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CENTRAL BANK POLICY AFTER THE CRISIS: EXAMPLE OF SERBIA

Politika centralnih banaka u periodu nakon krize – slučaj Srbije

Abstract

The aim of this paper is to provide a detailed analysis of how the monetary policy of the National Bank of Serbia has been conducted, actively changed and adjusted in the post-crisis period, particularly in the circumstances of increased volatilities in international financial and commodity markets, and also to what extent we have been successful in achieving the legislative mandates – price and financial stability. Particular assessment was made as to whether the instruments that the National Bank of Serbia has used after the global economic crisis, especially after 2012, were appropriate in succesful achieving of those objectives, taking into account current and expected market developments.

Achieving and preserving price and financial stability, though facing headwinds from the international environment, undoubtedly confirm that the current framework of monetary and macroprudential policy of the National Bank of Serbia was properly applied and that it delivered desired results. Through all key channels of transmission – the decline in interest rates on new and existing loans, increased availiability of loans and accelerated credit activity, provided relative stability of the exchange rate and well anchored inflation expectations – monetary policy contributed to more favorable business and investment conditions, household consumption and saving, and therefore to sustainable economic growth.

Keywords: *monetary policy, price stability, financial stability, key policy rate.*

Sažetak

Cilj ovog rada bio je da se detaljnije sagleda kako se nakon krize, u uslovima prisutnih volatilnosti na međunarodnom finansijskom i robnom tržištu, aktivno menjala i prilagođavala monetarna politika Narodne banke Srbije, kao i u kojoj meri smo bili uspešni u ostvarivanju zakonskog mandata – cenovne i finansijske stabilnosti. Posebno je analizirano da li su instrumenti koje je Narodna banka Srbije koristila nakon svetske ekonomske krize, posebno nakon 2012. godine, bili primereni uspešnom ostvarivanju ovih ciljeva, a uvažavajući aktuelna i očekivana tržišna kretanja.

Postignuta i očuvana cenovna i finansijska stabilnost u uslovima prisutnih rizika iz međunarodnog okruženja nedvosmisleno upućuju da je primenjeni okvir monetarne i makroprudencijalne politike Narodne banke Srbije bio adekvatno postavljen i da je dao željene rezultate. Preko svih ključnih kanala transmisije – pad kamatnih stopa na nove i postojeće kredite, veća dostupnost kredita i rast kreditne aktivnosti, obezbeđena relativna stabilnost deviznog kursa i usidrenost inflacionih očekivanja – monetarna politika bitno je doprinosila povoljnijim uslovima za poslovanje i investiranje, za potrošnju i štednju stanovništva, a samim tim i ekonomskom rastu na održivim osnovama.

Ključne reči: *monetarna politika, stabilnost cena, finansijska stabilnost, referentna stopa.*

Introduction

Until the outbreak of the global economic crisis, a large number of central banks, both of advanced and emerging countries, adopted price stability as the primary objective of monetary policy. They opted to achieve this objective through the inflation targeting regime, adapted to the specificities of their respective economies. A consensus was almost reached that this regime enables monetary policy to give the strongest contribution to macroeconomic stability. Central banks have had a single primary objective – low and stable inflation in the medium run, and a single primary instrument – the key policy rate [6, p. 4]. The inflation target was achieved through the impact on expectations, the yield curve and long-term interest rates, and thus on aggregate demand. In the initial years following the introduction of the inflation targeting regime (the early 1990s), assessments prevailed that the inflation targeting regime, as a monetary policy framework, was compatible only with a freely floating exchange rate. More precisely, allowing a free float was considered a test of commitment to the inflation targeting regime. At the same time, the necessary stability of the financial system and prevention of excessive risk assumption by economic agents was ensured through prudential and supervisory measures. Macroeconomic policy, in its present-day shape, was yet to come.

However, the financial crisis that escalated in 2008 and the ensuing recession shifted the focus of policies of the leading central banks to tackling the issue of a drastic reduction in liquidity, heightening mistrust among market participants and economic contraction. Responding to the crisis, central banks of advanced economies embarked on robust monetary accommodation and, as a consequence, key policy rates were reduced to exceptionally low levels. Convergence of the key policy rate to levels close to zero (zero-bound) blocked the interest rate channel, leading to the introduction of non-standard instruments by central banks, with the aim of supporting credit and economic activity, and bringing inflation close to targeted or desirable levels [1, p. 31]. Many of these instruments are still used today.

Within the global financial architecture, what turned to be an important lesson of the crisis was that central banks should systematically analyse and calibrate instruments to be used for resolution/mitigation of risks in the financial system and for the prevention of new risks. In fact, the crisis confirmed what had been clear even before it – the preservation of financial stability is an important precondition for ensuring overall macroeconomic stability [2, p. 4], [5, p. 6], [7, p. 70], [10, p. 4], which contributed to global shaping of macroprudential policy.

When it comes to emerging economies, the pursuance of countercyclical monetary policy has often been limited by the high share of foreign currency and foreign currency-indexed liabilities in total liabilities and the generally more significant currency mismatches in the non-financial sector balance sheet. Restrictions were also the result of the pronounced exchange rate effect on inflation, the underdeveloped financial market and procyclical fiscal policy. Decision-making of central banks of emerging economies was additionally aggravated by external shocks and volatile capital flows [8, p. 14], which were influenced also by non-standard measures of the leading central banks and expectations as to the start of application of exit strategies and their dynamics. In such circumstances, central banks of emerging economies inevitably stepped up the assessments of the impact of developments in the international environment and measures of the leading central banks on trends in the domestic market. As a logical choice, central banks of emerging economies adjusted their measures and instruments of monetary, microprudential and macroprudential policies and began to apply a mix of policies in the manner which most efficiently ensures the preservation of price and financial stability, by providing contribution to economic growth, without prejudice to the achievement of stability objectives. However, in general terms, during the most recent crisis, central banks of emerging economies could pursue countercyclical policies to a greater extent than during the earlier crises, i.e. monetary policies were eased in order to encourage economic recovery. The reasons behind this were the already initiated financial sector reforms in the prior period, better anchored inflation expectations owing to higher transparency and enhanced credibility of monetary policy, as well as better coordination with fiscal policy.

This paper elaborates in more detail on changes and adjustments to monetary policy of the National Bank of

Serbia after the crisis, against the backdrop of volatilities in the international financial and commodity markets, as well as on how successful we have been in achieving our statutory objectives – price and financial stability and supporting credit and economic activity. This assessment is preceded by several key "lessons" of the crisis relating to central bank policies, particularly for small and open economies such as Serbia's. Given that the process of decision-making by the central bank and the choice of an adequate mix of instruments are determined both by domestic fundamentals and developments in the international environment, a separate section is devoted to macroeconomic conditions on the eve of and after the crisis. A focus is placed on the analysis of the impact of the model of repo auctions withdrawing liquidity on interest rates in the credit market and absorption of a part of effects of short-term shocks on the foreign exchange market. Finally, several challenges of monetary policy of central banks in the coming period are examined.

Lessons of the global economic crisis on economic policies of emerging economies

With the globalisation of the financial crisis of 2008, the ensuing recession and mounting deflationary pressures, the focus of monetary policy shifted from inflation to tackling the issue of a drastic reduction in liquidity, heightening mistrust among market participants and economic contraction. Responding to such developments, central banks of advanced economies embarked on robust monetary accommodation through standard and non-standard measures, in order to ensure necessary support to economic recovery.

Several years later, global growth has still not fully recovered. It is uneven and further constrained by geopolitical tensions. Depressed demand in commodity markets has brought the economy on the verge of deflation. Eight years later, uncertainties in the international financial market still persist and monetary policies of the leading central banks are assuming a divergent character due to a varying pace of recovery of their economies. This further amplifies the volatility of capital flows, which affects all economies, particularly those with pronounced needs for additional capital.

The crisis has taught us, i.e. it has confirmed that turbulences in the international financial and commodity markets may have significant negative effects on financial stability and economic growth in emerging economies. These effects can be particularly strong once monetary policies of the leading central banks no longer have an accommodative character, provided the prior period is not used to strengthen the domestic economy. The countries with pronounced internal and external imbalances and strong reliance on external sources of funding are most exposed to consequences of contracted capital flows, which represents an additional challenge for their economic policies, as well as their economic agents. On the macroeconomic plane, this entails from economic policy makers in small and open economies to plan and pursue responsible fiscal policy, and to implement structural reforms in order to eliminate macroeconomic imbalances, while at the same time amplifying the necessity for full coordination of monetary and fiscal policy measures and provision of reserves to amortise potential outflows in future. In microeconomic terms, all economic agents must adjust their balance sheets.

The global financial crisis has further emphasised the importance of financial stability and the need to observe price and financial stability as a single whole. It has transpired that, even against the backdrop of low and stable inflation, mounting tensions in the financial system may trigger macroeconomic instability – both directly in the form of high fiscal costs of remedying problems, and indirectly through rising costs in the real economy. Therefore, a consensus has almost been reached today that central banks should target not only price, but also financial stability. This does not imply the abandonment of the inflation targeting regime, but its natural evolution. In 2014, to mark the 25th anniversary of inflation targeting, the Governor of the Reserve Bank of New Zealand, which is a pioneer of the regime, said that the inflation targeting regime has resulted in low and relatively stable inflation and higher certainty for market participants. The level of interest rates has declined on account of a reduction in the inflation premium. However, contemporary conditions of doing business have unequivocally pointed out to the need for developing and implementing measures of macroprudential policy, as a complementary policy [9, p. 3], [9, p. 15].

