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A DECADE OF FULL-FLEDGED INFLATION TARGETING IN SERBIA

Decenija potpunog ciljanja inflacije u Srbiji

Abstract

The aim of this paper is to describe the main postulates of the inflation targeting regime in Serbia and to explain policy responses against the background of domestic and global conditions in which the regime has been implemented. The paper also dwells on the debates about the inflation targeting as a theoretical concept and its "upgrades" arising from the practice. The paper focuses on assessing the performance of this regime after a decade of full-fledged implementation in Serbia.

Serbia may offer responses to policymakers, as a good example of a small and open economy with a legacy of high euroisation, which reduced its external and internal imbalances, stabilised prices and the exchange market, and managed to keep its financial system sound and improve the overall growth prospects. Timely responses, consistent approach, open-mindedness and readiness to use all available instruments, in full coordination with other policies, are the key elements on which the National Bank of Serbia founded the inflation targeting regime and upgraded it along the way, especially in the second period of its implementation. Today, we are speaking about Serbia as a country with low inflation, anchored inflation expectations and credible monetary policy.

In assessing the adequacy of this regime for our economy, based on the results measured by price and financial stability, it may be concluded that for Serbia there is no alternative to the inflation targeting regime. Working through all transmission channels, monetary policy gave the key contribution to more favourable business and investment conditions and to sustainable economic growth. On the whole, the inflation targeting regime was an important and inextricable part of the overall economic policy, which laid the groundwork for a better economic outlook for Serbia.

Keywords: *inflation targeting, monetary policy, volatility, stability, inflation expectations, exchange rate.*

Sažetak

Cilj rada je da se opišu osnovni postulati režima ciljanja inflacije u Srbiji, i razjasne odgovori politike u domaćim i globalnim uslovima u kojima se režim sprovodi. Ukazuje se i na debate koje se vode o ciljanju inflacije kao teorijskom konceptu, i o njegovoj „nadogradnji“ koja je proistekla iz prakse. Fokus rada je na ocenama dometa ovog režima tokom decenije punog ciljanja inflacije u Srbiji.

Srbija može da posluži kao dobar primer za dobijanje odgovora na pitanja nosilaca ekonomske politike za male i otvorene ekonomije sa nasleđenim problemom evroizacije, koja je smanjila spoljnu i unutrašnju neravnotežu, stabilizovala cene i devizno tržište, održala zdravim svoj finansijski sistem i unapredila izgleda rasta. Pravovremenost u reagovanju, doslednost u pristupu, spremnost i otvorenost za korišćenje svih raspoloživih instrumenata, uz punu koordinaciju sa drugim politikama, ključni su elementi na kojima je Narodna banka Srbije bazirala i „u hodu nadograđivala“ režim ciljanja inflacije, posebno u drugom periodu njegove primene. Danas govorimo o Srbiji sa niskom inflacijom, usidrenim inflacionim očekivanjima i kredibilnom monetarnom politikom.

Ocenjujući adekvatnost režima za našu ekonomiju, a sudeći na osnovu rezultata koji se mere cenovnom i finansijskom stabilnošću, može se zaključiti da režim ciljanja inflacije za Srbiju nema alternativu. Preko svih ključnih kanala transmisije, monetarna politika bitno je doprinosila povoljnijim uslovima za poslovanje i investiranje, i za ekonomski rast na održivim osnovama. U ukupnom kontekstu režim ciljanja inflacije bio je važan i neraskidiv element ukupne ekonomske politike, koja je stvorila osnove za bolje izgleda srpske ekonomije.

Ključne reči: *ciljanje inflacije, monetarna politika, volatilnost, stabilnost, inflaciona očekivanja, devizni kurs.*

Introduction

In the long monetary history, the question of central bank's role in the economic environment was repeatedly raised, and we are seeing it re-emerge today both at the national and global level. Legal mandates of central banks are being re-examined, as well as their quantitative objectives, the right to choose their tools, etc. Still, the best responses are obtained based on the analysis of past movements and responses, because experience is the best teacher. It is also a sound guide for shaping future measures. An ever-present question, not only in the theoretical domain, but also repeatedly imposed by the practice, is the dilemma on whether the tasks before central banks are unchangeable and known in advance or whether they should be re-examined and adjusted to changing circumstances. These questions do not hinder the work of central banks. Quite to the contrary. In seeking answers to these questions, central banks remain vigilant and try to keep track of and support economic development. The answers to these questions should also be sought in a broad-based consensus – in talks with economic experts, listening to the *vox populi* and also by asking ourselves in an objective, critical and impartial way what it is that we are striving for and what will best contribute to the domestic economy and citizens [8, pp. 12-35].

As of January 2009, the National Bank of Serbia (NBS) has formally applied and improved through practice the inflation targeting regime with all its principles – concerning the manner of setting the target, modern monetary policy framework and transparent communication. In choosing the monetary policy regime for Serbia, the starting assumption was that inflation targeting is a monetary strategy offering the broadest scope of action for addressing the problems of price instability and dented confidence in the national currency and monetary policy. The tenth anniversary of inflation targeting in Serbia provides a good occasion for taking stock of the results and for drawing some conclusions. Practical experiences that we can offer may serve as a good foundation for shaping future strategies and also for improving theoretical thinking about the achievements of monetary policy in general. One decade is a sufficiently long period for deriving reliable conclusions, bearing in

mind the fact that important changes in economy, same as in life, cannot happen overnight. Assessing whether the progress is sustainable or whether it came about as a result of temporary circumstances takes time. A decade is a sufficiently long period for making a reliable assessment of policy impact on the economy, population and government.

Serbia may serve as a good example when seeking answers to numerous questions troubling small and open economies with the legacy of high euroisation, because it relatively quickly reduced external and internal imbalances, stabilised prices and the exchange market (hereinafter: FX market), and managed to keep its financial system sound and improve the overall growth prospects. Timely responses, consistent approach, open-mindedness and readiness to use all tools available, in full coordination with other policies, were the key elements by which the NBS upgraded the inflation targeting regime during the decade of its implementation, especially in the second part of this period. On the whole, the inflation targeting regime was an important and inextricable part of the overall economic policy, which laid the groundwork for a better economic outlook for Serbia.

Key postulates of inflation targeting and directions of its upgrading

Shaping and implementing the inflation targeting strategy at the global level came as an expected response to the accelerated development of financial markets and full or partial failure of previous strategies – targeting of nominal interest rate, monetary aggregates, exchange rate, etc. The inflation targeting strategy allowed for greater flexibility in policy creation and use of available tools. Its postulates were in time supplemented by practical experience, which ultimately led us to a contemporary framework of this regime, which takes into account the changed business conditions, a new hierarchy of global risks and new interconnectedness (interdependence) between different economies.

However, the initial postulates of the inflation targeting regime were kept. What are those postulates?

Medium-term price stability, as the main statutory mandate of the central bank and the obligation to announce

inflation targets. Using the key policy rate (hereinafter: KPR) as the main tool for attaining the inflation target and deciding on its level based on the projected inflation movements. Other information is also used for assessing the effects of decisions in a wider context, which proves that this regime is not a set of rigid rules. Inflation targeting particularly strengthens the transparency of communicating the underlying reasons of central bank decisions. Monetary policymakers are also required to explain the factors which caused inflation's deviation from the target and measures which should facilitate its return and maintenance within the target band.

The concept of central bank transparency is one of the important features of this regime, to such an extent that communication itself can nowadays be viewed as part of the monetary toolkit. Its purpose is to better acquaint market participants with the conditions of policy implementation and, particularly, with the prospects going forward. The reason is obvious. If we understand each other well, we increase the chances of the market responding along the expected lines. Thus, central banks use different communication channels in order to bring closer to the public: (1) monetary policy objective(s); (2) monetary policy achievements and interaction with other policies; (3) numerical values for medium-term inflation targets; (4) reasons for deviation of the actual from targeted inflation; (5) tools and measures that are used or will be used for attaining the target. In this way, an efficient communication strategy strengthens monetary policy credibility and helps anchor inflation expectations. Reduced uncertainty regarding monetary conditions, primarily the movement of interest rates and inflation, considerably facilitates planning for market participants. An efficient communication strategy, among other things, answers two key questions: 1. How to say enough, but not too much? 2. How to strike a line between sufficient certainty for others while not making oneself vulnerable by excessive predictability which narrows the manoeuvring space for attaining the target?

