prices in investment assets markets may endanger reaching one of central banks goals. There are other reasons, as well. Monetary expansion in some moments may be canalized exclusively towards the investment assets markets, in that, the monetary expansion effect to consumer goods prices will fall behind, and the central bank will get the wrong signal about the monetary policy character, if exclusively oriented to consumer goods price growth. Also, the instrument, used to influence consumer goods price level, i.e., reference interest rates and the primary issue range, may be equally used for suppressing unfavourable trends in the investment assets market.

There are also reasons justifying the role of central banks in such actions. How to recognize that prices of key investment assets are getting distant from their fundamental value? There is a slight probability that central banks will determine the corresponding investment assets fundamental value better than the very participants active in competitive markets [9]. How would the "bubble" size, that is, the market systematic error be estimated? Although there are some proposals for some indicators using, e.g., appreciation rate or different indicators of price and yield relationship, not a single one is fully reliable. Possible announcement of such estimations could have long-term negative effects to financial market efficiency and stability, because there will be a tendency that investors would consider the attitude of monetary authorities as more significant than their own estimations, which could be justified by the fact that monetary authorities have unlimited resources to influence the situation in these markets. Furthermore, traditional instruments of monetary policy, probably in this case, will not be efficient enough. "Price bubbles", too, are usually formed on certain segments of the entire market. Monetary policy cannot be used in the way to ensure measures affecting isolated segments of the market mechanism without wider effects to financial markets and entire economy. Finally, the recession risk is present, as well.

There have been discussions lately about the target change, in the direction of introducing price levels targeting. Currently, all countries implementing inflationary targeting, rather target inflation than the price level, because of the possibility that prices level targeting may create higher output variability that inflation planning. When corresponding (absolute) price level could be defined as a target, instead of price level change, i.e., inflation rate, it would mean that monetary authorities, in case of target breakthrough, have to act contractively in the following period, in order that the prices be returned back to the level as defined by the target. If additionally, prices show rigidity, monetary contraction may lead to severe contraction of real economy. In case of quite a big target breakthrough, if acted in previously described way, it is also possible to have financial destabilization [9].

Prolonged and deep recessions, naturally bring changes to social priorities sequence, and therefore, the monetary authorities target priorities. In such conditions, economic growth is the target, brought to the forefront. Disturbances, remaining in the financial sector, without serious repercussions to real economy, also show a similar effect. In "normal" conditions the requirement for a stable financial system does not restrict the monetary policy, but the tasks of supervision and regulation. In the inflation targeting regime, decisions of monetary policy creators are directed to target reaching. Financial crisis, and then the recession, forced monetary policy creators to modify their decisions related to interest rate policy in order to increase the financial sector liquidity. In that way, the financial stability becomes a special restriction of inflationary targeting, as a monetary strategy.

3. Short Review of Inflation Targeting in Serbia

3.1. Some elements of inflation targeting formal framework in Serbia

The National Bank of Serbia (hereafter NBS) defined monetary stability as its basic target. Apart from the basic target, NBS has the task to preserve the financial stability. Practically, the monetary stability implies low, stable and forecastable inflation, while the financial stability is defined as preservation of the stable financial system. In view of the financial stability preservation, NBS was allocated the function of supervisor over the larger part of Serbian financial system.

Principles of inflationary targeting regime have been gradually introduced into practice based on Memorandum of New Monetary Policy Framework, adopted in August 2006, while the formal implementation of inflation targeting regime was defined by Memorandum of Inflation Targeting as the monetary strategy, adopted in December 2008.

For inflation measurement in Serbia, till December 2008, *retail price index* (RPI) was used. The drawback of this index is that proportionally big part of its weights make agricultural products prices, which are significantly impacted by seasonal supply and demand oscillations, as well as by administrative measures. Since NBS accepts responsibility only for market defined prices, its targets have been expressed by so-called basic inflation. From January 2009 inflation is measured by consumer prices indices, calculated according to EU standards, that is, harmonized indices of consumer prices (HICP).

Inflation targets are being established in the form of total inflation continuous range with a central value, measured by annual percentual change of consumer prices indices for several years ahead. Target rates of inflation are being adjusted so as to achieve mid-term stability of prices. The main instrument of monetary policy is the reference interest rate. Reference interest rate is the interest rate established by auction (variable interest rate method) or established for auction (fixed interest rate method) where repo sales of NBS treasury bills take place with two-week maturity. Reference interest rate adjustments are based on assessment of current economic situation and future inflation trends projection. When deciding on reference interest rate change, it is essential to estimate the interest rate level which conforms with the monetary policy neutral impact, that is, when monetary policy has neither extremely expansive nor extremely restrictive impact. Reference interest rate will be shifted in relation to this level, depending on estimation of reached inflation deviation from the target inflation and so-called production gap. If the economy is in recession and inflation is high, the relative significance of inflation and production gap will depend on preferred significance on the part of monetary policy.

