

5. Prices and the Exchange rate

During Q2 and July, inflation was below the lower limit of the NBS target band and at the end of July amounted to 1.1%. Low prices of petroleum and primary agricultural products at a world market, the lack of expected regulated price adjustments in a period longer than a year (until the increase in the prices of electricity in August 2015), low aggregate demand and low cost pressures in food production are the most important disinflationary factors affecting the maintenance of inflation at a very low level. The consumer price index (CPI) was mostly affected by the growth in the prices of tobacco products and travel arrangements. Underlying inflation (measured by the CPI excluding the prices of food, energy, alcohol and tobacco) from the beginning of Q2 until the late July was moving also below the lower limit of the target band, mostly due to a low aggregate demand, almost completely unchanged dinar exchange rate against the euro and low imported inflation. Moderate inflation was recorded during April and June, largely as the result of the increase in the prices of cigarettes and unprocessed food, i.e. the prices of travel arrangements and seasonally expected growth in the fruit prices. Deflation in May and July was entirely a consequence of the decrease in the prices of unprocessed food (mainly vegetables). By the end of the year, inflation is expected to move below and around the lower limit of the NBS target band, while its return within the limits of the target band is possible only from the mid 2016. National Bank of Serbia continued to decrease the key policy rate in Q2 and August, but it still at a relatively high level when compared to inflation (5.5% compared to 1.1%). Average inflation in 2015 will amount around 1.6%, which is lower than the planned 2.7%. Low average inflation will affect the downward adjustments in nominal GDP and the lower growth in tax revenues, which will decrease the expected results of the implementation of fiscal consolidation. In Q2 dinar nominally depreciated by 0.3%, in July it appreciated by 0.4%, while in August it weakened by 0.06%. These changes are so small that the exchange rate is almost fixed and ranges between 120.0 and 121 dinars per euro throughout the whole observed period. A slight real appreciation during Q2 of around 0.25% is entirely the result of the difference in inflations in Serbia and in the Eurozone, given that the period realized the modest real depreciation, while July maintained almost unchanged real exchange rate. The increase of inflation to the limits of the target band would affect the more efficient implementation of the fiscal consolidation measures, while the moderate depreciation would have a favourable effect on the growth of the economy competitiveness and employment, with the acceptable costs of loan servicing and costs concerning inflation.

Prices

Inflation continued its trend below the lower limit of the NBS target band in Q2 and July

At the end of the secon quarter year-on-year inflation amounted to 1.9%, which is slightly higher than its value at the end of Q1 (Table T5-1). Exclusion of a January 2014 high inflation from the calculation of the year-on-year inflation affected its strong decline in January of 2015. In the following months, inflation trend was largely influenced by the current monthly inflation, given that in other months in 2014 monthly inflation (i.e. deflation) was usually relatively low. Year-on-year inflation in April stood at 1.8%, in May 1.5%, in June 1.9%, while in July it dropped to 1.1% (mainly due to a strong drop in the vegetable prices). All these values are below the lower limit of the target tolerance of the National Bank of Serbia (NBS), below which inflation has stood since of March 2014. Underlying inflation (measured by the consumer price index, prices of food, alcoholic beverages, tobacco and energy products) was also below the lower limit of the NBS target band, and in June it amounted to 2.1%, while in July, it dropped to 1.8%. The trend of year-on-year underlying inflation in the past year was relatively stable. Since underlying inflation dropped below the lower limit of the NBS target band in August of 2014, there were no major discrepancies in it- it varied in the range from 1.6% to 2.2% (Graph T5-2). The implementation of the fiscal consolidation measures (reduction of public sector wages and pensions) reduces the domestic demand, which is reflected in a low underlying inflation, as well as in the absence of any signi-