Yet, communication in itself is not enough unless corroborated by results. And in order for the results to be achieved, the regime had to be upgraded.

How did the regime evolve? Until the outbreak of the global economic crisis, a large number of central

banks endorsed price stability as the primary monetary policy objective to be achieved by the inflation targeting regime. In the first years of its introduction (early 1990s), the prevailing opinion was that inflation targeting, as a monetary policy framework, is compatible exclusively with the free floating exchange rate. Central banks pursued a single objective – low and stable inflation in the medium term and had one main instrument – the KPR [3, p. 4]. Free floating exchange rate was viewed as a sort of a test of dedication to the inflation targeting regime [7, pp. 83-102].

However, as time and practice have unambiguously shown, theoretical models can never account for all real-life premises, so their re-examination, supplementing and adjusting is a modern-day imperative. Guided by practice, economic thinkers have gradually departed from theoretical views prevailing in the first years of introduction of the inflation targeting regime. More and more voices are heard saying that in practice, inflation targeting, in terms of monetary policy response, cannot boil down to rigid implementation of rules. Rather, decision-making must contain a “flexible” component. According to the newly-formed views, monetary policy provides the greatest contribution to macroeconomic stability through inflation targeting if it allows policy flexibility and thus its contribution to the stabilisation of economic flows. With the outbreak of the financial crisis, the flows became more volatile, which aggravated decision-making, especially in emerging economies [6, p. 14]. Thus, the crisis highlighted the need for “upgrading” the initial postulates of the inflation targeting regime, confirming what was clear even before the crisis – while price stability is the primary objective, financial stability is also a necessary precondition of the macroeconomic stability at large [1, p. 4], [2, p. 6], [4, p. 70], [10, pp. 3-4]. However, broadening the objectives as to include financial stability and the entirety of economic flows may raise the issue of prioritisation, due to the potential conflict of objectives in different stages of the business and financial cycle. The solution should be sought in coordination of macroeconomic policies and their responsible implementation, as well as in a proactive communication strategy, which should boost confidence in policymakers and their decisions. Further, in euroised economies with the high pass-through of exchange rate

to prices, FX interventions get the status of an effective additional mechanism for concurrent achievement of two key objectives – price and financial stability. Well-calibrated and timely FX interventions act as an absorber of short-term shocks and, by extension, one of the important factors mitigating the volatility of inflation and creating a more stable investment environment. For this reason, in conditions of volatile capital flows, a large number of emerging economies that are running the inflation targeting regime intervene in the FX market [5, pp. 1-10].

Monetary history has shown that monetary policymakers have upgraded the initial postulates of inflation targeting in accordance with the changing circumstances. In this way, central banks, Serbia’s example included, demonstrated in practice their ability to recognise limitations and to overcome them by using all the tools available and by being guided by their overall effects.

Implementation of inflation targeting in Serbia – a brief overview

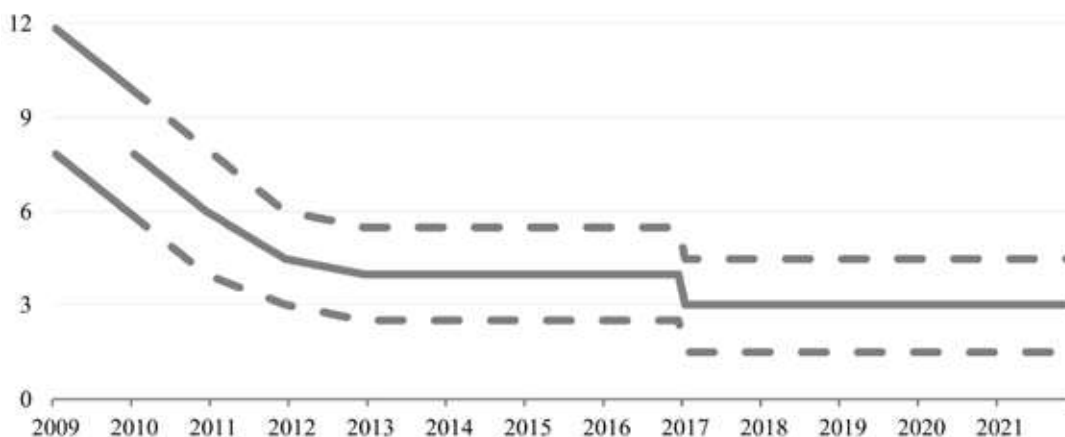
In the summer of 2006, the NBS opted for inflation targeting as its monetary strategy, as a regime tailored to the characteristics of the domestic economy. At that point, the NBS embarked on “implicit” inflation targeting, intending to lay in the transitional period, until 2009, the necessary groundwork for switching to the formal (full-fledged) inflation targeting regime. In weighing pros and cons of this regime, it was assessed that inflation targeting is a monetary strategy offering the broadest scope of action

for addressing the problems of price instability and weak confidence in the national currency and monetary policy.

The NBS set the first inflation targets in August 2006 when it adopted the “Memorandum of the National Bank of Serbia on the Principles of the New Monetary Policy Framework Aiming at Low Inflation Objectives” laying out the key directions of a gradual shift to the full-fledged inflation targeting. The focus of monetary policy was placed on core inflation, which was appropriate at the time, but also gave rise to some communication difficulties. Still, this was a necessary transitional period that ushered in the practice of the NBS’s mandatory intervention in order to bring inflation within the set (targeted) numerical range. In this period also the KPR (first on two-week and later on one-week operations) gained the role of the main instrument for achieving the inflation target, while other monetary policy instruments played a supporting role. Implicit inflation targeting paved the way for full inflation targeting and for shifting the monetary policy focus to the medium term.

With the introduction of the formal (full-fledged) inflation targeting as of January 2009, the headline inflation target was defined as a numerical range, with a central value for each month of the year (Figure 1). This helped to increase the transparency of communication with the public and the impact on stabilisation of inflation expectations. In the initial period of running this regime, objectives were defined as a linearly declining range of the y-o-y headline inflation rates. The path of lowering the inflation target involved gradual adjustments to the target,

Figure 1: Inflation targeting in Serbia – target with a tolerance band since 2009



Source: NBS.

typical for initial years of inflation targeting in countries that struggle with the legacy of high and volatile inflation. Such caution was necessary in order to take into account domestic circumstances and ensure that the achievement of target rates results also in a more durable stabilisation of inflation.

The target trajectory (Figure 1) also reflected the intention of the NBS to achieve price stability in the medium term, and to support price and income convergence toward EU levels. In addition, in the third year of full-fledged inflation targeting, as of end-2011, the target range was narrowed from 4 pp to 3 pp (i.e., from ± 2 pp to ± 1.5 pp relative to the target midpoint). Generally, this was supposed to contribute to better anchoring of inflation expectations, where the newly set width of the target range left enough room for the necessary flexibility of monetary policy and preserving of its credibility. This was also important in the context of responding to temporary shocks that may trigger short-term volatility of inflation, to which monetary policy typically does not respond, as this could negatively affect financial conditions in the market and economic growth. In other words, such target tolerance band reduces, in the medium term, the need for frequent monetary policy interventions, and thus increases the predictability of monetary conditions. The NBS started to regularly set and announce inflation targets for two years ahead, which was another component of the predictability of business conditions.

As of end-2012, the inflation target was set in the form of a point value at 4%, while keeping the target tolerance band at ± 1.5 pp. This target was kept until end-2016. Setting the target as a single numerical value was motivated by the need to additionally support the convergence of inflation expectations toward the target values. Inflation expectations were anchored in the second period of the regime implementation, owing to the results achieved in bringing inflation to low levels, a process underpinned by improvement of macroeconomic indicators and economic outlook. This also motivated the strategic decision to lower the inflation target to $3 \pm 1.5\%$ as of the start of 2017.

Measured by results, a decade of inflation targeting may be divided in two periods.

The beginning of the first period of regime implementation, 2009–2012, coincided with the escalation of the global economic crisis and was marked by high and volatile inflation which stayed only briefly within the target tolerance band (Figure 2). Consequently, in 2011, the financial sector expectations regarding consumer price growth overshot the target tolerance band (Figure 3), despite low aggregate demand. Expectations of the corporate sector were almost constantly above the upper bound of the target. The analysis of inflation factors present at the time shows that apart from the prices of primary agricultural commodities, inflation was also pushed up by a combination of depreciation pressures (Figure 5) and relatively high inflation expectations of economic agents.

