

## THE IMPACT OF EXCHANGE RATE DEPRECIATION ON BUSINESS CONDITIONS IN SERBIA

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**Abstract.** *The exchange rate is a macroeconomic variable with multiple influences on the real and financial sector. Exchange rate's changes, in a fluctuating system, affect the inflation rate, import, export, trade deficit, foreign direct investments, as well as the macroeconomic situation in a country. The fact is that the great foreign currencies income on various bases, before the crisis, enabled a more relaxing exchange rate policy and an easier way to the exchange rate and system stability. However, a sudden fall of foreign currencies income and their outcome growth caused significant depreciation of the Serbian currency. In this paper we analyze how the effects of currency depreciation are reflected in businesses of the real and financial sector, as well as foreign trade transactions.*

**Key Words:** *exchange rate, depreciation, dinar, National Bank of Serbia.*

### AN INTRODUCTORY REVIEW OF EXCHANGE RATE MOVEMENTS IN SERBIA

The exchange rate is a mirror of the national economy and a reflection of economic reality. In a fluctuating system, in the short term, it is possible that the level of the exchange rate shows a "distorted" picture of the economy. The exchange rate can not be the equilibrium one, if there are no foreign exchange inflows, coming not from the export but from any other basis, to cover or exceed the outflows. But, in the long run, the exchange rate is primarily determined by the development of the country, its productivity growth and export potential growth.

For the purpose of analysing and understanding the exchange rate trends in Serbia in the last years, we set aside three periods (Fig. 1): 1) appreciation period before the global economic crisis (September 2005 - September 2008); 2) the period of rapid depreciation during the powerful impact of the crisis (October 2008 - February 2009); 3) the period of stabilization and slow depreciation which is still going on (since March 2009).

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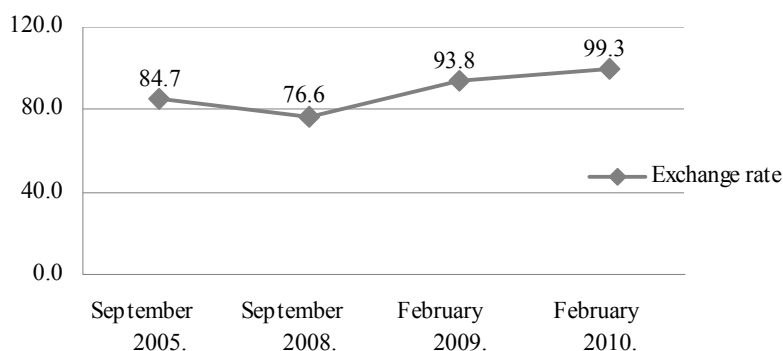


Fig. 1. Movement of exchange rate (September 2005 – February 2010)

In the three-year period starting from September 2005 (1 euro = 84.7 din) until September 2008 (1 euro = 76.6 din), the value of dinar appreciated to euro for 9.6%. At the same period, the growth of prices in the country was about 30% and only 8% in the Euro zone. This exchange rate's trend (appreciation) is opposed to the trend (depreciation) which is expected according to the *relative theory of purchasing power parity*. This theory suggests that changes in the equilibrium exchange rate are equal to the difference between domestic and foreign inflation rates in a particular period of the same basket of goods and services [1, pg. 236]. Thus, dinar should depreciate to euro due to higher general price growth in Serbia than in the Eurozone in this period. The conclusion is that the appreciation was not based on the productivity growth of the Serbian economy but in the way of creating exchange rate in fluctuating regime. Namely, in this regime exchange rate is a market category. It is created on the foreign exchange market confrontation of supply and demand for foreign currency with abstracting the qualitative basis of supply and the issue of long-term sustainability of the structure and level of that supply. From the composition of foreign currency inflows which are dominated by non-export components (privatization inflows, remittances from abroad, state loans and private sector loans coming from abroad and foreign inflows to the banking sector), it was easy to conclude that the level and stability of the exchange rate was under a strong influence of short-term foreign capital. High level of short-term foreign capital by itself is not bad, especially since it helped the National Bank of Serbia (NBS) to reduce inflation pressures with lower exchange rates. However, the problem is that it was not used in a rational and productive way: to invest in domestic material production, but in the final and budgetary consumption; for strengthening export potential and import of equipment and technology, but for the import of final consumption goods and intermediate goods.