Table T5-1. Serbia: Consumer Price Index, 2009-2015

	Consumer price index				
	Base index (avg. 2006 =100)	Y-o-y growth	Cumulative index	Monthly growth	3m moving average, annualized
2009					
dec	130.8	6.6	6.6	-0.3	1.6
2010					
dec	144.2	10.2	10.2	0.3	11.7
2011					
dec	154.3	7.0	7.0	-0.7	2.5
2012					
dec	173.1	12.2	12.2	-0.4	9.9
2013					
mar	175.1	11.2	1.2	0.0	4.7
jun	178.2	9.7	2.9	1.0	7.3
sep	177.3	4.8	2.4	0.0	-2.0
dec	176.9	2.2	2.2	0.2	-0.9
2014					
jan	179.5	3.1	1.5	1.5	4.4
feb	179.7	2.6	1.6	0.1	7.5
mar	179.1	2.3	1.2	-0.3	5.1
apr	180.1	2.0	1.8	0.6	1.4
may	180.2	2.1	1.9	0.1	1.1
jun	180.4	1.2	2.0	0.1	2.9
jul	180.2	2.0	1.9	-0.1	0.2
aug	179.9	1.5	1.7	-0.2	-0.7
sep	181.2	2.1	2.4	0.7	1.6
oct	180.8	1.8	2.2	-0.2	1.3
nov	180.8	2.4	2.2	0.0	2.0
dec	180.0	1.8	1.8	-0.4	-2.4
2015					
jan	179.6	0.1	-0.2	-0.2	-2.6
feb	181.1	0.8	0.6	0.8	0.7
mar	182.4	1.8	1.3	0.7	5.5
apr	183.4	1.8	1.9	0.5	8.7
may	182.9	1.5	1.6	-0.3	4.0
jun	183.8	1.9	2.1	0.5	3.1
jul	182.1	1.1	1.2	-0.9	-2.8

Source: SORS.

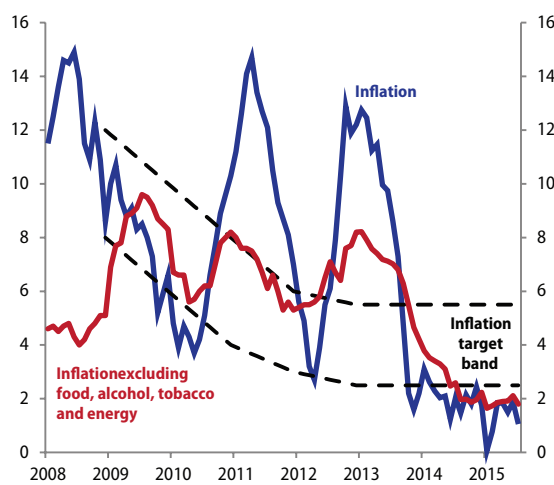
dity Agricultural Raw Material Index) has led to a reduction of cost pressures in food production in the world and domestic market. The index of prices of primary agricultural products is at its lowest value in the last five years, which will likely lead to a reduction in cost pressures in food production in the future. The price of petroleum is at a six-year minimum, which will contribute to further reduction of cost pressures in manufacturing. The disappearance of depreciation pressures in the mid Q1, opened the space for National Bank of Serbia to ease monetary policy, so that from March, it has taken a more active role in inflation targeting. Since the beginning of Q2 until the late August, NBS has lowered the key policy rate by a total of 2.0 percentage points, from 7.5% to 5.5%, by 50 base points (b.p.) in April, May, Jun and August (Graph T5-3). Price movements in Q2 and in July were at the expected level, i.e. below the limits of the NBS target band, taking into account the absence of the adjustment in regulated prices, slow economic recovery and a drop in the prices of primary agricultural products in world market and the decline in petroleum prices.

Moderate inflation in Q2

In the second quarter, the growth of the consumer price index amounted to 0.77% (Table T5-4), i.e. by months: in April 0.55%, in May -0.27% (deflation) and in June 0.49%. A total price growth since the beginning of the year until the end of Q2 amounted to 2.1% and it was at an approximately the same level as it was in the same period in 2014.

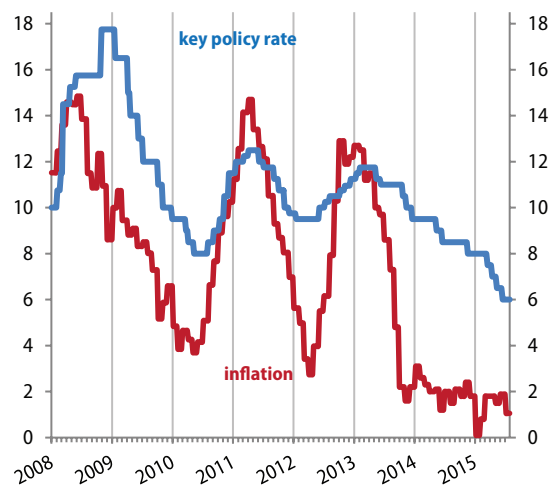
ficant dinar depreciation spillover from the period July 2014– Feb. 2015 to the prices. The absence of the expected growth in regulated prices in the previous year (until the end of July) also acted disinflationary, while a long-delayed increase in the electricity prices occurred in August. The price stability was also affected by the dinar strengthening and stabilization from February. Next to domestic factors, inflationary pressures in Q2 and July remained low and in accordance with low inflation in international environment and low prices in primary products on the world market. The fall in prices of primary agricultural products on the world market (measured by Commo-