The second period, 2013–2018, saw the reduction of inflation and its maintenance at low levels. Stabilisation of movements in the FX market, the beginning of anchoring of inflation expectations, good agricultural season and the still depressed aggregate demand, were the factors that drove inflation down within desirable limits. Within the span of only one year, inflation was lowered from close to 13% to around 2% (October 2012 – October 2013), and was maintained at around 2% thereafter, with much lower volatility (Figure 2). It was in this period that full coordination of monetary and fiscal policy measures began, producing a synergy effect on our economy that was further intensified by the implementation of a credible fiscal consolidation programme. This success in turn bolstered the credibility of monetary policy, as evidenced by the anchoring of inflation expectations [9, Figure 8]. Same as in the case of credibility, low inflation supported gradual development of the dinar financial market and establishment of the benchmark ten-year dinar yield curve.

Adjustment of the monetary toolkit

The adjustment of the monetary policy framework began with the preparations for full-fledged inflation targeting. The KPR assumed the function of the main policy instrument. Open market operations were standardised, with the

establishment of the main operations for one maturity, which gave them the quality of a clear-cut instrument.

The NBS introduced the practice of setting the KPR at regular meetings of the Executive Board. Rate-setting decisions take into account the overall macroeconomic developments and workings of the key inflation factors, both in the domestic and international environment. In order to avoid sudden changes in monetary policy which may trigger macroeconomic shocks, temporary deviations from the inflation target are tolerated, i.e., the emphasis is placed on the medium term. The time lag in the workings of monetary policy is taken into account.

A symmetric interest rate corridor was also established, focusing on overnight maturity. In the prior period, this instrument featured different maturities and interest rates, which made the interest rate corridor asymmetrical and insufficiently transparent. Revision of the corridor was one of the stabilisers of the money market and, by extension, the credit market.

The required reserve instrument was simplified by averaging, which was one of the factors that facilitated liquidity management for banks and contributed to more stable movements in the money market. A policy of differentiated required reserve ratios was introduced, depending on the currency and maturity of bank funding sources, to support long-term dinar sources of funding.

A new policy approach is also visible in the readiness to apply new solutions, always ensuring that they are adjusted to the domestic environment and supportive of the achievement of the desired objectives. A good example of improvements to the market-based toolkit which produced full effect is the changed approach to the dinar and FX market.

As regards NBS activities in the dinar market, at end-2012 the NBS changed the previous model of fixed-rate repo auctions without liquidity limitations and introduced a variable-rate model with a limited volume of liquidity withdrawn. The introduction of this model was a sort of a turning point in acting in the dinar money market, because by encouraging competition, it lowers the costs in the credit market and boosts lending to the private sector. At the same time, the application of this model introduced an additional mechanism for addressing temporary shocks

and reinforced monetary policy flexibility at times of more volatile capital flows [9, Figure 8].

In stable business conditions, the benchmark ten-year dinar yield curve was formed, as a basis for valuing financial assets and a precondition for further development of the dinar market in Serbia.

As regards NBS activities in the FX market, communication with market participants was raised to a higher level (market intelligence function), and the central bank now has information about the transactions that could have a stronger influence on the market. Cooperation with state institutions and public enterprises, as important participants in the domestic market, has improved. This increased the efficiency of NBS activities in the FX market in terms of making timely and appropriate decisions on FX interventions. As a result of mitigating the impact of short-term factors, a smooth operation of the FX market was ensured, with lower exchange rate volatility, which contributed to both stabilisation of inflation and financial stability.

Macroeconomic conditions in Serbia and monetary policy measures

The introduction of inflation targeting in Serbia coincided with the escalation of the global economic crisis, whose repercussions are felt to this day in some areas. During a decade of inflation targeting we learned some important lessons. These lessons partly stemmed from the conditions brought by the crisis and partly from our openness and readiness to introduce new solutions, always ensuring that they are appropriate to the domestic environment and that their application helps to overcome the external challenges and to achieve the desired objectives. Such an approach marked the second period of the regime implementation and the results proved it was justified. Its justifiability can also be measured through the achieved low inflation and anchored inflation expectations. Thus, the practical experience we can offer is a contribution to the monetary practice, but also provides a good foundation for improving theoretical thinking on the scope of achievements of monetary policy in general.

In the text below we will give a brief overview of the monetary policy tools used and the results achieved in terms of delivering low inflation, in order to assess their appropriateness and to draw some conclusions. The instruments and measures applied by the NBS and macroeconomic conditions in which the decisions were taken are analysed in detail in a separate paper [9, Figures 7 and 8].

Monetary policy measures in the 2009-2011 period

The first years of inflation targeting in Serbia were overshadowed by the outbreak of the global crisis. The 2009-2011 period saw low aggregate demand, weakening of the dinar and volatile food prices, as a result of developments in the global market and changeable agrarian conditions at home. Oil price movements in the global market were not conducive to the achievement of low and stable inflation either. In that period, inflation averaged 8.5% (Figure 2). Inflation expectations of the financial sector moved around the same average, while corporates expected a somewhat higher inflation, with a three-year average of around 11% (Figure 3). Apart from running high, inflation and inflation expectations were also volatile. Since the crisis took its toll on economic activity and aggregate demand, in the course of 2010 the NBS lowered the required reserve ratios with a view to supporting credit activity and economic growth.

That year, the KPR was changed 25 times, in both directions (up and down). Until May 2010, monetary policy was relaxed through the KPR. Then, until April 2011 the KPR was increased, while as of June that year the NBS embarked on a cycle of rate cuts. Such frequent changes of the character of monetary policy and the KPR (Figure 4) made monetary conditions unstable.

In that period, the effects of low aggregate demand on inflation were outweighed by the effects of the weakening of the dinar, which in 2008-2010 depreciated by 24.9% relative to the euro (Figure 5). These effects passed through to prices both directly and indirectly, since inflation expectations were not anchored. Namely, a more pronounced volatility of the exchange rate and thus of inflation was what hindered

the anchoring of inflation expectations, which in turn aggravated doing business and investment.

Inflation factors and monetary policy responses in the period since 2012

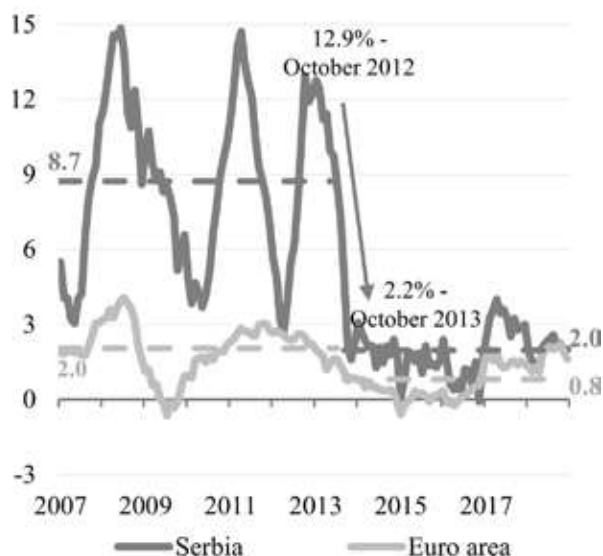
The lack of results on the plane of inflation stabilisation in the 2009–2012 period did not put into question the implementation of the inflation targeting regime, but it did impose the need to re-examine the approach applied, partly because of the (post)crisis environment.

As of the third quarter of 2012 disinflation took hold, as a result of the synergy of several factors, such as monetary policy tightening through the KPR (concluding with February 2013) and strengthening of the dinar from August 2012 until May 2013. The NBS changed its approach in the dinar and FX market (changed model of repo auctions; strengthening communication with participants in the domestic FX market), intensifying the impact of several transmission channels. Curbing of excessive short-term volatility of the dinar/euro exchange rate and the consequent lowering of inflation expectations contributed to the reduction and stabilisation of inflation. In addition, the effects were amplified by the drop in prices of primary agricultural commodities in the global and domestic market. In the final instance, within the span of one year only inflation was lowered from around 13% to around 2% (October 2012–October 2013).