During the impact of global economic crisis and a big fall in foreign capital inflows and increase in capital outflows, the exchange rate took the role of external shock absorber and caused the recession to affect mostly and only the real sector. In less than two months from October to November 2008, in the banking panic that affected the domestic banking system, nearly a billion euros of domestic deposits were withdrawn by the population. Direct interventions by the NBS on the foreign currency market in only six months,

from September 2008 to February 2009, amounted to 1.47 billion euros [2]. In spite of the strong intervention of the NBS and the inevitable spending of foreign reserves, in the same period the exchange rate depreciated by 22.4%. If we compare this decline of dinar with depreciation for the seven-year period before the crisis, where dinar depreciated only 30%, we have a clearer picture of just how much the Serbian currency was shaken by the crisis. Spending foreign reserves failed to prevent dinar from losing a fifth of its value. It established a new higher level of exchange rate.

On May 15<sup>th</sup>, 2009, IMF approved Serbia a stand-by credit arrangement of 2.9 billion euros to support the economic program of the Government of Serbia for the reduction of the impact the global economic crisis. The arrangement provided a short-term stability of the financial system, increased the amount of foreign reserves, and after February 2009 introduced the phase of currency stabilization, which lasted until October 2009. Since then, a light depreciation has begun. Overall, from the end of February 2009 to the end of February 2010 dinar weakened to euro by 5.9%. Below, we analyze the impact of depreciation of dinar on real and financial sector and foreign trade.

#### THE IMPACT OF EXCHANGE RATE ON REAL AND FINANCIAL SECTOR

The model of the financial system in Serbia is strongly exposed to the influence of exchange rate. Its main feature is a powerful and necessary orientation of the real sector to banks, due to the underdevelopment of capital market and non-existence of the alternative sources of financing. The banking system is dependent on foreign capital, because it is dominated by foreign banks whose credit potential is mostly in foreign currencies. Most of the resources are made by credit lines with foreign branches and "parent" banks. Local banking sources, deposits of the economy, and above all of the population, are also in the foreign currencies indicating a high level of currency substitution. Low accumulative and credit-dependent economy, price non-elastic loan demand of the population, imposed restrictive monetary policy of the NBS to keep down the inflation - had as a result a fairly comfortable investment and credit position of these banks.

In such a position banks have invested in the highly profitable and low-risk securities of the NBS. They have also approved expensive indexed corporate and retail loans. That brought debtors in troubled. Namely, with the developed mechanism of indexing, currency risk and possible reducing of the profit based on interest rate on borrowed funds due to exchange rate depreciation, is transferred on the debtors. However, the depreciation then brings serious problems with opening the way for easy transformation of the currency risk to credit risk. In an indirect way, depreciation becomes a threat to the stability of the banking and entire economic system.

During the crisis, low and price-elastic demand is an external limiting factor. To survive on the market it is inevitably to reduce operating costs and provide a steady inflow of funds into the company. Because of the decline of market inflow, one of the possible ways for securing these funds is borrowing from banks. Depreciation of the exchange rate has a negative effect on potential reduction of financing costs and on borrowing funds which are necessary for smooth functioning of a company. Further, this impact is multiplied because of the negative effects of the economic crisis. Namely, the domination of foreign currency in structure of credit liabilities and the domination of domestic currency in

structure of income means that depreciation increases loan's costs of companies and reduces the incomes in real amounts that are already lower because of the falling demand. Therefore, the results are following: the losses in the final accounts; deterioration of insolvency problem; delay in the repayment of loans; credit solvency fall and deterioration of access to the credit markets by domestic companies.

This raises the question of what the NBS could do in order to fix the position of the real sector. Under the conditions of relatively low inflation (annual inflation in the current year is 4.7%) due to a fall in an aggregate demand, low affinity of banks for placements in the economy, the NBS could relax the monetary policy by lowering the referent interest rate and rates of obligatory reserves. That would cause gradually weakening of dinar, potentially increasing the affinity of banks to insert necessary money into domestic production and stimulate economic activity.

The high referent interest rate, the rate on 14 days repo operations, as an indicator of the level of restrictiveness of the monetary policy, has been used to calm the inflation in two ways. Firstly, by offering repo operations as a better alternative to banks against excessive lending of the population, it reduced domestic demand and its pressure on prices. Secondly, these investments are in dinars so foreign currencies have to be converted to dinars at the market. This increases the supply of foreign currencies and reduces the pressure on the exchange rate and on inflation because the exchange rate is the strongest transmission channel of monetary policy. It is a result of negative experiences with hyperinflation and a lack of confidence in the domestic currency. The negative effects of using this instrument are: a) indirectly increasing the interest rates of bank loans, b) isolation of much needed economic funds in securities of the NBS, c) high costs because banks have made extraordinary profits.