Chart T5-2. Serbia: Y-o-y Inflation Rate and Underlying Inflation and the NBS Target Band 2008-2015



Source: NBS and QM estimates

Chart T5-3. Serbia: NBS Reference Interest Rate and y-o-y Inflation Rate, in %, 2008-2015



Source: NBS

The greatest contribution to inflation in Q2 was made by the rise in the prices of travel arrangements, cigarettes and petroleum products, as well as to a lesser extent rise in the prices of household appliances, tools and equipment for house and garden, telephone equipment, furniture, shoes and products for maintenance. Food prices had an approximately neutral effect to the consumer price index (growth in the fruit prices and a drop in the vegetable prices), while a fall in the prices of natural gas and solid fuels had a disinflationary effect. Due to a seasonal rise in the prices of travel arrangements, the rise in the prices in the group recreation and culture amounted to 5.1% (contribution to inflation of 0.3 p.p.), while the prices of petroleum products rose by 3.1% (contribution of 0.2 p.p.) due to a (short-term) growth in the petroleum world price and the growth of the dinar exchange rate (depreciation) against the dollar at the average level in Q2 compared to Q1. After a long-delayed increase in the cigarette prices, their price increased by 4.0% (contribution of 0.2 p.p.) in Q2, due to the April price rise of 10 dinars per pack of all types of cigarettes. Although excise rose in July 2014 and January of 2015, the prices of cigarettes decreased in the last quarter of 2014, and in early 2015 remained at the same level due to a high competition between the producers whose goal was to maintain their position in the declining market, and shifting the tax burden from producers to consumers occurred only during coordinated rise in the price by all the producers. The increase in the inflation was to a lesser extent influenced by the rise in the price of products and services from the group of house appliances (growth by 1.8%, contribution of 0.02 p.p.), tools and house and garden equipment (growth of 2.1%, contribution of 0.01 p.p.), phone equipment (growth of 4.3%, the contribution of 0.02 percentage points), footwear (growth of 1.5%, the contribution of 0.02 percentage points), furniture and household equipment (growth of 1.0%, the contribution of 0.01 percentage points) and products and services for household maintenance (growth of 0.7%, the contribution of 0.01 percentage points). Prices of products in the group of food and non-alcoholic beverages as a whole influenced the movement of the price index in Q2 to a lesser extent (growth by 0.05%, contribution of 0.02 p.p.). The greatest contribution was made by the prices of unprocessed food, but within this heterogeneous group the prices of fruit and vegetables had divergent movement and to a large extent mutually cancelled the contribution to inflation- the prices of fruit rose by 27.0% (contribution of 0.55 p.p.), while the vegetable prices dropped by 9.5% (contribution of -0.50 p.p.). Significant changes were recorded in the meat prices (growth of 1.8%, the contribution 0.14 p.p.), as well as the prices of milk, cheese and eggs (drop of 3.0%, contribution of -0.16 p.p.), while the other prices in the group of food had relatively small changes and contribution to inflation. A decline in the prices of natural gas for public supply of 5.0% and solid fuels of 0.8% had a disinflationary effect, which contributed to inflation by -0.03 p.p. or -0.02 p.p. respectively.

Table T5-4. Serbia: Consumer Price Index: Contribution to Growth by Selected Components

	Share in CPI (in %)	price increase in Q2 2015	Contribution to overall CPI increase (in p.p.)	Price increase in July 2015	Contribution to overall CPI increase (in p.p.)
Total	100.0	0.8	0.8	-0.9	-0.92
Food and non-alcoholic beverages	32.8	0.1	0.0	-3.7	-1.22
Food	29.2	0.0	0.0	-4.2	-1.22
Alcoholic beverages and tobacco	7.4	2.3	0.2	2.2	0.17
Tobacco	4.7	4.0	0.2	3.5	0.16
Clothing and footwear	4.5	0.2	0.0	-1.1	-0.05
Housing, water, electricity and other fuels	13.6	-0.3	0.0	-0.4	-0.06
Electricity	4.8	0.0	0.0	0.0	0.00
Furniture, household equipment, routine maintenance	4.6	1.1	0.1	0.4	0.02
Health	5.0	0.2	0.0	-0.3	-0.02
Transport	12.9	1.5	0.2	0.2	0.03
Oil products	5.8	3.1	0.2	0.3	0.02
Communications	5.0	0.2	0.0	0.2	0.01
Other items	14.3		0.3		0.19