The environment was additionally enhanced by the anchoring of inflation expectations and rounded off by the adoption and implementation of the fiscal consolidation programme and coordination of monetary and fiscal policy measures. The ultimate effect was the suppression of inflationary pressures on a durable basis, as indicated by the movements of core inflation which from August 2013 until end-2018 on average stood at the headline inflation average of 2.0%.

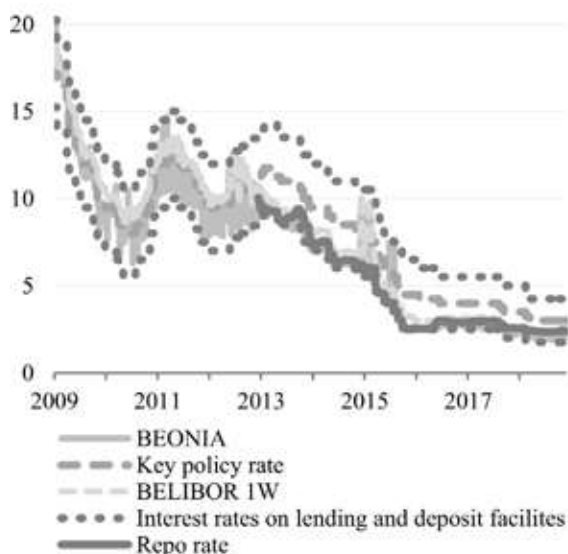
In the period of disinflation, initial conditions were created for a monetary policy easing cycle, starting from the KPR of 11.75%. Since May 2013, KPR cuts were continuous, enabling the monetary policy to provide stronger support to credit growth and economic recovery via that channel. The rate-setting decisions were made taking into account

Figure 2: Inflation movements in Serbia and euro area (y-o-y rates, in %)



Source: NBS and Eurostat.

Figure 4: NBS interest rates and interest rates in interbank money market (in %)

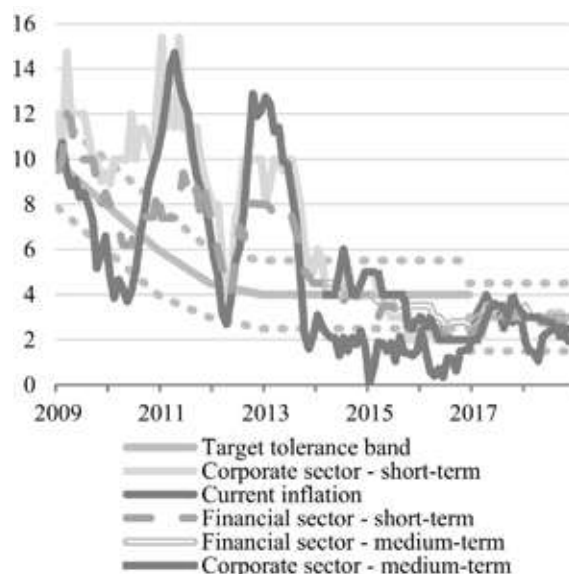


Source: Thomson Reuters and NBS.

the effects of the past monetary policy easing, the expected inflation movements going forward and developments in the international environment. It was the combination of effects of domestic and international factors that determined the scope and dynamics of monetary policy relaxation. In 2013, for the first time since the crisis broke out, the NBS was the net buyer of foreign currency in the FX market (EUR 185 mn).

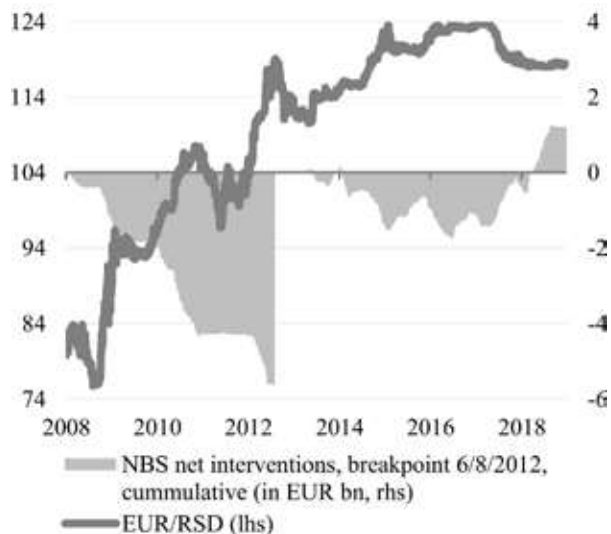
Monetary policy easing continued into 2014 against the background of disinflationary effects of depressed

Figure 3: Current inflation and inflation expectations (y-o-y rates, in %)



Source: Gallup, Ipsos/Ninamedia and NBS.

Figure 5: Exchange rate movements and NBS interventions in the FX market



Source: NBS.

aggregate demand and low cost-push pressures. Although the strength of disinflationary pressures that year suggested there was more room for KPR cuts, uncertainty in the international financial market mandated caution. It was expected that the FED would embark on a gradual reduction in the volume of quantitative easing, but at the same time, that possibility was also a source of uncertainty. In order to additionally encourage credit and economic activity in conditions of low inflationary pressures, monetary policy accommodation was also increased through the lowering

of required reserve ratios. In 2015, monetary policy easing was stepped up on account of the majority of factors from the domestic and international environment, which was particularly intensified by the implementation of the fiscal consolidation programme adopted in late 2014. Hence, as of that year, monetary and fiscal policy became fully coordinated.

Thanks to that, KPR cuts continued even after 2015, at a cautious pace and as of end-2016 another factor that also played a role was the new, lower inflation target.

During the whole easing cycle, the KPR was adjusted in 21 steps and brought down to 3%, its lowest level in the inflation targeting regime. At the same time, the NBS continued to use the required reserve instrument with a view to supporting credit and, by extension, economic activity.

An important issue discussed during this period was the impact of import prices on inflation at home, and the impact of the exchange rate on prices. The analyses carried out by the NBS suggest that changes in import prices spill over to domestic prices with a one-quarter lag on average. In the period before 2012, the effect of shock of global primary commodity prices on inflation at home could be amplified by the effects of significant depreciation of the dinar. On the other hand, relative stability of the dinar exchange rate in the period that ensued diminished the volatility of imported inflation and its impact on domestic inflation and inflation expectations [12, pp. 12–13].

In the second period of the inflation targeting regime, i.e., from 6 August 2012 until late 2018, the NBS intervened in the FX market, buying EUR 5.860 bn and selling EUR 4.645 bn, i.e., buying EUR 1.215 bn net. The dinar gained 0.3% in nominal terms.

Interventions in the FX market in an environment of volatile capital flows

In small and open economies with a relatively high degree of euroisation, trends in the FX market are in the focus of the central bank as the exchange rate can exert a significant impact on macroeconomic developments. This is why excessive short-term exchange rate volatility is mitigated through interventions in the FX market.

The principles of NBS intervention policy are consistent with the tenets of the inflation targeting strategy – the timeliness and adequacy of interventions, without the intention to impact the level and trend of the exchange rate. The central bank can respond to long-lasting changes in the external position, which trigger durable pressures on the dinar, by implementing targeted structural reforms which enhance the competitiveness of the domestic economy. For its response to be efficient, the NBS must have reliable information about the trends that can cause short-term market volatility, i.e., about their causes, the scope of impact and the period during which the effect will materialise. Thus, more durable external influences can be absorbed by exchange rate changes. Bearing in mind a broader context, we have “upgraded” our approach by ensuring and linking information on intraday trends in the FX market, expected demand of residents, non-residents’ behaviour, and assessment of the effect of developments in the global financial market, while at the same time establishing proper coordination with fiscal policy. As a result, in the past six years, NBS interventions in the FX market were efficient and effective – relative stability of the exchange rate was ensured with smaller presence of the central bank, which was consistent – on both the purchase and sale side. The communication about central bank measures and decisions and about current and expected developments also improved, exerting a stabilising effect on market expectations and decisions.

Reducing the inflation target to 3% – a strategic decision

The lowering of the inflation target (from 4%) to 3% starting from 2017 was a strategic decision. Serbia thus became a part of the group of countries which, without looking for any excuses, work on setting a sound foundation for their sustainable growth. At the same time, the new inflation target leaves room for further price and income convergence to EU levels.