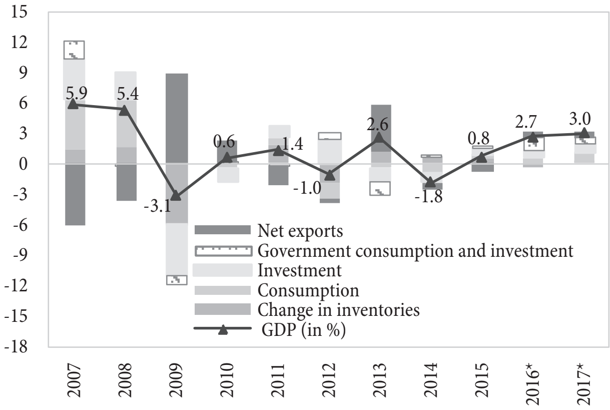
Consistent with this, the concept applied before the crisis – a single objective and a single instrument for a central bank, is slowly being abandoned. A consensus is practically reached among central banks about the necessity to apply an optimum mix of instruments of monetary, microprudential and macroprudential policies, appropriate for the current, expected and desired market developments. They are expected to continuously and pre-emptively take measures in order to preclude situations that may jeopardise not only price, but also financial stability. Furthermore, in the period after the crisis, central banks in countries of Central and Eastern Europe had a special task to monitor the process of adjustment of the domestic system to the deleveraging of banking groups from the European Union. They were expected to ensure that the process would be gradual, in accordance with the possibilities of adjustment of the domestic economy.

The experience gained during the crisis also revealed the need for reforming banking regulations in the European Union, so as to make the financial system safer and more resilient to shocks. The introduction of capital buffers and raising liquidity requirements are only some elements of the new banking regulations, aimed at creating reserves that could be used in crisis situations. New instruments for systemic risk monitoring are also being developed, as well as instruments for calibration of macroprudential policy that should prevent risk build-up. Increasingly stronger integration into international financial flows and more frequent turbulences in the international financial market have also indicated the need for changing the process of supervision and regulation of the financial system also in countries where banks with majority foreign capital from the European Union operate, such as Serbia. Global interlinkages and financial innovation mandate that regulations be harmonised with international regulations in the field, and that cooperation be strengthened at the international level.

Macroeconomic conditions of pursing monetary policy in Serbia on the eve of and during the crisis, inclusive of 2012

In the years immediately preceding the global economic crisis, Serbia's economic growth was such that attempts were made to compensate for the large gap of the 1990s. However, although it was relatively high (around 5.5% annually from 2001 to 2008), on the production side economic growth relied excessively on a rise in services (with reduced shares of the industry and agriculture), while on the expenditure side it relied on final consumption (Figure 1). Growth in domestic demand exceeded GDP growth and the difference was covered by imports, notably of consumer goods, which was financed by privatisation receipts, domestic loans and cross-border borrowing of the private sector. In 2008, such developments culminated in a record high external trade and current account deficit (Figure 2). In such circumstances, monetary policy measures were aimed primarily at limiting credit growth

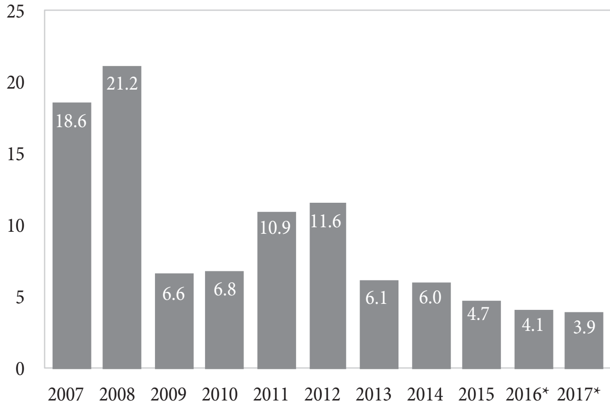
Figure 1: Economic activity movements (in %)



* NBS estimate.

Sources: SORS and NBS calculation.

Figure 2: Current account deficit (in %)



* NBS estimate.

Source: NBS.

and anchoring inflation expectations in order to curb inflationary pressures from that source.

Such economic growth model was viable while sufficient foreign capital flowed in to cover the current account deficit. Nonetheless, the global crisis triggered a major reversal in capital flows in 2008–2009. Capital inflows in respect of FDIs contracted sharply, which was followed by banks' deleveraging to parent banks. All this coupled together had a negative impact on the availability of sources of funding of economic growth. It became obvious that the continuation of economic growth led by consumption was no longer sustainable in the long run and that Serbia had to shift to the model of growth based on investments and exports. The relatively strong and certainly elicited balance of payments adjustment was conducted already in 2009, with an unselective drop in domestic demand and economic contraction.

Economic recovery over the following four years (2009–2012) was relatively slow, or more precisely, two of these four years were recording negative growth rates. Positive effects of a higher degree of expansiveness of fiscal policy on economic activity did not take place as the major portion of fiscal stimuli spilled off to imports, which influenced the gradual, but cumulatively significant deepening of external and fiscal imbalances (Figures 2 and 3). In such conditions, public debt soared, the country's rating deteriorated and risk premium increased.

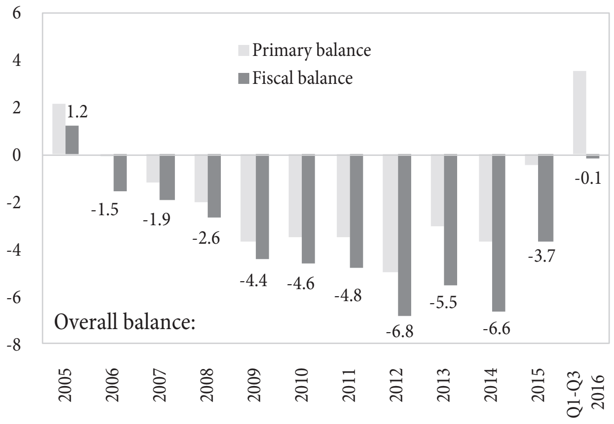
Due to such macroeconomic environment, monetary policy also faced strong challenges. Monetary policy easing in Serbia during the first years following the crisis could not be applied to a greater extent given the persistently relatively strong external shocks and volatile capital flows toward emerging economies, prevailing inflationary pressures and accumulated internal and external imbalances. With the first effects of the crisis, reduced foreign capital inflows and withdrawal of foreign currency (FX) deposits from the banking system, the dinar depreciated, despite significant interventions. This put an additional upward pressure on already high inflation expectations.

In early 2009, responding to the crisis, the National Bank of Serbia introduced a number of changes to regulations, now with a view to stimulating credit activity and enabling more favorable credit repayment terms. The three years that followed saw alternate periods of monetary policy easing and tightening. Monetary policy tightening was necessary as 2010 and 2012 experienced a vigorous rise in prices of primary agricultural commodities, which spilled over to food prices and inflation expectations of economic agents, which, in combination with depreciation pressures, caused a relatively strong rise in year-on-year inflation (Figure 4). In general, inflation in that period was volatile, mainly reflecting volatile food prices with a relatively high share in the consumer price index.

Monetary policy measures in Serbia as of 2012

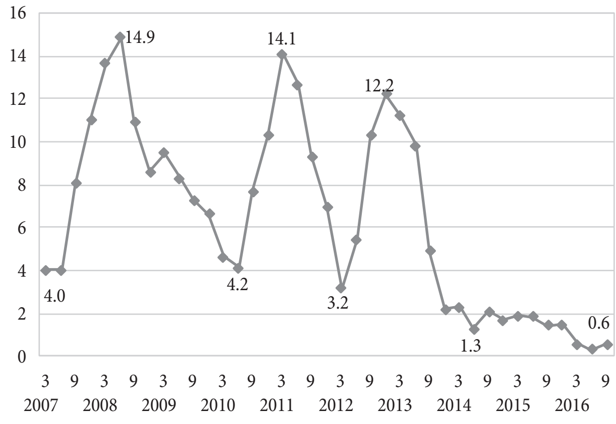
It was only when inflationary pressures were curbed on a more durable basis owing to restrictive monetary policy measures taken in the period June 2012-February 2013, relative stability of the exchange rate, adoption of the fiscal consolidation program and full coordination between monetary and fiscal policies, that the cycle of monetary

Figure 3: Fiscal deficit (in %)



Source: Ministry of Finance.

Figure 4: Year-on-year inflation rate (in %)



Source: SORS.

policy easing could ensue, with monetary policy supporting credit growth and economic recovery to a greater extent.

In that period, the global financial and economic crisis only further confirmed the magnitude of impact of external shocks and volatile capital flows, showing how easily the turmoil from the global financial and commodities markets can pass on to other countries, particularly those with pronounced internal and external imbalances. Being a small and open economy, Serbia is also exposed to external shocks which, by definition, it cannot control. However, the extent to which external shocks will affect us depends on whether we will respond in a timely and adequate way, i.e. on the type of measures we will take and on how effective they will be. For this very reason, the National Bank of Serbia carefully monitors and assesses developments in the international environment, reactions of other central banks and calibrates its own decisions, taking into account the effects not only on the achievement and preservation of low and stable inflation, but also on the preservation of financial and overall macroeconomic stability. This is why we combine our instruments – the key policy rate, open market operations, the reserve requirement ratio and interventions in the FX market in the manner ensuring a reduction in volatility and market stability, while at the same time contributing to the preservation of price and financial stability, and supporting the Government's economic policy to the extent this does not jeopardise the achievement of stability objectives.

Interest rates of the National Bank of Serbia and the importance of the model of liquidity absorption auctions, applied as of December 2012

The primary monetary policy instrument used by the National Bank of Serbia in the inflation targeting regime in order to achieve the inflation target is the key policy rate applied to one-week reverse repo transactions (liquidity absorption). From November 2012 to end-2016, the inflation target equalled 4±1.5%[1]. In November 2016, following detailed analyses and consultations with the Government of the Republic of Serbia, the National Bank of Serbia made the decision to lower the inflation target to 3±1.5% starting from 2017[2].