Source: SORS and QM estimates

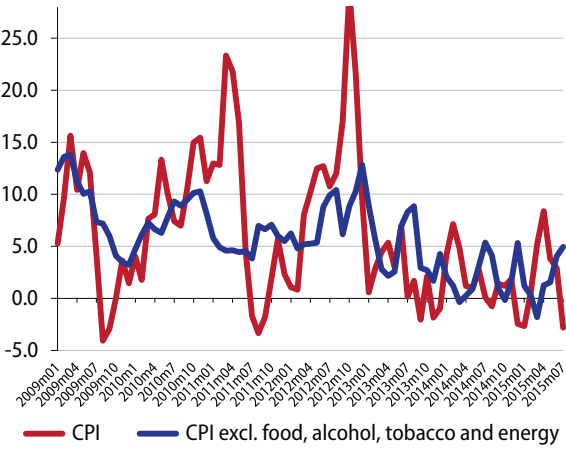
Deflation in July

At a monthly level, July realized relatively high deflation of 0.9%, mostly due to the falling prices of unprocessed food, natural gas and clothing and footwear, while a rise in the prices of tobacco products and travel arrangements had inflationary effect. Within the food prices, the greatest contribution was made by the changes in the unprocessed food prices- a strong drop in the vegetable prices, amounting to -20.5 (contribution of -1.1 p.p.) and significantly more modest drop in the fruit prices of -2.8% (contribution of 0.06 p.p.), while the prices of other categories in the food group (excluding the prices of oil and fat which increased by 4.8%) stagnated. When compared to the prices from a year ago, fruit is more expensive by about 26%, while vegetables are cheaper by about 5%, and the seasonal movement of these prices (the fruit price growth at the end of Q2 and at the beginning of Q3 and vegetable price drop during Q3 are usual) in the following months should have approximately neutral effect. In July, the prices of natural gas further dropped (by 10.2%, contribution of -0.06 p.p.), as well as the prices of solid fuels (by 0.2%, contribution of -0.01 p.p.). Price reduction of footwear and clothes (-1.1%, contribution of 0.05%) and furniture and household equipment by approximately the same amount as the price increase in Q2 was (-1.0%, contribution of -0.01 p.p.), mostly due to the sales in summer months, when the demand decreases, had a disinflationary effect. Deflation was largely mitigated by the continued growth in the prices of tobacco products of 3.5% (contribution of 0.16 p.p.), since there was a new rise in the prices of 10 dinars per pack of cigarettes in July. This price increase is in line with our earlier expectations, given that the decision to increase the excise duties from July was implemented in July, as well as that the price increase could not be delayed in the long term, thus the April and July price increase in cigarettes made the tax burden of excise growth in the previous period largely transfer to consumers. Travel arrangement prices continued to grow in July, so the prices from the group recreation and culture increased by 4.3% (contribution of 0.23 p.p.) which is in accordance with the seasonal growth that is expected from Jun until August, which is followed by a noticeable decline. Prices of petroleum products increased by about 0.3% (contribution of 0.02 p.p.), the water supply price increased by 1.2% (contribution of 0.02 p.p.) and maintenance products price additionally increased by 1.6% (contribution of 0.03 p.p.). In the coming months (observed yoy) August electricity price increase, exclusion from the calculation of the last-year's low prices of tobacco products and somewhat weaker agricultural season in the country than expected will have an inflationary effect, while the most significant disinflationary effect will be caused by an extremely low price of crude oil on the world market.