Other instruments of monetary policy have got a stand-by role, that is, they contribute to uninterrupted transmission of reference interest rate impact on the market. The basic instruments of NBS monetary policy are reserve liabilities, credit and deposit facilities, but also foreign market interventions. Namely, NBS carries out the managed floating exchange rate regime, with the right to intervene in case of significant daily oscillations in the foreign market, endangered financial and price stability, or in order to protect the adequate level of foreign currency reserves.

3.2 Up-to-date experience of Serbia in targeted inflation strategy carrying out

Monetary policy transmission

In order that the interest rate, as a transmission canal, coud make effect, it is necessary that each change of interest rate directly impacted by monetary authorities (reference interest rates) be reflected to the interest rates amount in the interbank liquidity market, and further transmitted to the credit interest rate level. NBS could not significantly impact the credit interest rate level by changing the reference interest rate because the majority of domestic banks placements is expressed in foreign currencies or indexed by foreign currency exchange rate. The interest rate to such placements are dominantly impacted by reference interest rates from European and British inter-bank deposits market. NBS may ensure certain impact on domestic currency (RSD) part of banks credit portfolio by reference interest rate. However, even in this limited space, this instrument has a proved asymmetrical effect. Reference interest rate increase would initiate reallocation of placements from a risky credit market to non-risky receivables from NBS, and probably, increase to a certain extent the interest rate on credit RSD portfolio. Reference interest rate lowering releases a part of resources, now available for credit activity, but without effects to credit interest rate decrease. Banks, in an attempt to oritect their profitability, compensate for lost yields in the credit market, thus the eventual effect may be the credit interest rates growth. The key reason for such weak effect of interets rate, as a transmission mechanism, lies in structural problems of domestic credit market.

The national currency exchange rate has always played an important role as a transmission mechanism. In the Republic of Serbia, as a country with highly import-dependent economy, the prices level indicate high dependence on foreign exchange rate trends (*pass-through effect*), that is, high correlation degree in foreign exchange rate and prices trends. Comparative empirical analyses showed that the intensity of this effect in Serbia in this period is close to the intensity observed in other countries in transition, and quite higher, compared to the developed countries [14]. It should be expected that, with time, the impact of foreign exchange rate to prices canal will get weaker while the interest rate canal is getting stronger, that increasing the possibility to impact the credit activity and aggregate demand by changing reference interest rate, via the other interest rates.

An important transmission mechanism element is inflationary expectations, formed on the basis of reached inflation, but there is also a return impact to it. It is estimated that inflationary expectations increased after a series of external shocks in 2007, were one of the main causes for inflation acceleration in the following year 2008 [5, p. 6].

Achieved results versus targeted values

The economy of the Republic of Serbia is burdened with problems of long-term and structural nature, such as deindustrialization of the country and over-expansion of the sector of economy, creating internationally unexchangeable goods and services, Eurization in monetary system, structural deficit in foreign trade and relatively high level of the economy foreign indebtedness. All the mentioned facts, as well as the impact of the world financial crisis, experienced in financial and real sectors, were reflected in monetary policy measures and the achieved results.

Table 1 Inflation: targets and performance, 2006 – 2008

Year	Inflation target	Inflation rate
2006	7-9%	5,9 %
2007	4-8%	5,4%
2008	3-6%	10,1%

Source: NBS

After 2005, inflation was significantly slowed down, mostly because of the significant nominal appreciation of RSD. By the end of 2006, the basic inflation was below the lower limit of the targeted range. At the end of 2007, inflation remained within the targeted range, while the target for 2008 was not reached because the basic inflation broke through the range upper level. NBS target for the end of 2009 is the inflation of 8±2 percent, and for the year 2010, 6±2 percent.

The main task of monetary policy in 2006 was to stop inflation which came out of control in 2005. Owing to monetary policy measures, based on new framework, the total inflation was reduced from the level of 17.7% to 6.6% and the basic inflation from 14.5% to 5.9%. Reduction of the inflation rate was particularly characteristic for the third and fourth trimester of 2006. Since the foreign exchange rate is the main canal of transmission mechanism, nominal appreciation of the national currency (RSD) had the greatest significance in sudden slowed down inflation by the end of the year. The reasons for RSD appreciation are substantial inflows of foreign capital and NBS restrictive policy during the year. For the purpose of maintaining the basic inflation within the projected level, NBS intervened by reducing the reference interest rate and foreign currency buying in interbank market. The end effect of such actions is basic inflation below the targeted range lower limit. The year 2006 was characterized by a very solid economic growth (5.3%), as well, but with it, a big deficit of current account was also reached.

In 2007, NBS reached the planned goal. In the first half of the year, when inflation was below the projected range lower limit, the reference interest rate was being gradually decreased (9.5% at the beginning of June). Since by the end of the year inflationary pressures started growing, the reference interest rate was being increased (10% at the end of the year). In inflation fighting, NBS had to intervene by prudential measures, as well, to slow down the granted credits increase. External shock (oil prices increase, agricultural products prices increase) overpowered disinflation effects of nominal and real appreciation of RSD and it influenced inflation to return within the targeted range limits.