The decision reflected the results Serbia achieved in improving macroeconomic fundamentals and the economic outlook, including the fact that inflation was low over the last three years, standing at the levels comparable to

advanced economies. In addition, the inflation expectations of the financial and corporate sectors were relatively stable over a longer period, at the levels consistent with the new target. Also taken into account was the Serbian Government's commitment to set the operation of public enterprises on a sound footing, primarily by reducing the costs of operation rather than by increasing the prices of goods and services of those enterprises, which used to push up administered prices.

Fiscal results and plans, export trends, the implementation of reforms and improvement of the business environment, successful coordination between monetary and fiscal policies, and a reduction in the risk of investment in Serbia – support the assessment that inflation will move within the new, lower target band in the medium run. These factors were also taken into account in setting the inflation target at 3% in December 2018 until end-2021.

Lessons learned during the inflation-targeting decade

The 2009-2012 period during which monetary policy was pursued in a crisis environment, both globally and at home, can serve as an example for the analysis of factors underlying the volatility of inflation. First, inflation displayed volatile movements in the said period, reflecting the volatility of food prices with a relatively high share in CPI and pronounced exchange rate fluctuations. This leads us to conclude how important relative stability of the exchange rate is in the context of price stability in euroised economies. The second conclusion concerns the importance of anchored expectations, to prevent the spillover of growth of some prices to other prices through the inflation expectations channel (second-round effects). The necessary coordination between monetary and fiscal policies did not take place in this period, which is considered the third conclusion, or better to say, the third lesson learned.

The 2013-2018 period, which featured low inflation, confirms the importance of relative stability of the exchange rate, anchored inflation expectations and consistency of economic policy as a whole. It also suggests that global factors play an important role in policy design, particularly when they are a source of uncertainty. Inflation targeting

can yield the expected results to the extent to which monetary policy aims to resolve the key uncertainties, bearing in mind the overall effects of monetary policy decisions. Just like other policies, monetary policy produces the best results if fully coordinated with other policies.

NBS measures impacting and contributing to the overall environment

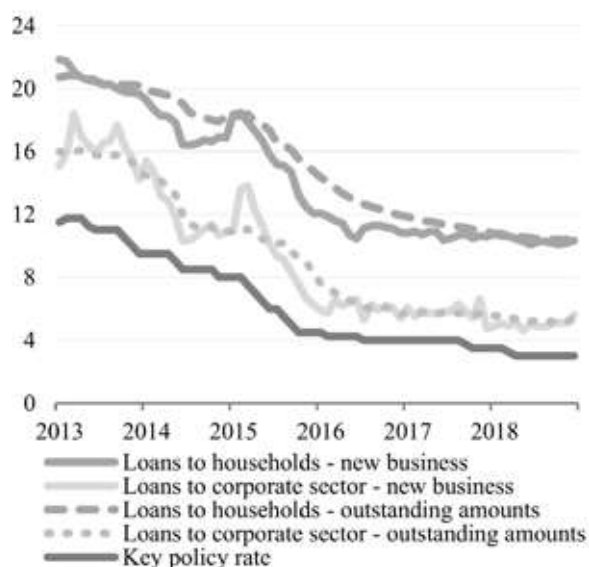
The scope of achievements of monetary policy in Serbia can be assessed based on the effects produced through the key channels of monetary policy transmission. We have presented here the impact of measures and instruments on interest rates, credit activity and expectations of economic agents. The cost impact of measures on inflation and economic activity is achieved through the impact on interest rates and the exchange rate, while the effect of demand is achieved through the credit channel. The expectations channel also produces cost effects, through demand.

Support to credit and economic activity

The 2009-2012 period of volatile monetary conditions was followed by continuous monetary policy easing by means of the key policy rate. Starting from May 2013, when the easing started, until April 2018, the key policy rate was cut by 875 bp to 3%. The cuts were made at a different pace in different years, depending on the assessment of the strength of (dis)inflationary pressures. The KPR cuts also affected new and outstanding dinar household and corporate loans whose rates fell by over 10 pp (Figure 6) on average as at December 2018. The same period saw a reduction in rates on euro-indexed loans, as a result of a lower country risk premium and developments in the international money market. The effect was further amplified by higher interbank competition. For more information about this channel see a separate paper [9, Figure 8].

Falling interest rates bolstered the recovery of lending (Figure 7), which was reinforced by the release of FX required reserves during two cycles (late 2014 and 2015). Loan demand stepped up as well, reflecting not only

Figure 6: Interest rates on dinar loans to the non-financial sector (in %, p.a.)

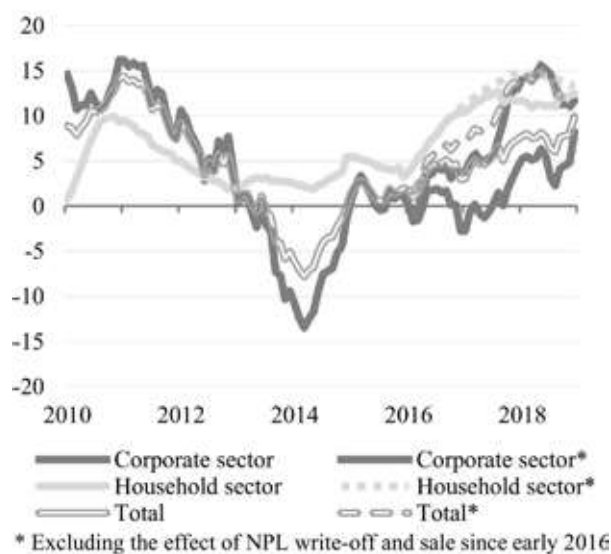


Source: NBS.

lower rates on new and outstanding loans and a higher disposable income, but also positive tendencies in the labour market, supported by economic policy measures. A feedback effect was noted as well. Lending encouraged economic activity, while at the same time the recovery of the economy and labour market spurred economic growth. These are direct and indirect channels employed by the NBS to reduce the negative output gap.

In addition to overall lending activity, equally important, if not more so, is the structure of lending growth. Looking at the sources of growth in the period from 2015, the most important contribution came from the new investment cycle initiated at the time, with cumulative growth in private investment of around 30% in four years. Growth was strongly supported by investment corporate loans whose volumes during the 2015-2018 period were on a par with net FDI inflows into Serbia, exceeding significantly the volumes recorded before. This suggests that private investment growth was financed by bank loans more than before, i.e., that investment loans contributed significantly to the new investment cycle. Owing to low interest rates and labour market recovery, supported by economic policy measures, a part of loans were refinanced under much more favourable conditions, with housing loans returning to the 2011 levels, when subsidised loan programmes were in force.

Figure 7: Credit growth excluding the effect of NPL write-off and sale (in %)



Source: NBS.

Given that excessive lending growth can generate inflationary pressures, central banks assess both overall lending activity and its individual segments. This also reflects the hierarchy of objectives defined by Article 3 of the Law on the National Bank of Serbia. The main aim is to achieve and maintain price stability. Without prejudice to this objective, the NBS also contributes to the preservation and strengthening of financial stability. Without prejudice to these two objectives, the NBS supports the Government's economic policy, acting in accordance with market economy principles. This implies full support to economic activity, to the extent that does not jeopardise the achievement of the inflation target and/or financial stability.

Expectations of economic agents

Great importance is also attached to the anchoring of inflation expectations of economic agents, monitored since the switch to the full-fledged inflation targeting regime (January 2009). At the start, only short-term, one-year ahead expectations were monitored, whereas as of March 2014 the coverage was extended to medium-term expectations as well. The survey carried out on a regular monthly basis covered four segments of respondents – the financial sector, corporates, households and trade unions. Their expectations of the main macroeconomic

indicators and the underlying factors are monitored. The content of the survey for each sector is clearly defined, as well as the size of the sample and manner of familiarising respondents with the survey purpose.

The decade of inflation targeting can be divided into two periods also in terms of anchoring of inflation expectations (Figure 3).

The first period of 2009-2012 was marked by high and volatile financial sector expectations which exceeded the upper bound of the target range for consumer price growth, despite subdued aggregate demand. Corporate expectations were at the same time almost constantly above the upper bound of the target tolerance band. The fact that expectations were not anchored aggravated the achievement of the target in this period, with the opposite holding true as well.