Overall inflation is at a low level, while underlying inflation is in growth

Overall inflation is in negative zone (3m annualized average is -2.8%), while underlying inflation (inflation excluding food, alcohol, tobacco and energy products) was in a mild growth. However, their short-term trend (Graph T5-5) can be well explained by the changes in the prices of one-off character – by the seasonal drop in the prices of unprocessed food for overall inflation and seasonal growth in the prices of tourist services for underlying inflation, which were the main factors of their movements in the last few months. After a relatively stable trend during Q2 (except in April, when there was an accumulation of the increase in fruit and vegetable prices in the previous three months), the strong decline in the prices of vegetables of more than 20% overthrew 3m annualized average by almost 6 percentage points (from 3.1% to -2.8%). However, as the growth of these prices is uncertain in the following months, this trend is expected to change: inflation is certainly low, but deflationary trend is the result only of temporary factors. The growth of the annualized 3 month-average of the underlying inflation in June and

Chart T5-5. Serbia: CPI and Underlying Inflation Trend, Annualized Rates, in %, 2009-2015



Source: SORS and QM estimates

July can in large be explained by the seasonal growth in the prices of travel arrangements, when the prices in the group of recreation and culture increased by 4.1% in June and 4.3% in July. As the prices of unprocessed food momentarily brought down the overall inflation to a very low level, so the seasonal growth in the prices of travel arrangements (which is common for the period June-August) increased the underlying inflation to a much higher level than the one to which it will return in the following months, when the abovementioned prices will stagnate and then drop. In addition to short-term factors, underlying inflation is influenced by the factors that determine its dynamics in the medium and long term, such as the stable dinar exchange rate and a low aggregate demand.

NBS Regulated price growth will contribute to approaching the inflation to the NBS target band

Regulated prices in Q2 recorded a growth of 0.8% (contribution to the CPI of 0.1 p.p.) mostly due to the growth in the prices of cigarettes in April, while they are still in decline of -1.5% at a year-on-year level. However, it is uncertain whether this trend will reverse in Q3. Although the announced increase in the electricity price didn't occur during Q2, as well as in July, NBS prediction that it will increase in Q3 was realized. In August, electricity price increased for the consumers at low voltage network (households and the service sectors – trade, catering, financial sector, etc.) by a total of 12% (increase in manufacturing price by 4.5% and introduction of excise in the amount of 7.5%), while the price for industrial producers using the electricity on medium and high voltage increased only by the amount of the excise duty of 7.5%. This increase will have a direct impact on the inflation growth of about 0.6 percentage points and the return of the regulated price growth at a year-on-year level, after a long period of decline. A spillover effect of electricity price to other consumer prices will provide an additional contribution to inflation and contribute to its approaching to the NBS target band.

National Bank of Serbia participates more actively in the inflation targeting, but its return within the target band is not expected in this year

During the second quarter, National Bank of Serbia on several occasions, during April, May and June reduced the key policy rate by 50 basis points each time. In August, the key policy rate was additionally reduced by 50 b.p. and at the end of the month was lower by 2.0 p.p. compared to the beginning of Q2 and amounted to 5.5% (this is its lowest level in the targeting inflation regime), which is a good measure with the goal to return the inflation within the target band. Although the key policy rate is at its lowest level, it is still relatively high, i.e. significantly higher than overall and underlying inflation (1.1% and 1.8% respectively). The decrease of the key policy rate should lead to the reduction in dinar interest rates at the market of money and loans, which should contribute to the economic growth. Despite the easing of monetary policy, the central projection of the NBS in August was lower when compared to May projection, as the world pri-