The target for 2008 was not reached and the basic inflation was substantially above the targeted range upper limit. Series of external shocks in 2007 and transferring of financial crisis negative effects to Serbia were reflected in the domestic currency value drop, risk premiums growth, economic activity drop and inflationary expectations growth. In order to alleviate inflationary pressures NBS has increased reference interest rate a number of times (from 10% at the beginning of the year to 17.76% in December). With such a policy, NBS impacted alleviation of inflationary pressures, although it was not enough for the basic inflation to remain with the targeted value. By the end of 2008, the monetary policy was less restrictive, due to high depreciation of RSD currency [5, p. 17). In spite of disinflationary acting of numerous factors, the targeted inflation rate was not achieved in this period. Oil price trend at the world market and RSD appreciation had disinflationary effect but not in an expected measure.

Since by the end of the year the growth rate was significantly decreased, it became obvious that Serbia, like other countries, would enter recession, therefore NBS did not further increase the reference interest rate. With economic activity slowing down, restrictive policy of reference interest rates decreasing is not the best solution, so during 2009 the further decreasing of its level is continued.

The success of reaching the set goals in relatively stable environment, and failure during 2008 could possibly raise the issue of this regime selection justification, particularly when having in mind that the year 2008 was not successful for other central banks either. However, if we take into consideration that the highest inflation rates within EU in 2008 were recorded in countries not implementing the targeted inflation regime, but one of fixed exchange rate regimes – Bulgaria and Estonia, it may be concluded that possible selection of such a regime would not be a better solution, because it is more sensitive to external shocks [5, p. 17]. Anyway, since the idea of inflation targeting concept is not reaching the targeted inflation at any price, but the responsibility of the central bank for low and stable inflation in the mid-term, reconsideration of the monetary policy would have sense only after long-lasting failure in achieving the proclaimed goals.

CONCLUSION

Flexible inflation targeting is a monetary strategy by which the central bank tends to achieve both the inflation stabilization and real economic activity, but with a clearly expressed attitude that a low, stable inflation is a primary long-term goal. By implementing this monetary policy framework, a lot of countries managed to reduce a high inflation and stabilize it on the low level. However, the global financial crisis showed that even the flexible inflation targeting is not sufficient for achieving these goals, in conditions of expressed financial instability. It led to reconsideration of this monetary policy framework selection. For the time being, the practice tends to introduce "improvements" of inflation targeting framework, aiming at maintenance of financial stability and stabilization of real economy, with, of course, still maintained stability of prices as the key target of central banks. The question of preventive role of central banks in creating property prices "bubbles" and generating financial instability is raised. Financial instability is imposed as a possible limitation of the monetary policy, together with with the target, in order to act preventively on events that may cause instability. It implies making serious decisions about responding at the right moment and to the right extent. For that reason, it is important to follow the financial system situation. And in order for the public to understand the actions, higher transparency is necessary.

The conclusion is that central banks, apart from being responsible for prices stability as the main goal, must take responsibility for financial stability, as well. The interest rate policy is not a "perfect" instrument, sufficient for financial stability maintenance. Instead, the emphasis is frequently on supervision and regulation, introduction of "non-standard" instruments and measures, as responses to occurences that may endanger achievement of the set goals.

Implementation of inflation targeting regime in Serbia is relatively successful, having in mind all specificities of the monetary policy. The impact of global financial crisis was reflected in the failure to reach the projected goals in 2008. Since the inflation targeting concept idea is not to achieve the targeted inflation at any price, but the responsibility of the central bank for low and stable inflation in mid-term, the justification of this regime selection is not to be reconsidered yet.

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TARGETIRANJE INFLACIJE PRED IZAZOVIMA FINANSIJSKE KRIZE

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Mnoge centralne banke prihvataju kao svoj osnovni cilj stabilnost cena, jer postoji širok konsenzus da niska i stabilna inflacija predstavlja osnovu ekonomskog rasta. Izbor targetiranja inflacije dao je dobre efekte kako kod razvijenih tako i kod zemalja u razvoju i tranziciji, posebno u obaranju visoke inflacije u početnom periodu primene monetarnog režima. U uslovima značajno poremećenog ekonomskog rasta monetarnu politiku je potrebno prilagoditi. U takvim uslovima optimalna je monetarne politike koja je dovoljno fleksibilna da podrži ciljeve kontrole inflacije i podstakne ekonomski rast. Globalna finansijska kriza je stavila mnoga pitanja pred kreatore monetarne politike. Odgovori na ova pitanja trebalo bi da odrede dalju "sudbinu" inflacionog targetiranja. Za sada se pokušaji inoviranja monetarne politike kreću u pravcu uvođenja "poboljašanja" režima targetiranja inflacije uz održanje finansijske stabilnosti i stabilizaciju realne ekonomije, kao dopunske ciljeve.

Ključne reči: *inflacija, finansijska kriza, intermedijarni target*