Decisions on changing the key policy rate are made based on the assessment of economic developments and the inflation projection, taking into account the time lag, i.e. the full effects on inflation are visible after around a year. Also, practice has confirmed that the most efficient inflation targeting regime is the one where temporary deviation from the defined target is allowed, in order to avoid sharp changes in monetary policy which can trigger macroeconomic shocks. This relates to cases of deviations caused by major and unexpected changes in prices of, for instance, primary commodities or products and services under direct or indirect influence of Government's decisions.

In parallel with its commitment to use the key policy rate as the primary monetary policy instrument, as many other central banks, the National Bank of Serbia also applies open market operations, a symmetric interest rate corridor aimed at better streamlining the movement in short-term interest rates in the interbank money market, required reserves and interventions in the FX market.

The primary function of open market operations conducted by central banks is to ensure an adequate degree of liquidity and an impact on money market rates, whose effect will depend on: the criteria for participation in auctions, i.e. choice of participants; the type of transaction – repo or outright; transaction maturity – shorter or longer; type of operation – a fixed or variable interest rate; scope of operation – limited or unlimited; securities that may be subject to trading and overall collateral policy; auction frequency – regular and extraordinary. The choice of each of these elements can determine the impact of operations on the management of liquidity and short-term money market rates.

In general, since the introduction of the new monetary policy framework (September 2006), interest rates in the domestic interbank money market fluctuated around the key policy rate, while the overnight Beonia moved below the key policy rate, reflecting the position of excess liquidity in the domestic banking system. On the other

1 See the National Bank of Serbia's Memorandum on Inflation Targets until 2016 at http://www.nbs.rs/internet/english/30/memorandum_ciljevi_do_2016_eng.pdf

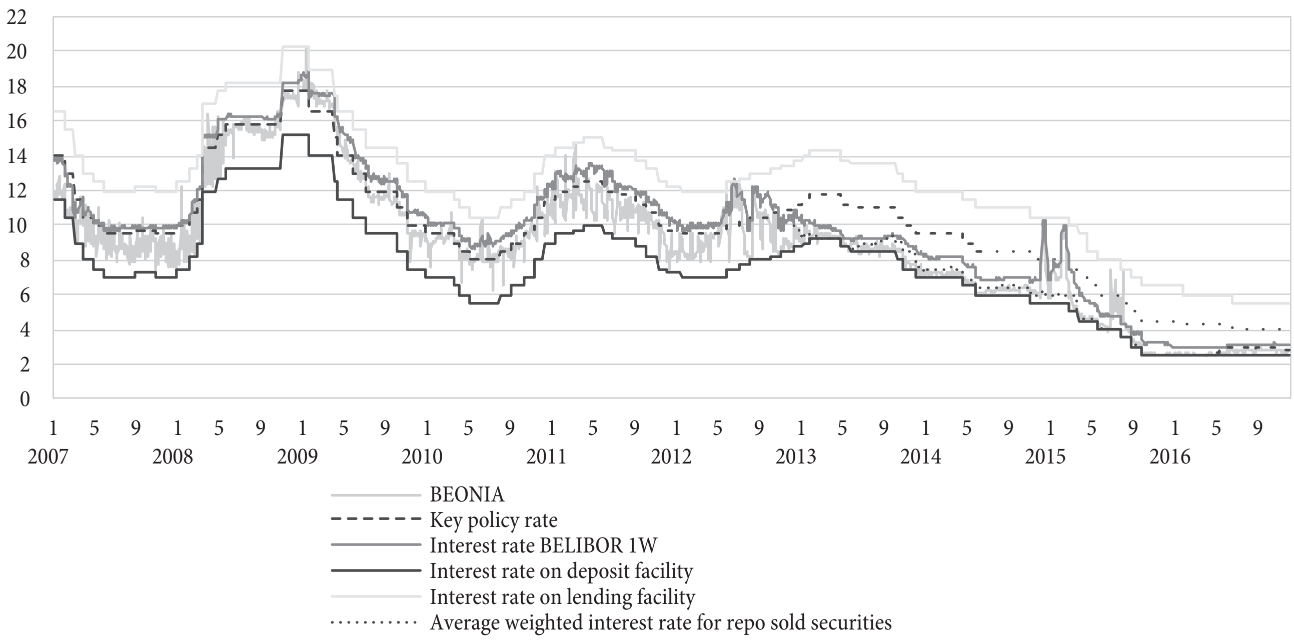
2 See the National Bank of Serbia's Memorandum on Inflation Targets until 2018 at http://www.nbs.rs/internet/english/30/memorandum_ciljevi_do_2018_eng.pdf

hand, interest rates of other maturities fluctuated evenly above the key policy rate due to embedded liquidity premia linked to longer maturities.

A shift in movement in money market interest rates ensued in June 2012 when, due to sterilisation of dinar liquidity through changed currency structure of required reserve allocations, some banks faced a temporary shortfall of dinar liquidity. Interbank rates recorded a rise, whereas Beonia exceeded the key policy rate, but remained within the upper half of the interest rate corridor. At the same time, longer-maturity rates came closer to the upper bound of the corridor (Charter 5). In July that year, the National Bank of Serbia reversed the direction of its main operations – it switched to liquidity provision operations. In addition to reversing the direction (from liquidity absorption to provision), it also changed the auction model – from fixed-rate to variable-rate auctions (the key policy rate being the minimum rate). Furthermore, instead of full allotment auctions, the National Bank of Serbia now declares the maximum amount at an auction (in this case the maximum amount to be ensured). Due to relatively high demand for funds at the first repo, liquidity provision auctions, from mid-August to mid-September the weighted average rate was significantly higher than the key policy rate. This affected the movement in Belibor rates in that period.

However, in the period that ensued, the government contributed to a significant rise in dinar liquidity of banks, which is why banks expressed almost no demand at repo auctions held in November and December. The absence of demand at auctions and elevated dinar liquidity that threatened to put pressure on the FX market (toward weakening of the dinar) led to a turnabout in mid-December, when the National Bank of Serbia reversed back to one-week repo liquidity absorption operations as its main open market operations. This, however, did not imply a shift to the erstwhile model of fixed-rate auctions and meeting of all banks' offers, but instead, the model of multiple-rate auctions was applied with a limited volume of liquidity absorbed. In such model of liquidity absorption auctions, the key policy rate is the maximum rate that could be accepted at an auction. Through this auction model, competition among banks is encouraged and a favorable impulse provided for lower money market rates. Truly, after that period, i.e. after a new shift to liquidity sterilisation operations, the banks' demand at auctions was almost constantly higher than the central bank's offer, whereas the rate achieved at auctions was at the levels close to the deposit facilities rate, so the desired effect on rates in the money market and the dinar credit market has been achieved. Belibor rates have moved from the upper half of the interest rate corridor into the lower half of the

Figure 5: Movements in the key policy rate and interbank money market rates (daily data, annually, in %)



Sources: Thomson Reutersand NBS.

corridor (Figure 5). In other words, if the vigorous decline in Belibor rates which ensues can be correlated with the changed central bank auction method, and it certainly can, one may conclude that by designing its instrument, the central bank contributed to the lowering of interest expenses for sectors with dinar loans linked to interbank money market rates.

In addition, due to the fact that not the total amount of dinar liquidity offered by banks is withdrawn at all times, banks are motivated to lend a portion of liquid funds to corporates and citizens, or to invest it into government securities. In the ensuing years, especially as of 2015, interbank competition has strengthened particularly in the market of household loans in dinars, undoubtedly as a result of a combination of factors – low interest rate environment, the achieved macroeconomic stability and the model of repo auctions.

Not less importantly, by switching to repo operations of withdrawal of liquidity at a variable interest rate and with a limited volume of liquidity withdrawn, the NBS was in a position – by carefully assessing and calibrating the key auction variables - the maximum amount of liquidity withdrawn and interest rates to be accepted at the auction – to absorb one part of the effects of short-term shocks on the FX market even more effectively. We will illustrate this by several episodes (November – December 2013, May 2014, March and May 2015, May and June 2016), when the National Bank of Serbia reacted to heightened volatility of capital inflows to Serbia by increasing the amount of liquidity withdrawn and the maximum rate accepted at auctions, thus alleviating the short-term pressures on the dinar exchange rate. In this way, the flexibility of this model of liquidity mop-up auctions increased the strength of this channel in alleviating excessive short-term volatility of the exchange rate in both directions, and the availability of a range of options is very important in conditions of volatile foreign capital inflows. Also important in this process is the liquidity projection based on all relevant factors (including among other, the assessment of influence of autonomous factors during two required reserve maintenance periods), and the result of the liquidity projection is the starting point in determining the maximum amount of liquidity to be withdrawn at auctions. As in all other cases, expert judgment is an additional important factor in decision making and calibrating auction parameters. Models, no matter how sophisticated they may be, cannot fully substitute for the complementary role and importance of expert judgment.

Given that banks' demand at repo auctions almost always exceeded the NBS's offer, which is actually the goal, the average auction rate was by some 2 pp lower than the key policy rate, except that the spread narrowed in time with the narrowing of the interest rate corridor. Also, given that from the start of application of the variable rate method at liquidity mop-up auctions (December 2012) interest rates in the interbank money market fell by 1.5 – 2 pp, mirroring the average repo rate[3], interest expenses of household dinar loans, whose rates are linked to interest rates in the interbank money market[4] embarked on a downward path, and this happened almost half a year before the National Bank of Serbia launched its monetary policy easing cycle (May 2013).