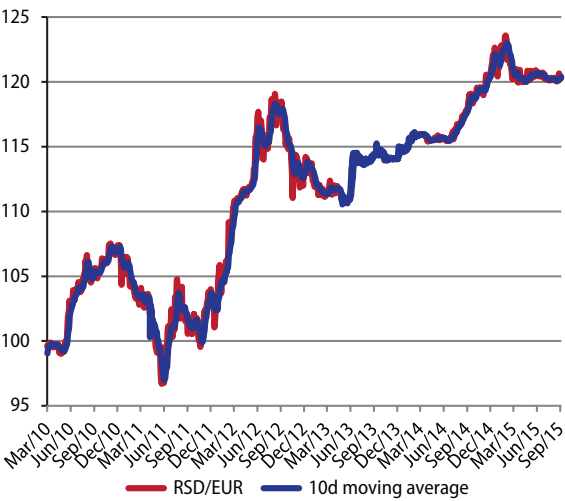
ces of primary products lower than previously expected (they are at a five-year minimum). It is expected that by the mid 2016 inflation will be moving around and below the lower limit of target tolerance, and that only then the inflation entry within the target band can be expected. The main factors that will influence the inflation to return within the target band (in the mid-term) are the growth in the price of electricity, cigarettes and petroleum products, as well as a possible increase in the prices of primary products. It is expected that the spillover effect of the August growth in the electricity price to other prices will not be higher. Inflation will grow according to a low base from the last year, which is largely a consequence of the reduced price of cigarettes and petroleum products. Inflation expectations of the economy and financial sector for the year ahead and in the medium term are within the target band, but the inflation expectations of the citizens are at a much higher level. However, given that the inflation perceived by the citizens is several times higher than realized, it is probable that the inflation projections by citizens are biased. In the following period (in the short term) a low petroleum price, low inflation in the international environment, a continued implementation of the fiscal consolidation measures and low domestic demand will all have a disinflationary effect. Uncertainty regarding the realization of the NBS projections refers to the movement of the prices of primary agricultural products and their impact on the food prices, as well as the impact of the trends in the international environment on the risk premium of the country and the capital influx. Domestic risks are to some extent reduced - arrangement with the IMF and lower fiscal and external deficits contribute to the sustainability of public finances and the improvement of macroeconomic parameters, which in turn contributes to the stability of the foreign exchange market and affects more favourable perception of investors. It is expected that the average inflation in 2015 will be around 1.6%, which is lower than the planned inflation rate of 2.7%. This change will lead to the downward adjustments in nominal GDP by the amount of the difference between planned and achieved inflation (ie. by about 1.1%), which will affect the tax revenues to grow more slowly than planned, the fall of the public expenditure shares in GDP to slow down. Changes like these are most significant in the case of the share of expenditures for salaries and pensions in the GDP, given that, due to the placing their goal in the percentage of the GDP, the slower decline will indicate weaker effects of the fiscal consolidation and necessary extension of the period of its implementation. We estimate that there is room to increase the inflation (within the limits of the target band) in order to increase the nominal GDP, and hence the tax revenues, while the share of public expenditures in GDP would be reduce.

The Exchange rate

Dinar exchange rate is almost flat

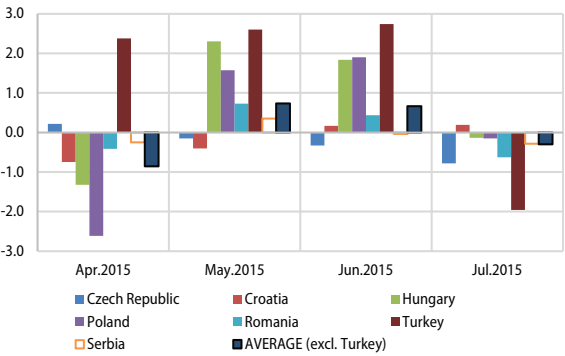
Depreciation in Q2, appreciation in July, and then depreciation in August are extremely small, thus it can be concluded that the exchange rate is almost flat (from the beginning of April until the late August its trend was between 120.0 and 120.9 dinars per euro). During the second quarter dinar nominally depreciated against the euro by 0.3%, observed at the end of the period, i.e. by 0.07% on the level of the period average. Against the US dollar, the dinar at the end of Q2 declined by 3.3%, the same as on the level of the quarter average. For the most part this is a consequence of the continuation of weakening of the euro against the dollar. Minor changes in the exchange rate occurred during April (appreciation of 0.05%) and June (depreciation of 0.03%), when the dinar was relatively stable, while only in May it weakened somewhat more noticeable- by 0.34% (Graph T5-6). However, depreciation realized in Q2 was annulled by the July appreciation of 0.38% at the end of the month, i.e. 0.28% at the level of the month average. Against the dollar, dinar weakened by 1.9% in July (i.e. by 1.6% at the level of the average). Stabilization of the dinar exchange rate against the euro occurred in August- slight depreciation of 0.06% was recorded at the end of the month, i.e. 0.01% at the level of the month average. National Bank of Serbia intervened at the interbank foreign exchange market (IFEM) during Q2 and mostly in April- by buying 140ml euros and selling 30 ml euros, while after that, by the end of Q2, it intervened only on the purchase of foreign exchange in the amount of 10 ml euros (in June). During the time of appreciation pressures, NBS intervened by buying the foreign exchange and eased the further dinar strengthening. However, when there was depreciation pressu-