The second period of 2013-2018 was marked by bringing inflation to a low level, of around 2% on average. Durable curbing of inflationary pressures, measured by core inflation as well, strengthened further monetary policy credibility. As a result, the period from 2014, i.e., half a decade, featured anchored inflation expectations. As in the case of policy credibility, the continuity of low inflation, amplified with a relatively stable dinar exchange rate, was a necessary cornerstone for the gradual development of

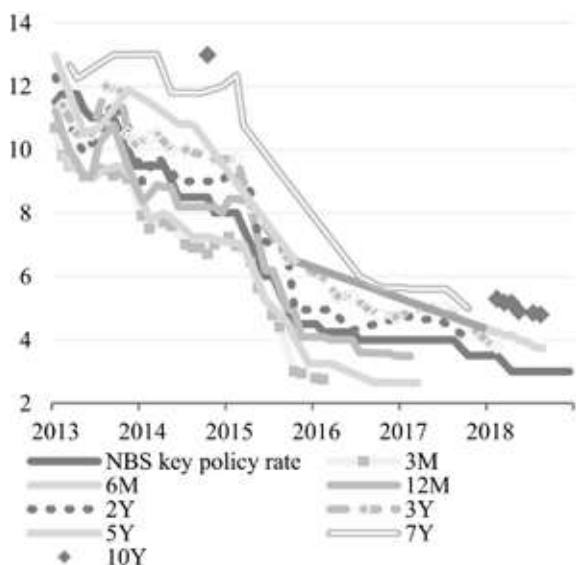
the dinar financial market and creation of the benchmark ten-year dinar yield curve.

The importance of inflation expectations is also signalled by the analysis published in the IMF October World Economic Outlook (Chapter 3), in which inflation factors in emerging and advanced economies are examined as of the mid-2000s. The conclusion contained in the analysis is the following: “Longer-term inflation expectations have been the main factor determining inflation, compared with the considerably smaller role of external conditions” [13, Figure 3].

Creation of the dinar yield curve

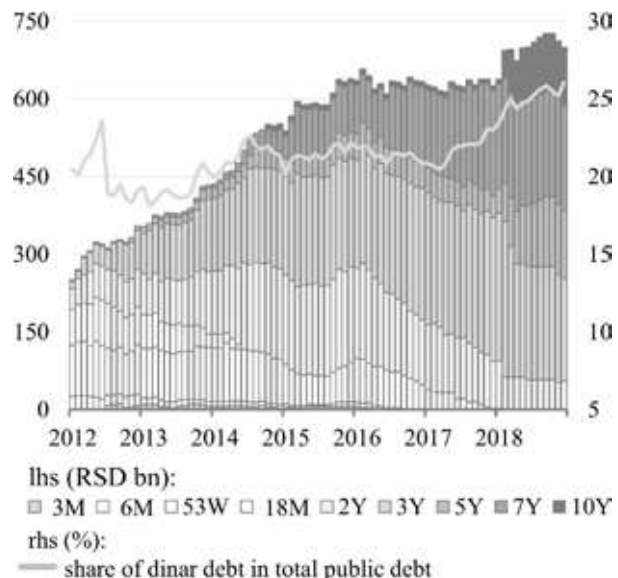
The KPR cuts spilled over to the money and capital markets, as evidenced by the sharp fall in interest rates at which the government borrowed in the domestic market (Figure 8). Lower interest expenses, through reduced government financing needs, were one of the factors of fiscal stabilisation. A feedback effect was recorded as well. Achieved stability and predictability of operation led to the lengthening of the dinar yield curve and a rise in the share of dinar in total public debt (Figure 9). The effect is clearly visible by comparing December 2018 and end-2012 data:

Figure 8: Interest rates in the primary market of government securities and NBS key policy rate (in %)



Source: Ministry of Finance and NBS.

Figure 9: Stock of dinar government securities and the share of dinar debt in total public debt (in RSD bn) (in %)



Source: Ministry of Finance.

- the weighted average rate on total sold dinar government securities fell from 13.7% to 6.2%;
- the share of securities with the maturity of five years or more increased from around 2% to over 63%;
- the share of dinar in total public debt rose from 19% to 26%.

Investors are prepared to invest in the long run and at lower returns if they believe that the economic outlook is positive. The sharp fall in Serbia's risk premium and intensive investment in ten-year dinar government securities definitely confirm that there is confidence in the better outlook of our economy.

Stability has no alternative

By preserving low and stable inflation and generally stable conditions, the NBS contributes to better economic prospects and joint results of the overall economic policy. These results are visible, among other things, in rising production and exports, lower current account deficit and sound public finances. All this together is also reflected in a reduction in the country risk premium and Serbia's more favourable credit rating, which leads to new business opportunities, with rising profitability of the domestic economy and FDI propping up investment. The new investment cycle is also supported by favourable terms of funding and higher availability of loans. Therefore, the inflation targeting regime cannot be assessed separately, but as a part of the overall economic policy, since they form an inextricable unity. Our assessments are based on facts and figures.

First, the predictability of prices and favourable financial conditions, together with fiscal consolidation results and structural reforms, make the macroeconomic environment conducive to business and investment. This is also confirmed by Serbia's progress on competitiveness rankings of the World Economic Forum and the Doing Business List of the World Bank in terms of relatively favourable terms to start business. Moreover, three leading global rating agencies (Standard & Poor's, Fitch Ratings and Moody's) upgraded Serbia's credit rating. The most recent outlook upgrade was made by Standard & Poor's in mid-December 2018. This agency particularly

highlighted the measures undertaken by the central bank to enhance the credibility and efficiency of monetary policy measures in the inflation targeting regime. According to Standard & Poor's, inflation expectations are anchored, the exchange rate regime is relatively flexible, the financial sector has been further reinforced, non-performing loans are declining sharply and lending is on an upward path. The agency particularly emphasised the NBS's credibility and operational independence. It assessed that well-calibrated monetary policy decisions in the inflation targeting regime, which resulted in years-long successful preservation of low and stable inflation, helped anchor inflation expectations. The agency also emphasised the preserved relative stability of the exchange rate, stating that the current exchange rate regime not only alleviates excessive short-term volatility, but also contributes to Serbia's improved resilience to potential shocks from the international environment, while at the same time enhancing the domestic financial market.

Second, facing higher certainty, domestic and foreign investors are increasingly investing in Serbia. Favourable terms of funding and greater availability of loans raised the disposable income and spurred investment. The new investment cycle began in 2015, when gross fixed investment accelerated, reaching around 30% in 2015-2018. In the four years of the new cycle, the cumulative rate of private investment growth was close to 25% and of government investment over 70%. Increased investment in the expansion and modernisation of capacities was supported by more favourable terms of funding, as well as robust FDI inflows (around 6% of GDP on average in 2015-2018). Investment has further diversified our supply and is financed from long-term sources.

Third, investment, predominantly in tradeable sectors, drove up economic activity. In 2015-2018, investment growth (close to 7.5% on average per year) was the source of two-fifths of the growth recorded in this period. This ensured necessary growth assumptions in the following period – both in terms of capacity enhancement and enlargement and in terms of technological modernisation that contributes to increased efficiency and economic competitiveness.

Fourth, increased competitiveness of an economy is confirmed by its export results. In 2015-2018, goods and

services exports rose at a real rate of above 10% on average per year, attesting to better integration of our economy in global economic flows. As a result, relative to 2014, the share of goods and services exports in GDP increased by more than 9 pp to close to 50% in 2018 (balance of payment methodology). In the same period, the share of goods and services imports in GDP rose by less than 7.5 pp, on account of rising investment and related external procurements of equipment and intermediate goods. The current account deficit stood at around 4.2% on average and was fully covered by net FDI inflows (around 140%).

Fifth, the new investment cycle stepped up structural adjustment of the economy. The key drivers of growth were tradeable sectors, particularly manufacturing, and private sector services. Manufacturing recorded cumulative production growth above 20% and euro exports of around 50% (to more than EUR 15 bn in 2018). Exports increased in all areas of manufacturing, leading to a much better diversification of export supply. A significant rise was also observed in private sector services, whose cumulative euro exports exceeded 55%. In the segment of services, GDP in construction also recorded significant growth, as a result of rising investment.