A lower referent interest rate could release a significant amount of dinars from the securities of the NBS and divert it to economy if banks wanted to place that money with lower interest rates. Of course, there is a possibility that banks will take a part of these funds out of the country, because they do not want to lend to domestic enterprises due to increased credit risk. But regardless of the negative effects of these outflows of foreign currency, perhaps it is high time that a certain amount of such speculative capital left the country while the NBS is able to defend the domestic currency with relatively high foreign reserves. On the other hand, the Government should help enterprises with big problems in servicing their liabilities under indexed loans due to the depreciation of dinar. In order to allow enterprises to overcome a new situation easily, it should offer the use of credits for liquidity, tax relief, postpone settling their tax liabilities and similar measures.

In conditions when the fear of credit expansion practically does not exist, the NBS should also think about relaxing the obligatory reserves. The overall reduction of the restrictive monetary policy should be accompanied by other measures to prevent that additional money from the banking system from leading to instability on the foreign currency market and to be turned towards the investments in infrastructure, domestic production and potentials of the export sector.

## THE IMPACT OF EXCHANGE RATE ON FOREIGN TRADE BALANCE

According to data (*Table 1*) at the end of 2009, the total external debt of Serbia was 22.78 billion euros, 31.74% of that is public sector external debt (7.23 billion), and the rest of 68.26% is the external debt of the private sector (15.55 billion). The total external debt has increased by 83.84% in the period from 2000 to 2009, thereby it was the biggest at the time of the greatest appreciation of dinar from 2005 to 2008. Another aspect of relations issue with foreign countries is a constant trade deficit and related net importer position of Serbia. The coverage of import by export at the end of 2009 was 53.44%. Because of the above mentioned, the increase in export with reducing import, intrudes itself as a certainty for the necessary reduction of trade balance deficit and for the increase of export revenues in order to avoid external liquidity crisis.

Table 1. Overview of external trade indicators (2001-2009) (in million euros)

Year	2001	2002	2003	2004	2005	2006	2007	2008	2009
1. Goods export	1.922	2.870	2.441	2.832	3.608	5.102	6.432	7.428	5.962
2. Goods import	4.759	5.957	6.585	8.623	8.439	10.463	13.507	15.494	11.157
3. Trade deficit (1-2)	-2.837	-3.755	-4.144	-5.792	-4.831	-5.361	-7.074	-8.066	-5.195
4. Public sector external debt	10.007	8.441	8.352	7.112	7.714	6.421	6.130	6.387	7.231
5. Private sector external debt	2.352	2.325	2.506	3.242	5.350	8.465	11.659	15.414	15.556
6. Total external debt (4-5)	12.395	10.766	10.858	10.355	13.064	14.885	17.784	21.801	22.787
7. Current account deficit (% GDP)	-7.6	-11.5	-9.6	-14.1	-10.1	-13.1	-16.2	-17.8	-6.2

*Source:* Ministry of Finance of the Republic of Serbia, Public Finances Bulletin, January 2010

This further indicates the need of isolating and putting under control the causes of growth of the trade deficit, and the causes of excessive import and insufficient export. There are three main causes of excessive import: excessive domestic demand for import, strong importing dependence of domestic production and "unrealistically" strong dinar in the period before the crisis. When the conditions of stability of foreign currency market are satisfied, the depreciation of the national currency improves and appreciation makes worse of the balance of payments [3, pg. 87]. Therefore, depreciation is imposed as a way of solving one part of the problem. Namely, theoretically weaker dinar makes export goods cheaper for the foreign buyer, and import goods more expensive for domestic buyer. Thus the depreciation with reducing imports and increasing exports should improve the foreign trade balance and increase domestic production.

However, from the previous part of work we can conclude that the strong depreciation in the short term carries with it the danger that, because of increased credit risk and the impossibility of settling the liabilities of the debtors, the stability of overall financial system can be jeopardized. Also, sudden depreciation does not have the expected results if domestic production is dependent on foreign inputs (energy, raw materials, intermediate goods). The increase of prices of imported components would raise the prices of final

products in which they are installed. Then, because of exceptional sensitivity of the prices to the movement of the exchange rate, it is one of the basic determinants of macroeconomic stability. Strong weakening of dinar would adversely affect the overall economic environment and greater inflow of foreign direct investments. The conclusion is that a strong depreciation in the short term can not solve the problem of uncompetitive Serbian export and economic dependence on inputs import, and could significantly jeopardize stability of macroeconomic and financial system.