Chart T5-6. Serbia: Daily RSD/EUR Exchange Rate, 2010-2015



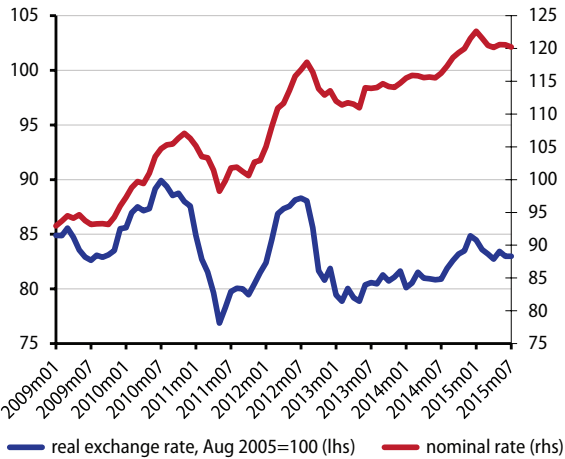
Source: NBS

Chart T5-7. Nominal Exchange Rate Change (in %) in Selected Countries



Source: Eurostat, NBS, QM estimates

Chart T5-8. Serbia: Nominal and Real RSD/EUR Exchange Rate, Monthly Averages, 2009-2015



Source: NBS, SORS, Eurostat and QM estimates

Note: an increase represents depreciation

Global factors affect the movement of the dinar exchange rate

re- from the other half of April till the end of May, NBS didn't intervene and left the exchange rate to the conditions of the market. The National Bank of Serbia intervened in the IFEM by buying 230 million euros in July and net purchase of 130 million euros in August (buying 140 million and selling 10 million euros). This represents a change in comparison to the behaviour of the NBS in the previous period, when the interventions were aimed at the prevention of excessive daily exchange rate oscillations, but mostly when dinar was weakening, while they generally didn't react on the excessive daily dinar strengthening. Strengthening of the dinar is the consequence of exogenous, mainly financial factors (quantitative easing in the Eurozone countries) and not in accordance with the competitiveness of the Serbian economy. Possible future strengthening of the dinar would negatively affect the export of Serbia, and in the medium term, the growth of economic activity and employment. It is therefore essential that the NBS, through various measures of monetary policy (through interest rates, reserve requirements, etc.), prevents the strengthening of the dinar against the euro.

The growth of liquidity in the international financial market (mostly due to the measures of ECB quantitative easing that started to be applied from May) is one of the most important global factors that affect the movement of dinar exchange rate. The reduction in the risk perception of the country (mostly due to the signing of the arrangement with the IMF) and fiscal deficit are additional factors that impact the stabilization of the exchange rate. During April, NBS interventions (key interest rate reduction and purchase of the foreign exchange in the IFEM) contributed the volatility of the exchange rate in Serbia to be among the lowest in the region, when compared to the countries with the similar regime of the foreign exchange rate (Graph T5-7). Given that all chosen countries represent small open economies, their foreign exchange markets are under a strong influence of foreign capital movement. In such way, the Greece crisis of a public debt led to a more cautious behaviour of the investors in most European markets which spurred depreciation pressures. However, after Greece

reached the agreement with international creditors, the extreme risks decreased and July was followed by appreciation in most observed countries.

Real dinar value is almost unchanged during Q2 and July

Dinar appreciated in real terms by 0.25% during Q2, while it remained at almost unchanged value of the real exchange rate during July (real depreciation of 0.01% was realized). Real appreciation in Q2 is completely the result of the difference in inflation in Serbia and in Eurozone (inflation in Q2 in Serbia amounts to 0.77%, and in Eurozone 0.45%), given that the period realized the nominal depreciation of the dinar exchange rate of 0.07%. Since the beginning of the year until the late July dinar appreciated in real terms by about 2.2%, which halved the increase of economy competence that was realized in the second part of 2014. (Graph T5-8). However, July maintained the value of the real exchange rate at the June level, because the difference in inflation in Serbia and Eurozone “annulled” nominal appreciation. Real exchange rate at the end of July was at a similar level as in October of 2014. Moderate real depreciation would lead to the improvement of the economy competitiveness, which would then have a favourable impact on the growth of employment in Serbia and on the economic growth, with acceptable costs on the inflation side (especially when we take into account that it is at a historical minimum and below the lower limit of the NBS target band) and the costs of the loan servicing.