It is important to emphasize that the maximum effect of the auction model was used both for interest rates in the dinar lending market and for strengthening the effects of this channel in alleviating the short-term pressures on the FX market, especially the ones arising from volatile capital flows. One of the forthcoming analysis of the National Bank of Serbia will focus exactly on the assessment of strength of the interest rate channel. Owing to the symmetric corridor of interest rates on lending and deposit facilities, within whose boundaries the interbank money market rates actually move, the change in the key policy rate is always followed by the change in the average interest rate achieved at repo auctions. The process of cutting the key policy rate, down to its lowest, was followed by the narrowing of the interest rate corridor – from ±2.5 pp in 2012 to ±2.0 pp (May 2015), followed by two additional corrections, by 25 bp each, to 1.5 pp relative to the key policy rate (February and July 2016). These measures were

3 The exception are the first three months of 2015 when, due to temporary shrinking of banks' excess liquidity, interest rates in the interbank money market went up. In the period from 18 February till the beginning of April, repo auctions were not held. Lesser deviations which ensued resulted from the narrowing of the interest rate corridor and, in some periods, also from the effort to amortize pressures in the FX market.

4 BELIBOR interest rates moved from the upper half of the interest rate corridor to the lower half, i.e. they fell below the key policy rate.

a logical consequence of a more sizeable lowering of the key policy rate and the National Bank of Serbia's efforts to additionally strengthen the transmission of monetary policy measures through the interest rate channel in the dinar market which is gradually expanding. The interest rate corridor should ensure stability without limiting the development of the interbank market. Bearing in mind the level of the key policy rate, we may say that the existing corridor of interest rates enables efficient transmission of monetary policy signals, without limiting the development of the interbank market.

Required reserve – brief chronology of changes

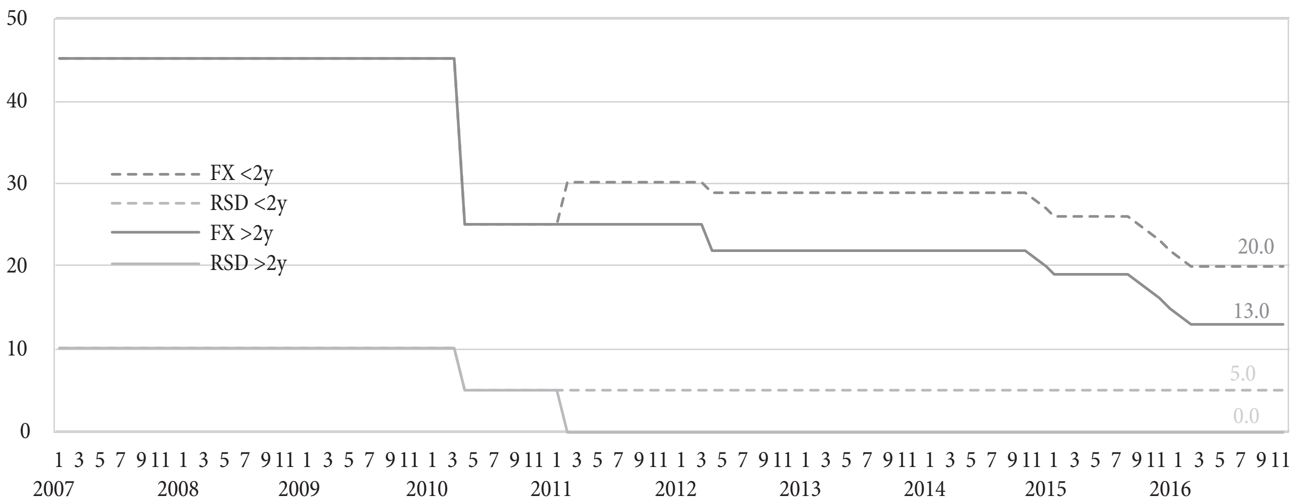
In Serbia, pre-crisis, required reserve ratios applied to FX reserving base were rather high (Figure 6), reflecting the market conditions prevailing in that period and movements in the lending market. The buffers created in that period enabled the release of the needed liquidity during the crisis by means of lowering the required reserves, and thus alleviating the negative effects entailed by the crisis. The lowering of the required reserve ratios started in April 2010 and as of February 2011, the National Bank of Serbia put in place the policy of differentiating required reserve ratios by maturity of sources of funding – to those up to and over two years.

The policy of differentiating required reserve ratios by currency and maturity of sources of funding favours dinar and long-term sources of funding, i.e. supports the dinarisation of the financial system and more stable sources of funding. Such design of the instrument is aimed at preserving financial stability of the system.

Since 2014 we applied two cycles of lowering required reserve ratios, including the change in the structure of dinar allocations. The first cycle was applied from November 2014 until January 2015, when required reserve ratios were lowered in three iterations by 1 pp each (the total of 3 pp), with concurrent increase of required reserve allocations in dinars. The second cycle of required reserve relaxation was implemented from September 2015 until February 2016, when required reserve ratios were lowered in six iterations by a total of 6 pp. After the last round of ratio cuts, the required reserve ratio on banks' FX sources of funding with maturity up to two years is 20%, and to sources with maturity over two years – 13%. In this way, the freed foreign currency and dinar liquidity of banks amounted to nearly EUR 1 bln.[5] This strengthened the effect of continuous lowering of the key policy rate which the National Bank of Serbia applied since May 2013. The main goal of adopted measures was to support the growth of lending by freeing banks' credit potential. In emerging economies where the key policy rate and required reserve ratios were high, central banks were able to use standard monetary policy instruments in attaining financial stability objectives and did not have to resort to non-standard measures.

The required reserve ratio applied to dinar reserving base is much lower than the ratio applied to FX base, as part

Figure 6: Required reserve ratios on dinar and FX reserving base (in %)



Source: NBS.

5 The release of dinar liquidity was the result of a requirement to allocate dinar portion of required reserves.

of support to the strategy of dinarisation of the domestic financial system and equals 5% for bank's liabilities with maturity up to two years, while tno reserve requirements are applied to liabilities maturing in over two years.

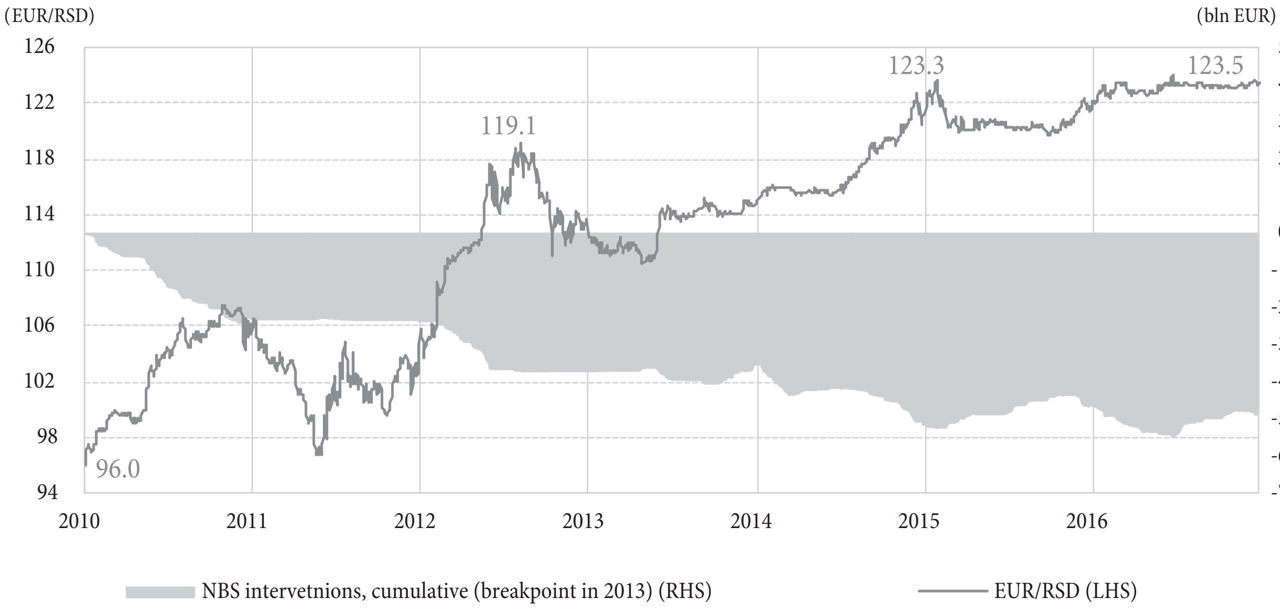
Interventions in the FX market – a few notes

Like many other central banks, the National Bank of Serbia uses interventions in the FX market as an auxiliary monetary policy instrument in the inflation targeting regime. However, new business conditions and lessons learned during the crisis have led to a view on a global level, where movements in the FX market are not observed exclusively in the context of their influence on inflation (the pass-through effect of the exchange rate is particularly pronounced in dollarised/euroised economies), but also in terms of their effect on the financial and thus the overall macroeconomic stability.