Empirical confirmation of these claims can be found in the analysis of local authors [4, pg. 23, 24]. In theory, the depreciation will have a positive net effect on the balance of foreign trade if it meets the conditions of the Marshall-Lerner theorem. This requires that the sum of the coefficient of price elasticity of domestic demand for imports and the coefficient of price elasticity of foreign demand for domestic exports is greater than one. However, the sum of long-term coefficients of elasticity of imports and exports has amounted to 0.72 (0.24 + 0.48), which is less than the required 1. A big domestic demand, generated by the unrealistic growth of salaries and pensions, has a much stronger impact on import than the exchange rate. This could be explained by the fact that the most of the imports (80%) consists of equipment and raw materials whose import demand is largely determined by production needs of the economy, and much less by the level exchange rate.

The fascination with export and even more the fixation to a significant production increase as an alleged condition for export expansion have moved another slightly less obvious plan, import contraction as an alternative and far more realistic way of decreasing foreign trade and balance of payments deficit [5, pg. 112]. Namely, in the specific conditions of the Serbian economy a key channel of transmission between depreciation and the reduction of import should be a mechanism to reduce salaries and pensions denominated in foreign currency. The reduction of domestic aggregate demand is effective for the reduction of foreign trade deficit and that indicates the fact that foreign trade deficit is 35.59% lower at the end of 2009 than in the previous year. This is because the fall of import caused by the decrease of domestic demand was greater than the decline of export as a result of falling world demand. The fall of domestic demand is a result of the recession in the economy and earnings fall, but depreciation reduced that earnings denominated in euros even more.

Otherwise, because of the crisis in the coming period it is difficult to expect a greater inflow of foreign direct investment; foreign currency inflows from privatization are almost completely exhausted; further state borrowing is unacceptable; export inflows are low - and because of the smaller inflow of foreign currency it will be difficult to maintain the current exchange rate level. Slight "slipping" of the exchange rate is inevitable and certainly it would be impossible to stop it in the long run. Therefore, the central bank should not spend excessive foreign reserves to defend the exchange rate to the level which will be a threat to price stability (projected inflation) and financial system, especially if foreign reserves are not as great as it seems at first glance. Namely, the NBS foreign reserves amounted to 14.8 billion dollars at the end of January 2010. However, net foreign reserves, after the rejection of receivables of banks from the NBS (8.18 billion), deposits of the state (1.18 billion) and liabilities to the IMF (1.59 billion), amounted to 3.24 billion dollars.

Therefore, further depreciation is a reality, and light-controlled depreciation which leads to equilibrium exchange rate level is a much better solution than defending the current level by limited foreign reserves, with the possibility of their total exhaustion and then a sudden collapse of the domestic currency. It would not be a significant generator of increased exports, but for the beginning it would leave more space on the market for domestic production that should be more competitive because of more expensive imported goods as a result of depreciation. The current recession and decline in aggregate demand are the reasons for preventing the companies and importers to raise prices significantly regardless of depreciation, so the effect on inflation should be relatively low.

#### CONCLUSION

Under the conditions of relatively low inflation due to a fall in aggregate demand, low affinity of banks for placements in the economy, it is possible to relax the monetary policy by lowering the referent interest rates and rates of obligatory reserves. That would cause gradual weakening of dinar, potentially increasing the affinity of banks to insert necessary money into domestic production and stimulate economic activity.

A strong depreciation in the short term can not solve the problem of uncompetitive Serbian export and economic dependence on inputs import but could significantly jeopardize stability of macroeconomic and financial system while opening the way for easy transformation of the currency risk to a credit risk. However, as a further depreciation is inevitable a light-controlled depreciation which would not jeopardize price stability and lead to equilibrium level of exchange rate is a much better solution than defending the level of exchange rate with limited foreign reserves.

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## **UTICAJ DEPRESIJACIJE DEVIZNOG KURSA NA POSLOVANJE U SRBIJI**

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*Devizni kurs je makroekonomska varijabla sa višestrukim uticajem na realni i finansijski sektor. Promene nivoa deviznog kursa, u fluktuirajućem režimu, reflektuju se na stopu inflacije, izvoz, uvoz, spoljnotrgovinski deficit, strane direktne investicije, odnosno na privredni i makroekonomski ambijent zemlje. Činjenica je da je veliki priliv deviza po raznim osnovama, pre krize, omogućavao relaksiraniju politiku kursa i lakši put do stabilnosti kursa i sistema. Međutim, sa naglim padom priliva i rastom odliva deviza, srpska valuta je počela značajnije da depresira. U radu analiziramo kako se efekti slabljenja valute reflektuju na poslovanje u realnom i finansijskom sektoru, kao i na sektor spoljnotrgovinske razmene.*

Ključne reči: *devizni kurs, depresijacija, dinar, Narodna banka Srbije.*