Sixth, economic growth supported by investment and exports was sustainable in microeconomic terms as well, as confirmed by the increasingly better financial results of companies since the start of the new investment cycle. In the 2015-2017 period, the financial result of corporates improved by RSD 570 bn, reflecting, among other things, plummeting interest expenses (close to 40%), while exchange rate gains and losses fell by around 60%. Interest expenses declined although corporates stepped up the disbursement of loans, with favourable terms of funding contributing to growth in production, turnover and GDP. The improvement in the corporate financial result signals the importance of narrowing imbalances and having a stimulating environment, as well as the corporates' success in using the leeway to increase investment. Owing to this positive synergy, the medium-term economic outlook is more favourable and Serbia is now a desirable destination for long-term investment.

Seventh, growth is accompanied with the recovery of the labour market, which features a pronounced drop in

unemployment and rising employment and wages in the private sector. Since end-2014, the employment rate rose by 6.3 pp to 49.2% (Q3 2018). The employment structure suggests a rising share of the private sector, most notably in the industry, construction, catering and trade. At the same time, the unemployment rate declined by 5.7 pp to 11.3%. Compared to H1 2012, the unemployment rate went down by more than 14 pp. In 2015-2018, real wages in the private sector exceeded 10%, with low inflation contributing to the preservation of their value.

Eighth, owing to fiscal consolidation results, by increasing capital expenditure the government was able to support long-term growth assumptions, primarily through infrastructural development. In 2018, government investment increased in real terms by more than 30%, reaching around 3.6% of GDP, which is by 1.3 structural points more than in 2014, when fiscal consolidation started. Progress is particularly important given that the fiscal result improved significantly – from a deficit of 6.2% of GDP in 2014, through a surplus in 2017 and 2018, i.e., fiscal adjustment of close to 8 pp, and a vigorous reduction in the share of general government public debt in GDP to 50% in January 2019.

Ninth, household consumption growth is powered by rising employment and wages in the private sector. In the 2015–2018 period, it recorded cumulative real growth of 6.5%. In the last two years of this period, household consumption grew in parallel with GDP, ensuring a social and sustainable dimension of growth.

Tenth, the achieved results of economic policy and favourable macroeconomic indicators underpin a positive growth outlook of our economy, which is a precondition for a switch to a sustainable growth model, this being, always and everywhere, the objective of economic policy makers.

Concluding remarks

A decade since the introduction of the inflation targeting regime, we have come a long way and have learned important lessons. These lessons have partly arisen from the conditions generated by the crisis, and partly from our readiness and openness to introduce new solutions, invariably adjusting them to the domestic environment,

<ul style="list-style-type: none"> • Predictability of prices and favourable terms of funding • Fiscal consolidation • Structural reforms 	<p>⇨ Monetary policy easing by the NBS contributes to falling interest rates on dinar loans (they are by around 10 pp on average lower compared to May 2013), which increases the disposable income of the corporate and household sectors, contributes to economic growth and employment, higher investment, and a favourable outlook going forward.</p>
<p style="text-align: center;">⇩</p> <p>Improved macroeconomic indicators</p> <ul style="list-style-type: none"> • Serbia's progress on rankings concerning competitiveness and relative ease of starting business • Credit rating upgrade 	<p>⇨ By preserving financial stability, reducing the level of NPLs and undertaking other measures, the NBS contributes to the strengthening of banks' credit potential.</p>
<p style="text-align: center;">⇩</p> <p>A more favourable business and investment environment</p> <p style="text-align: center;">⇩</p>	<p>⇨ In December 2018, Standard & Poor's highlighted the NBS's credibility and operational independence, as well as the adequacy of monetary policy decisions in the inflation targeting regime, which have resulted in years-long preservation of low and stable inflation and anchored inflation expectations. The agency also emphasised the preserved relative stability of the exchange rate – in addition to mitigating excessive short-term volatility, the exchange rate regime increases Serbia's resilience to potential shocks from the international environment, while at the same time facilitating the development of the domestic financial market.</p>
<hr/> <ul style="list-style-type: none"> • Investment growth: in the new investment cycle (2015-2018), gross fixed investment accelerated, reaching around 30% in cumulative terms – private investment close to 25% and government investment over 70%. • Economic growth led by investment in tradeable sectors: in 2015-2018, investment growth equalled close to 7.5% on average a year, accounting for two-fifths of GDP growth in that period; this at the same time resulted in the modernisation of production capacities. • Growth in competitiveness and exports: the economy that is now more advanced in technological terms and more cost-efficient increased the goods and services euro exports by around 50%, and the share of exports in GDP rose by around 10 pp to around 50% in 2018 (balance of payment methodology). A support to growth comes from lower costs of funding, notably due to a high FDI inflow and the availability of loans at more favourable terms. • Sectoral restructuring: the 2015-2018 period saw acceleration in tradeable sectors growth – manufacturing (production growth of more than 20% and export growth of around 50%) and services (euro exports rose by over 55%). More favourable general conditions underpin export growth recorded by all areas of manufacturing, with investment contributing to their production and geographic diversification. • Microeconomic growth sustainability: in the 2015-2017 period, the financial result of corporates improved by RSD 570 bn. Interest expenses were lower by close to 40% and exchange rate gains and losses by around 60%. Corporates used the savings to increase investment, and this positive synergy makes the medium-term growth outlook brighter. • Labour market recovery: the employment rate rose by 6.3 pp in 2015-2018 and reached 49.2% (Q3 2018), with unemployment declining from 17% to 11.3%, and real private sector wages rising by over 10%. Low inflation contributed to the preservation of their value. • Growth in government capital expenses: the confirmation of sustainability of balanced public finances opens room for the government to support the growth outlook also by increasing investment in infrastructure – in 2018, government investment will increase by more than 30% in real terms, reaching 3.6% of GDP. • A rise in the standard of living: owing to increased employment and wages, primarily in the private sector, household consumption was up by 6.5% in real terms in 2015-2018. • The sustainable growth model entails a more favourable growth outlook, opening additional possibilities to accelerate growth and ensure a rise in the standard of living, with an expected further rise in investment and narrowing in external imbalances owing to increased competitiveness. <hr/>	

while at the same time overcoming external challenges and achieving the desired objectives.

Aiming to explain these lessons, we have analysed the inflation targeting decade through two periods. In the 2009-2012 period, monetary policy was pursued in a crisis environment, featuring high and volatile inflation and

inflation expectations. This is partly due to volatile food prices with a relatively high share in the consumer basket, as well as to pronounced volatility of the dinar exchange rate. This is a clear confirmation of the importance of relative stability of the exchange rate for the achievement and preservation of price stability in small and euroised

economies. The second lesson concerns the importance of well-anchored expectations, which can prevent the pass-through of growth of some prices to other prices (second-round effects). The fact that expectations were not anchored aggravated the achievement of the target in this period, making monetary conditions volatile as well. Coordination between monetary and fiscal policies was lacking, which is a necessary precondition for the achievement and preservation of price stability. This is our third lesson.

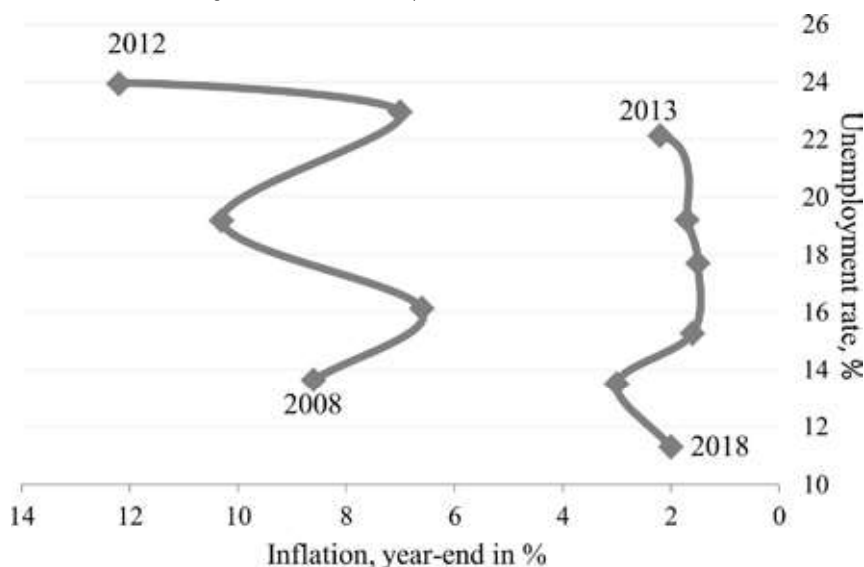
The 2013–2018 period featured low inflation, confirming the importance of relative stability of the exchange rate, anchored inflation expectations and consistency of economic policy as a whole. It proved that global developments, given that they spill over to the domestic market, must be borne in mind when making decisions and designing the policy, particularly when it is a source of instability. Well-calibrated and timely FX interventions absorb short-term shocks and help mitigate inflation volatility and create a more stable investment environment. Therefore, in an environment of volatile capital flows, a large number of emerging economies that pursue inflation targeting regimes intervene in the FX market. It proved that the timeliness of response, consistency of approach, readiness to use all available instruments, in full coordination with other policies, are important elements of the inflation targeting regime.