Therefore, in making monetary policy decisions we take into account the fact that in an euroised economy any significant changes in the exchange rate in terms of currency depreciation entail numerous negative effects such as: effects on company business and investment; increase in dinar equivalent value of household and corporate liabilities which are predominantly foreign currency-indexed; credit risk to a bank – in terms of reduced ability of clients to meet their liabilities. Also, in cases when the FX market is shallow, even smaller changes in the volumes of foreign currency demand/supply (which may result from numerous factors) may push the exchange rate strongly in either direction. That is why the movements in the FX market are carefully monitored and assessed, i.e. we carefully evaluate the character and intensity of pressures on the exchange rate – assessing primarily whether those are temporary shocks or pressures of a long-term nature. We do not intend to defend by FX interventions any predetermined level of exchange rate or to impact the trend of currency appreciation or depreciation. We try to alleviate the consequences of temporary shocks and to reduce short-term oscillations of the exchange rate, intervening in both directions, both by buying and selling foreign currency in order to make business conditions more stable and predictable for market participants. More lasting pressures on the exchange rate may arise only in case of a severe disturbance of external balance. It is clear that in such circumstances the problem could not be solved by interventions, but only by structural reforms aimed at additional strengthening of the competitiveness of the domestic economy.

History has taught us that the undervaluation of the dinar, an alleged universal solution not so rarely brought up in various circles, is not a recipe for growth sustainability (it is generally known that there is no such panacea,

Figure 7: Exchange rate trends and interventions of the National Bank of Serbia in the IFEM



Source: NBS.

except stability, and the advocates of the aforementioned solution offer no rationale for their proposal), given that it contributes to a reduction of external imbalance only in the short run, as was the case in 2009. In other words, it is only growth in productivity, together with new investment, that can help us stay on the path of sustainable growth and rise in employment.

It is evident that the exchange rate volatility decreased over the last four years (Figure 7), which is the result of a combination of reduction in internal and external imbalances and determination of the National Bank of Serbia to conduct a consistent policy of interventions in the FX market and to alleviate the excessive short-term oscillations of the exchange rate in both directions. This is evidenced by the fact that, in the course of 2015, the National Bank of Serbia net bought EUR 520 mln in the FX market, while during 2016, which was characterised by turbulences in the international financial market, it net sold EUR 160 mln. In total, during those two years, it net bought EUR 360 mln. It should also be noted that the trend of moderate depreciation of the dinar, in place since mid-2014, has been neither reversed nor discontinued in this way.

Impact of monetary policy measures on inflation and economic activity

The primary objective of the National Bank of Serbia is the achievement and maintenance of price stability. Without prejudice to its primary objective, the National Bank of Serbia contributes to maintaining and strengthening of the stability of the financial system. Without prejudice to these objectives related to stability, the National Bank of Serbia supports the pursuance of economic policy of the Government of the Republic of Serbia, operating in accordance with the principles ofmarket economy (Article 3 of the Law of the National Bank of Serbia[6]). These are at the same time the key criteria for evaluating the results and support which the central bank provides in improvement of the business ambience and smooth operation of the financial system.

6 See the Law on the National Bank of Serbia at http://www.nbs.rs/internet/english/20/laws/law_nbs.pdf.

The impact of monetary policy measures on inflation and economic activity may be better comprehended and evaluated through the key monetary policy transmission channels, i.e. through their impact on interest rates, exchange rate, credit activity and expectations of economic agents. The cost effect of monetary policy measures on inflation and economic activity is realised through effect on the exchange rate and interest rates, the demand effect is realised via the credit channel, while the effects through the expectations channel are realised through both costs and demand.

Achieved and maintained low and stable inflation

The National Bank of Serbia embarked on a cycle of monetary policy relaxation in May 2013, when the key policy rate measured 11.75%. The decision to cut the key policy rate by 50 basis points was guided by lower inflationary pressures owing to past restrictive monetary policy measures, a drop in prices of primary agricultural commodities in the international and domestic markets, low domestic demand, the achieved relative stability of the exchange rate and lower inflation expectations. In addition, it was expected that the fiscal consolidation programme that had been adopted in October would yield more visible results and contribute to lowering of year-on-year inflation in the period ahead. Owing to this, after the key policy rate cut by 50 basis points in May and another cut in June by 25 basis points, monetary policy easing continued in the last three months of 2013 by monthly cuts of 50 basis points each, so that since May 2013 the key policy rate was lowered by a total of 275 basis points.

Monetary policy easing continued in 2014, with due caution, bearing in mind possible negative effects of heightened uncertainties in the international financial markets on the emerging economies, including Serbia. Uncertainties were mainly driven by the expectations that the FED would gradually reduce the volume of its quantitative easing. In the course of 2014 the key policy rate was cut three times, by 50 basis points each – in May and June in response to relatively strong disinflationary pressures of low aggregate demand and low cost pressures, and then again in November, to 8%, after the Government's decision to reduce public sector wages and pensions.

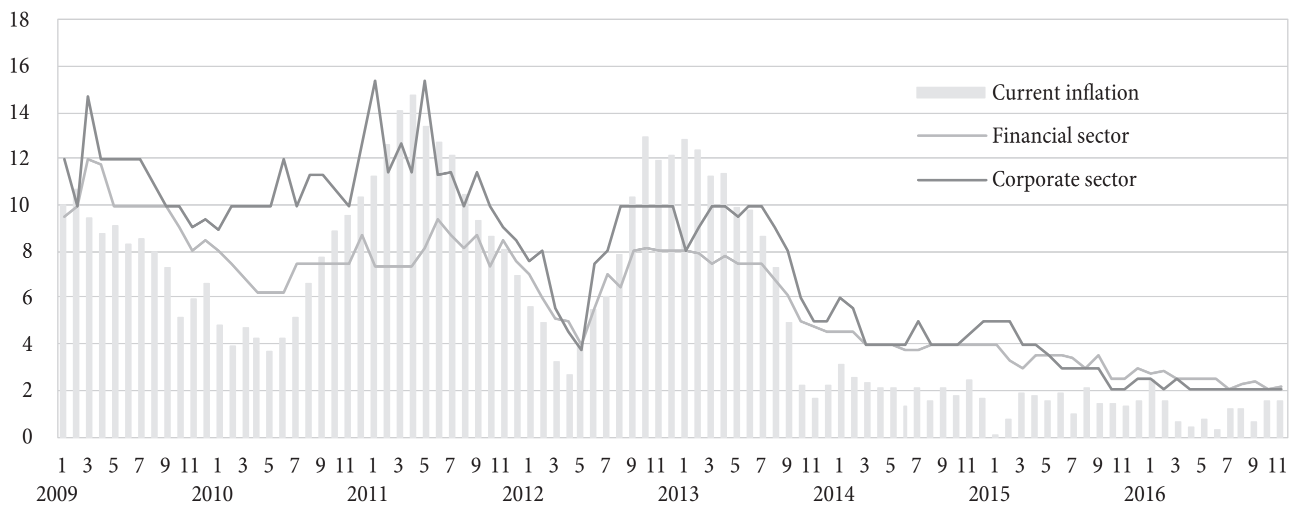
A more significant monetary policy easing in 2015, when the key policy rate was lowered by a total of 350 basis points (to 4.5%) was enabled by: low inflationary pressures stemming from the majority of domestic factors, successful implementation of the fiscal consolidation programme adopted in late 2014 and the conclusion and successful implementation of a standby precautionary arrangement with the IMF. Such easing, despite turbulences in the international financial market due to diverging monetary policies of leading central banks and news on the slowdown of the Chinese economy, was also possible owing to the strong drop in global oil prices and prices of primary agricultural commodities. The undertaken fiscal consolidation measures and structural reforms, as well as the full coordination of monetary and fiscal policy, contributed to the reduction of internal and external imbalances and improvement of conditions for sustainable economic growth.

Trimming of the key policy rate continued in 2016, with due caution, bearing in mind primarily the effects of the past monetary policy easing, the expected inflation movements in the period ahead and the prevailing uncertainties in the international environment. During this period, the key policy rate was cut down by a total of 50 basis points, to 4%, its lowest level since the introduction of the inflation targeting regime.

By a cautious monetary policy and, later on, also by its successful coordination with the fiscal policy, in the course of one year inflation was lowered by 10 percentage points – from 12.2% at end-2012 to 2.2% at end-2013. Over the next three years, we continuously maintained low inflation. Thus, according to the achieved price stability, Serbia became comparable with other European countries. As already noted, low inflationary pressures in the period observed resulted from a majority of domestic factors, primarily restrictive fiscal policy, ensured relative stability of the exchange rate and low and anchored inflation expectations of economic agents, as well as low cost pressures from the international environment. Low inflation is not only the result of a drop in prices of oil and other primary commodities as evidenced by the fact that some countries (which did not reduce their imbalances) have recorded high inflation in the same period, mainly because of the depreciation of their national currencies amid geopolitical tensions, macroeconomic imbalances and higher volatility of capital flows.

Owing to low inflationary pressures, inflation expectations of the financial and corporate sectors (both one and two years ahead) were lowered and anchored within the inflation target band (Figure 8). And vice versa, stable and anchored inflation expectations facilitate the maintenance of low and stable inflation. The fact that inflation expectations of the financial and corporate sectors have been moving between 2% and 3% for quite some time was one of the factors in favour of the lowering of the inflation target to 3%±1.5 pp as of 2017.

Figure 8: Current inflation and inflation expectations 12 months ahead* (y-o-y rates, in %)



* Ninamedia agency since December 2014, and Ipsos and Gallup in the prior period. The survey was not conducted in November 2014.

Sources: Gallup, Ipsos/Ninamedia and NBS.

By carefully analysing and judging the effects of change of the inflation target on economic trends in Serbia, the National Bank of Serbia, in coordination with the Government of the Republic of Serbia, assessed that necessary conditions were in place for lowering the inflation target for 2017 and 2018 from 4% to 3%, while keeping the target tolerance band unchanged (±1.5 pp). The key arguments in favour of the lowering of the inflation target are the following:

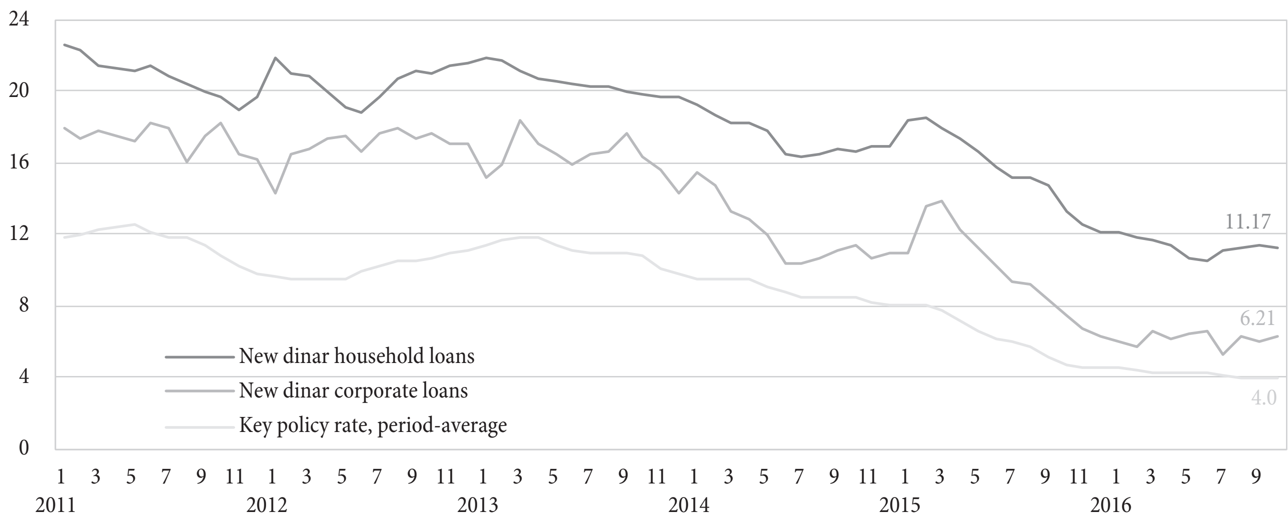
- over the past three years inflation was consistent with the proposed target (3±1.5%), and in some periods, it even moved below the target;
- the financial and corporate sectors already expect that inflation will move around 2-3% in the following two years, which is close to the proposed target and facilitates its achievement;
- administered price growth was much slower than expected. Since 2013 they grew mainly at around 10%, adding some 2 percentage points to inflation. Over the last two years, administered price growth decelerated significantly and could move around 2% in 2016, with a 0.4 percentage points contribution to inflation. Since this change is the result of the commitment of the Government of the Republic of Serbia to resolve inefficiencies in the operation of public enterprises primarily by reducing operating costs, we believe that relatively low growth of administered prices will continue in the coming period;
- stability in the FX market and lower inflationary pressures on that account resulted from a significant reduction of external and internal imbalances, and lower risk of investment in Serbia, which was achieved by a successful coordination of monetary and fiscal policy, and particularly by the successful implementation of fiscal consolidation.

The width of the target tolerance band (±1.5 pp) should ensure the necessary flexibility of monetary policy, i.e. stability of monetary conditions. In our case, uncertainties are mainly generated by external factors. This primarily concerns the volatility of global prices of primary commodities, especially energy and agricultural commodities, which may induce higher volatility of headline inflation in Serbia. In addition, being a small and open economy, Serbia remains vulnerable to external shocks, which, by affecting the risk premium and exchange rate, may impact inflation. For these reasons, the target tolerance band was kept unchanged at ±1.5 pp.

Support to lending

The cycle of key policy rate cuts initiated in May 2013, coupled with lower macroeconomic uncertainties and risks, was the key factor that contributed to the lowering of interest rates on corporate dinar loans by around 10 pp since 2013 (Figure 9). Since the fall of interest rates on dinar loans was sharper than the key policy rate cut, one part of this fall undoubtedly resulted from the

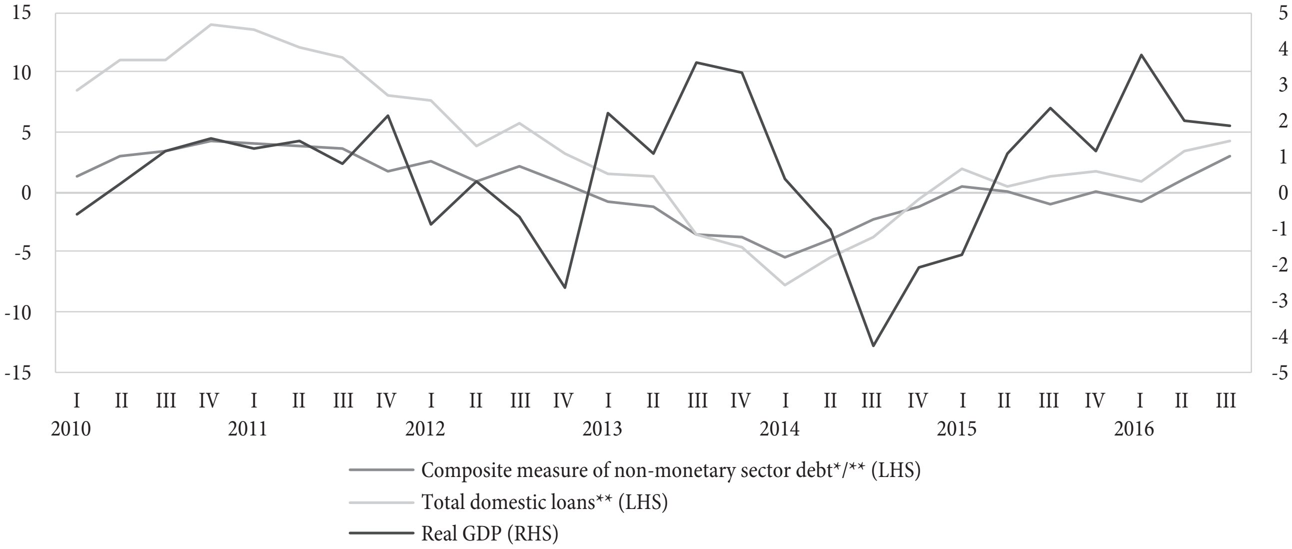
Figure 9: Interest rates on dinar loans approved to private sector (annually, in %)



* Excluding revolving loans, current account overdrafts and credit card debt.

Source: NBS.

Figure 10: Credit activity of banks and GDP (y-o-y rates, in %)



* As an indicator of total borrowing, it includes domestic loans to the private sector, public enterprises and local authorities, and cross-border borrowing of enterprises and households.

** Excluding the exchange rate effect.

Sources: NBS and SORS.

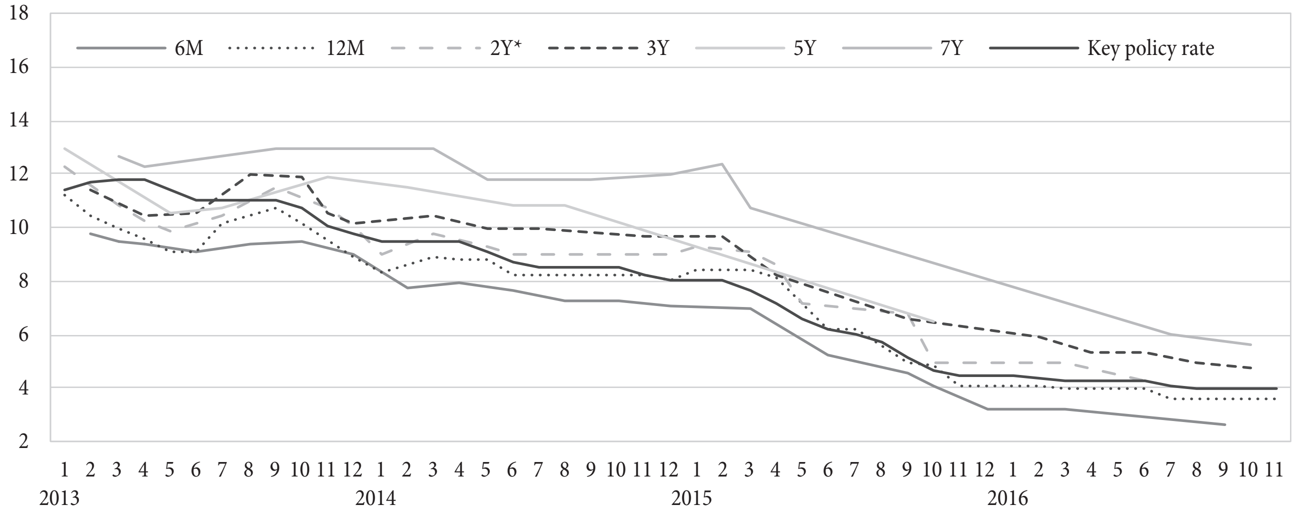
strengthened confidence in macroeconomic fundamentals and increased interbank competition. Lower interest rates in the international money market, lower country risk premium and reduction of required reserve ratios led to the fall in rates on FX loans, by more than 4 pp. Judging the effects of monetary policy measures on economic activity, it is important to note that the fall of interest rates in the domestic and international money market reflected not only on the price of new loans, but also on lower costs of financing of existing loans. From the standpoint of the corporate sector, the fall in interest rates means lower costs of doing business and contributes to the improvement of the financial result and raising funds for new investment. From the standpoint of households, lower interest rates mean higher disposable income and consequently, higher spending. This is a direct effect of the interest rate channel through which the National Bank of Serbia contributed to lower costs of doing business and,thus, also to a gradual reduction of the negative output gap of the economic activity and lowering of the deflation risk.[7]

A sharp drop in interest rates on loans, together with the funds released on account of reductions in reserve requirements (see section 4.2), facilitated the recovery of lending which gained 1.8% (above our expectations) in 2015. Lending continued to increase in 2016, accelerating to 3.9% y-o-y in November. Growth was recorded primarily owing to the effects of past monetary policy easing and faster-paced economic growth, and despite more intensive activities of banks to resolve the issue of NPLs through the sale and write-off of some of the receivables. By contrasts, banks' increased engagement on NPL resolution today means lower bank provisioning for this purposes in the future, which increases potential for new lending.