In early 2017, Serbia lowered the inflation target to 3%. This was an important strategic decision, owing to which Serbia became a part of the group of countries which, without looking for any excuses, work on setting a sound foundation for their sustainable growth. At the same time, the new inflation target leaves room for further price and income convergence to EU levels. Serbia is now considered a safer investment destination. The progress achieved contributed to a higher disposable income, growth in lending and economic activity, and employment and wages. The real life serves as the most obvious proof. One rarely talks about inflation in Serbia. It is also easier to make plans and pursue a business.

However, this does not mean that the job for the central bank is over. Challenges arise all the time, in different forms, with different intensity, which is why we have to strengthen resilience, constantly upgrading our capacity to recognise and respond to challenges in a timely manner. Business and financial cycles are inevitability, which is why economic policymakers must create an environment to significantly reduce the impact of shocks. Although the conflicts between objectives in different phases of the cycle remain, they can be diminished through full coordination of policies, as shown in the Philips curve for Serbia.

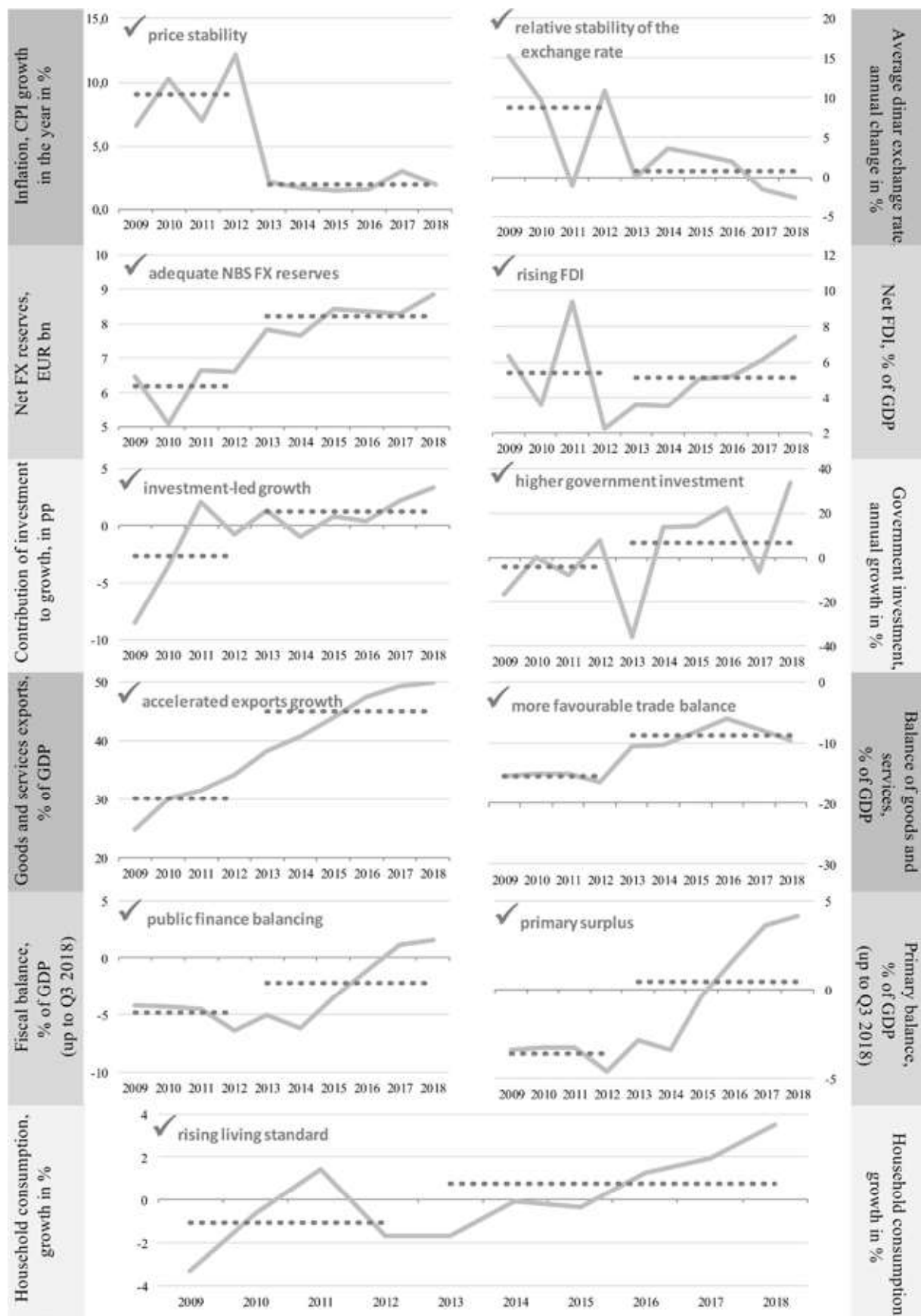
Therefore, the inflation targeting regime cannot be assessed separately, but as a part of the overall economic policy as they form an inextricable unity.

Figure 10: Unemployment rate and inflation



Source: Statistical Office of the Republic of Serbia.

Table 1: Selected indicators in the 2009-2018 period, the case of Serbia



Source: Statistical Office Serbian of the Republic of Serbia, NBS, NBS assessments.

References

1. Bernanke, B. (2011). The effects of the Great Recession on central bank doctrine and practice. Keynote address at the Federal Reserve Bank of Boston 56th Economic Conference "Long term effects of the Great Recession," Boston, October 18–19.
2. Blanchard, O. J., Dell'Ariccia, M. G., & Mauro, M. P. (2013). *Rethinking macro policy II: getting granular*. International Monetary Fund.
3. Blinder, A., Ehrmann M., Haan J., & Jansen D. (2016). Necessity as the mother of invention: Monetary policy after the crisis. DNB Working Paper, No. 525/October, De Nederlandsche Bank.
4. Brunnermeier, M., & Sannikov Y. (2014). Monetary analysis: Price and financial stability. In V. Constancio (Chair), *Monetary policy in the new regulatory environment*. Paper presented at the ECB Forum on central banking: Monetary policy in a changing financial landscape, Penha Longa, Sintra, Portugal.
5. Mohanty, M. (2013). Market volatility and foreign exchange intervention in EMEs: What has changed? An Overview. BIS papers No. 73.
6. Ostry, J., Ghosh, A., & Chamon, M. (2012). Two targets, two instruments: Monetary and exchange rate policies in emerging market economies. *IMF Staff Discussion Note 12/01, February, Washington: International Monetary Fund*.
7. Tabaković, J. (2017). Central bank policy after the crisis: Example of Serbia. *Ekonomika preduzeća*, 65(1-2), 83–102.
8. Tabaković, J. (2017). Targetiranje inflacije u Srbiji – prošlost nas uči, budućnost obavezuje. *Bankarstvo*, 46(1).
9. Tabaković, J., & Ivković, A. (2018). Monetarna politika – nema konačnih pobeda. Beograd: HERAedu.
10. Woodford, M. (2012). Inflation targeting and financial stability. NBER Working Papers 17967, National Bureau of Economic Research.

Web sites:

1. Inflation Report –February 2017. National Bank of Serbia. Retrieved from https://www.nbs.rs/system/galleries/download/pdf_ioi/inflation_report_02_2017.pdf.
2. Inflation Report – February 2018. National Bank of Serbia. Retrieved from https://www.nbs.rs/system/galleries/download/pdf_ioi/inflation_report_02_2018.pdf.
3. International Monetary Fund, World Economic Outlook, October 2018.

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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.