Growth in investment loans to corporates, whose volume doubled in 2015 relative to 2014, is seen as an extremely favorable tendency in the loan market, especially in the context of support to the economy. A high level of these loans was recorded in 2016 as well, which is why their share in the stock of loans approved to corporates edged up from 31% (2014) to 34% (2016). Considerable growth in new investment corporate loans suggests that the rise in private investments is now financed from bank loans more than it was before. Together with macroeconomic stability, growth and higher diversification of FDI, and improvement of the business and investment ambience

7 High degree of correlation of interest rates on new dinar loans to corporates and households and interest rates in the interbank money market, amounting to over 95%, clearly confirms that the interest rate channel is working in Serbia. The fact that the correlation was somewhat above 50% until end-2012, while reaching over 95% in the period thereafter is a confirmation that the channel has strengthened in over the last few years.

Figure 11: Interest rates in the primary market of government securities – annually, in %



* Excluding coupon securities with the rate linked to the NBS key policy rate.

Source: Ministry of Finance.

after the adoption of reform laws, this helped private investments to become the main driver of economic growth in 2015 and 2016, with expectations that the trend will continue into the coming years. Paving the way for lower interest rates and releasing a portion of the credit potential, while at the same time ensuring and maintaining price and financial stability, the National Bank of Serbia gave full contribution to the creation of favorable business and investment environment.

Owing to the National Bank of Serbia's trimmed key policy rate, considerable fiscal adjustments and the government's reduced need for funding, narrowing of external and internal imbalances, and decline in the country's risk premium, the costs of the government's dinar borrowing were gradually reduced, most notably since the beginning of 2015. Since that time, within a period of less than two years, interest rates on dinar government securities recorded a fall of around 5 pp (Figure 11), which reflected positively on the government's fiscal deficit and the country's lower risk premium. This is certainly an example of true synergy and full coordination of monetary and fiscal policy measures.

Stability of the financial system is preserved, results of the NPL Resolution Strategy are visible

Despite turbulences coming from the international environment, the domestic financial system remained stable and resistant to shocks, which means that the National Bank of Serbia has met its legal objective.[8] Despite numerous challenges, the Serbian financial sector is stable and resistant to turbulences coming from the local and international environment, as confirmed by the stress-testing, which the National Bank of Serbia conducts regularly (quarterly), applying extremely unfavorable scenarios.[9] Banks in Serbia have a satisfactory level of liquidity, as confirmed by the movements of main liquidity ratios and the maturity structure of assets. The average monthly liquidity ratio of the banking sector remained above 2 during 2016 (1.0 being the regulatory minimum), while liquid assets accounted for 35.9% of total balance sheet assets as at 30 November 2016. The domestic banking system is highly capitalised, as attested by the capital adequacy ratio of around 21%, which is considerably above the level prescribed by both the international and domestic regulatory frameworks, and among the highest in the region. Through complex Special Diagnostic Studies (SDS), implemented during 2015 in cooperation with international financial institutions, the asset quality review was conducted in Serbia. The SDSs were based on the methodology used for asset quality review in the territory of the European Union,

8 Without prejudice to its primary objective, the National Bank of Serbia shall contribute to maintaining and strengthening of the stability of the financial system.

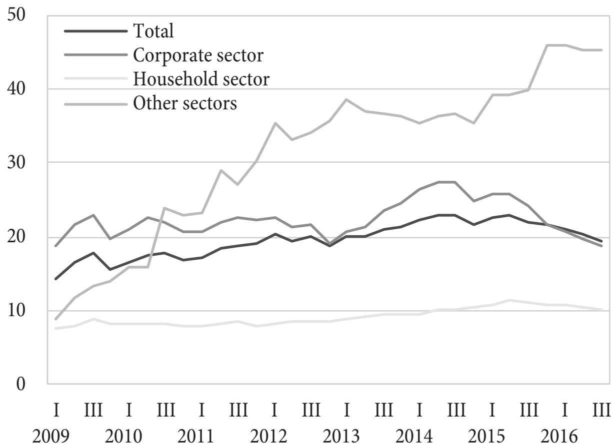
9 See the part on the function of financial stability at http://www.nbs.rs/internet/english/90/fs.html.

conducted in 2014 by the European Central Bank, though it was additionally tailored to adjust for local specificities. Overall, after all corrections were implemented, the SDSs did not identify capital shortfalls in any of the 14 banks included in the studies, which accounted for 88% of the banking sector assets. This additionally confirmed the high capital adequacy of the Serbian banking sector and its resistance to shocks.[10]

A key risk in the financial system of the majority of countries is the relatively high level of NPLs. Serbia entered the crisis with the NPL share in total loans of around 11% (Figure 12), while as soon as 2009 this share exceeded 14%. The ensuing growth in NPLs during the crisis was relatively similar to that of the neighbouring countries, but because of the higher starting point, the share exceeded 20% in the first quarter of 2012. Although the current level of NPLs is not a threat to financial stability, owing to the high coverage with loan loss provisions (Figure 13), NPL resolution required a systemic and proactive approach which followed in 2015. Therefore the Serbian Government and the National Bank of Serbia, together with international financial institutions, worked hard to create conditions for an efficient resolution of NPLs. To this end, the NPL Resolution Strategy was developed and adopted by the Serbian Government in August 2015. At the same time, two action plans for the implementation of the Strategy were drafted, of which one is the action plan of the National Bank of Serbia. The National Bank of Serbia implemented all activities from the action plan – all of them within the deadline, and some even before. The implementation of the Strategy gave results and over the past year, the share of NPLs was cut by more than 3.0 pp to 18.9% in November, which is the lowest NPL share in almost four years. Such pronounced fall in the NPL share can be linked both to direct effects of the measures in the Strategy, the aim of which is to reduce NPLs, and to its indirect effects such as creating room for higher credit growth which was additionally initiated by accelerated economic activity. The decline in the NPL share was particularly evident in sectors which were hit the hardest during the crisis (such as manufacturing and construction). In the period ahead, we expect the share of NPLs to continue on the downward path, even more so bearing in mind the improved financial position of the corporate sector and the anticipated growth in credit activity on account of faster economic growth.

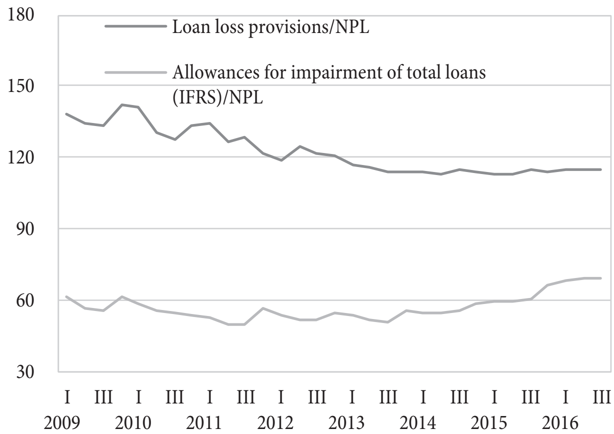
The National Bank of Serbia, as the banking system regulator, constantly monitors and analyses how banking regulations are developing, and what the future might bring. On this path, we strive to align our regulatory framework to the greatest degree possible with the EU *acquis communautaire* and the best international practice and standards. With this goal in mind, in 2016 we stepped up the efforts on establishing a regulatory framework in compliance with Basel III standards, i.e. with provisions of the relevant EU regulations on credit institutions (CRR and CRDIV). Having conducted a gap analysis and a quantitative impact study of the effect on

Figure 12: Share of NPLs in total loans (in %)



Source:NBS.

Figure 13: NPL coverage (in %)



Source: NBS.

10 For more on SDSs see http://www.nbs.rs/internet/english/55/55_0/index.html.

capital and liquidity, in December 2016 a set of regulations was adopted implementing Basel III standards in Serbia.

In addition to the fact that stability has been maintained and a set of reform regulations adopted, it should be noted that the financial system expanded during 2016. Once the Bank of China Srbija was granted the operating license, the Serbian baking system gained the 31st bank, whose owner is the fourth largest credit institution in China and one of the five top banks in the world by the volume of its market transactions. The plan is to make the bank a hub for the Balkans, and Eastern and Western Europe. One domestic institution was the first to be granted a license for electronic money issuance, while o eight more licenses were issued for payment services provision, thereby introducing a new type of payment service providers in the Serbian market.

As financial stability is an extremely important segment of the overall stability, and as this function has constantly been improved over the past four years, in one of the future papers we will discuss in more detail this function, its development, systemic risk monitoring, calibration of macroprudential policy instruments[11]and the need to raise public awareness of the pre-emptive role of certain instruments and measures.

At the end and at the beginning – dinarisation

The nexus of the interests of all – those who borrow and those who save, exporters and importers, investors and consumers, is stability. The greatest contribution of the National Bank of Serbia to the local economy is the maintenance of price and financial stability. As a responsible regulator, we dedicate special attention and efforts to the factors that contribute to stability and a further increase of monetary policy efficiency – increasing the degree of dinarisation, keeping inflation expectations anchored and strengthening the credit channel on account of the lowering of NPLs.

In order to endorse the use of the local currency in the domestic financial system, the Serbian Government and the National Bank of Serbia signed the Memorandum on the Strategy of Dinarisation in 2012, which has three pillars.[12] Measures within the *first* pillar include activities aimed at establishing a macroeconomic environment characterised by low and stable inflation, stable financial system and sustainable economic growth. Measures within the *second* pillar focus on actively promoting dinar instruments and markets, with an emphasis on the development of the market of dinar securities. Developing the dinar yield curve is the backbone of this pillar. The *third* pillar aims to improve the existing foreign exchange hedging instruments in the non-banking sector and prevent further strengthening of those risks.

The first pillar, made up of monetary and fiscal policy measures geared at strengthening the macroeconomic environment by delivering low and stable inflation and durable economic growth – is the most important one. It is also the pillar within which continuous results have been recorded, which reflected on the rise in dinarisation of both loans and deposits.

On the side of *lending activity*, the rise in dinarisation is best perceived through an increase in the share of dinar loans to households from 35% at end-2012 to around 47% in November 2016. Dinarisation of household lending was particularly intensive during 2015 with more than two-thirds of new loans approved in dinars, only to accelerate further in 2016, when more than 75% of new loans to households were in dinars. The last months of the year were characterised by the development of dinar products. Banks started offering dinar housing loans with a 30-year repayment period and the interest rate of below 5% which, until only recently, were the rates for FX-indexed loans. With the economy recovering further and inflation remaining low and stable, with a relatively stable exchange rate, we expect that corporates too will rely increasingly on dinar loans (currently accounting for around 22% of total corporate loans).

On the *deposit* side, dinar savings of households almost tripled in the last four years and now amount to almost RSD 50 bln, while the degree of dinarisation of total deposits increased by 6 pp (from 8.8% at end-2012 to 15.0% at end-November 2016). As far as the corporate

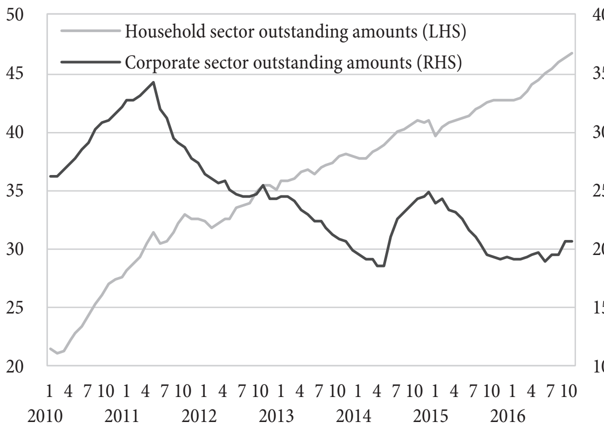
11 See the Macroprudential Framework at http://www.nbs.rs/internet/english/18/18_5/index.html.

12 See the Memorandum on the Strategy of Dinarisation at http://www.nbs.rs/internet/english/30/MemorandumVladaDinarizacija_20120406_eng.pdf.

sector is concerned, dinar deposits have for xsome time already accounted for around 50% of total deposits. Thanks to the government's commitment to increasing the issuance of dinar securities, the share of the dinar in the currency *structure of public debt* is today much larger than before the crisis (the share of the dinar rose from around 2.5% in 2008 to 21.5%), and the dinar yield curve has been extended to ten years. An important step in the development of the dinar capital market and the process of dinarisation is the fact that the EBRD issued the first dinar bond in the domestic market with a three-year maturity, and the funds secured in this way will be used for extending dinar loans to corporates.

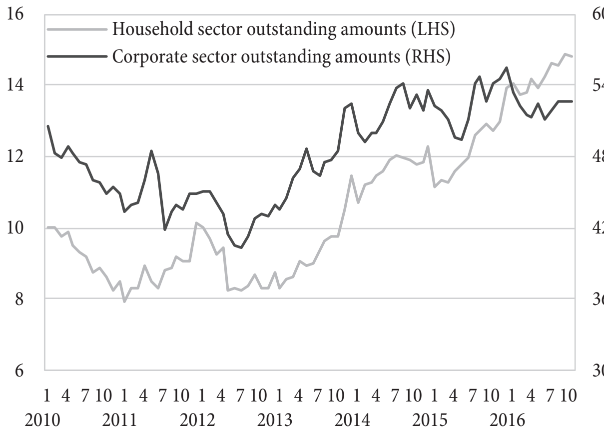
The achieved and preserved relative stability of the exchange rate has been and will remain one of the important pillars for the improvement of the business and investment ambience. Although pressures toward increasing the fluctuations of the nominal exchange rate are possible in the short term on account of volatility in the global financial and commodity markets, which can reflect on capital flows, market liquidity, the price of money, and economic growth of developed and developing countries, they can be counteracted by available FX reserves which, according to all criteria, are at the adequate level.[13] We emphasise that this is only short-term, because it is certain that the leading central banks and, in general, bearers of economic policy in those countries would react should there be any indications of a situation which would imply long term instabilities. In addition, the relative stability of the exchange rate in Serbia is also supported by narrowed external imbalances and the recovery of the private sector, i.e. increased production and export (FX) inflows.

Figure 14: The share of the dinar in total bank receivables from corporates and households (in %)



Source: NBS.

Figure 15: The share of the dinar in total bank deposits from corporates and households (in %)



Source: NBS.

As dinarisation is one of the strategic projects which has already produced first results, we believe it is extremely important to continue the process. Because of its significance, in one of the future papers we will look more closely into this topic in an effort to use this manner, in addition to other forms of communication, to bring attention to the importance of dinarisation and investment possibilities in the dinar market, which has already been recognised by those citizens who tripled their dinar savings over the past four years, banks which included in their offer dinar housing loans with a 30-year repayment period and considerably lower interest rates (below 5%), as well as international financial institutions which issued the first three-year dinar bond.

Conclusion

Risks from the international environment will remain a key challenge to the monetary policy of emerging countries in the coming period. Global growth has not recovered yet; it is uneven and unfolding against the backdrop of unstable financial and commodity markets and amidst geopolitical tensions. Another unknown factor is the pace of the recovery of prices of primary commodities, notably oil, in the period ahead. Following a meeting in late

13 See the part on the function of financial stability at http://www.nbs.rs/internet/english/90/fs.html.

November, at which OPEC members agreed to scale down production, some increase in oil price ensued. However, the pace of its recovery will depend on the offer as well as on global demand, which is still recovering slowly.

Monetary policies of the leading central banks are divergent and it is still not possible to perceive their effects on the global financial infrastructure in the coming period. Uncertainty in the international financial markets is such that it can have an adverse effect on capital flows toward emerging countries, Serbia included, making them unpredictable and volatile. There are uncertainties regarding the movement of inter-currency ratios, liquidity in the global market, relevant spreads in the money market, yields in the capital market. Ratios between all of these variables are complex and their mutual effect must be taken into account. In the global financial architecture, one of the important lessons the crisis taught us turned out to be that central banks should systemically approach the calibration of instruments they will use to mitigate risks in the financial system and prevent the occurrence of new risks. It is certain that global risks may force us to contemplate a more global approach to designing measures for the reduction of vulnerability of developing countries, given that they are exposed to similar challenges.

Because of such future ambience, and in order to enable Serbia to successfully meet the challenges that the bearers of monetary policy will face, it is paramount that we continue to boost domestic macroeconomic fundamentals, reduce internal and external imbalances and improve the local business ambience. This is the only way to ensure sustainable resilience of the Serbian economy to shocks from the international environment, and reduce the sensitivity to the availability and the price of foreign sources of funding.

In terms of maintaining price and financial stability, results achieved confirm that over the past three years the National Bank of Serbia was successful in attaining its legally defined goals. Inflation was maintained low and, in year-on-year terms, it did not exceed 2.1%. Bearing in mind the challenges that marked the post-crisis period, especially in the international environment, achieving those results was no easy task. We estimate that in the coming years, inflation in Serbia will remain low and stable and move within the bounds of the new, lower target tolerance band of 3%±1.5 pp.

The achieved and preserved price and financial stability in conditions of risks from the international environment most certainly indicates that the implemented framework of the National Bank of Serbia's policies was adequately structured and has yielded desired results. The high degree of correlation of interest rates on new dinar loans to corporates and households and interest rates in the interbank money market of over 95% confirms beyond doubt that the interest rate channel in Serbia is functioning. Inflation has been low and stable for three years, interest rates on new and existing loans fell sharply since May 2013, loan availability increased and lending rose, relative stability of the exchange rate has been secured and inflation expectations anchored – all of this confirms that the National Bank of Serbia's measures have contributed significantly to the creation of more favorable conditions for running businesses and investing, for household consumption and saving, thereby enabling sustainable economic growth. Dinar housing loans with a 30-year repayment period and more favorable interest rates (below 5%), as well as international financial institutions which issued the first three-year dinar bond, attest to the participants' confidence in the long-term sustainability of achieved stability.

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has been serving as Governor of the National Bank of Serbia since August 2012. In early 1992, she was employed by Prištinska banka a.d., part of the Beogradska banka system, as Deputy General Manager and continued to work in the banking industry until 1999. From March 1998 until October 2000, she served as Minister of Economic and Ownership Transformation in the Serbian Government. Since 1999 until her appointment as Governor, she worked in the Telecommunications Company "Telekom Srbija", initially at the position of General Manager of the Logistics Department (March 2005-December 2008), after which she worked as an expert for economic operations.

She obtained an MA degree in 1999 from the Faculty of Economics of the University of Priština and earned her PhD in Economics from the same university in May 2011. She has authored a number of studies on privatisation and financial markets. In 2006 and 2007, she lectured at the Faculty of Management in Novi Sad.