5. Prices and the Exchange Rate

At the end of 2017 inflation (both the average and the year-on-year) was 3% and was at the middle of the NBS targeted band (3 ± 1.5%) - primarily due to the rise in food prices and some regulated prices (such as electricity and tobacco products). When we exclude a one-off increase in prices of a limited number of products in the first few months of last year we conclude that inflationary pressures are still weak, and also that in 2018 Serbia is entering with a very low inflation trend. This conclusion is also confirmed by January and February data with monthly inflation of 0.3%, but the y-o-y inflation was in only two months practically halved due to the base effect and is now at 1.5%. That inflationary pressures are weak is also confirmed by the underlying inflation (measured by the consumer price index excluding the prices of food, energy, alcohol, and tobacco), which is below the NBS targeted bans since October, and in February stopped at 1.3%. As a response to low and stable inflation in the larger part of 2017 and strong appreciation pressures on the dinar, the NBS reduced the key policy rate by 25 basis points on two occasions (from 4% to 3.5%). Looking ahead we estimate that there are several domestic and external factors that could somehow push inflation upward in the second half of 2018. These are primarily further growth of domestic demand (which will undoubtedly be supported by fiscal policy through the increase in salaries in the public sector and pensions) while the key risks from the external environment are announced possibility of a faster increase of interest rates in the USA, energy prices and foreign exchange rates movements - which in 2017 had a strong disinflationary impact. In Q4 the appreciation pressures against the dinar continued, consequently, the dinar has nominally strengthened by an additional 0.7%, which at an annual level represents the appreciation of 4% (compared to the US dollar even 15.4%). Since inflation in Serbia was higher in 2017 than in the Eurozone countries the real appreciation of the dinar in the previous year was even more pronounced and amounted to 5%. Such strong strengthening of the dinar in real terms, which significantly deviates from the movement of macroeconomic fundamentals, seriously undermines the price competitiveness of the Serbian economy. Given that low pressures on inflation and strong appreciation pressures on the dinar are prevailing at the beginning of 2018 (NBS purchased 510 million Euros by mid-March to soften excessive daily strengthening of the domestic currency) we estimate that the March decrease of the key policy rate by 25 p.p. represents adequate response of the monetary policy.

Prices

Inflation in 2017 was at a targeted level of 3%, primarily due to the rise in food prices and regulated prices, but visibly slowed down in the second half of the year

At the end of 2017, y-o-y (December) and average inflation were both 3%, which is exactly in the middle of the National Bank of Serbia target band (3 ± 1.5%) (see Table T5-1). Having in mind that over the last few years the total inflation most frequently ended beyond the target band such a result in 2017 could in principle be considered as a success of monetary policy. However, it is important to note that this was still the result of (one-off) increase in prices of a small number of products and regulated prices, while the basic trends indicate that inflationary pressures in Serbia are still weak. Observed by product groups the biggest contributor to inflation in 2017 was increase in food prices by 4.1% (1.2 percentage points), of which the largest part is due to a rise in fresh vegetable prices (contribution of 0.5 pp) and fresh fruits (contribution of 0.4 pp). From regulated prices, tobacco prices increased by 8.9% (contribution of 0.4 pp) due to the harmonization of the excise tax in January and July, and the household electricity price increased by 3.5% (contribution of 0.3 pp). We also highlight the slight increase of fuel and lubricants for passenger vehicles by 4.5% (contribution of 0.3 pp), as a result of the growth of world oil prices. The increase in these prices could have been even more pronounced because the world oil price in the world market (in dollars) in 2017 increased by almost 18%, but the effect of this external shock on domestic prices was significantly reduced thanks to the strong nominal appreciation of the dinar against the dollar of around 15%.Also, most of these factors had effects on inflation only in the first four months of 2017, while in the rest of the year the general price level has largely stagnated or

Table T5-1. Serbia: Consumer Price Index, 2011-2018

	Consumer price index				
	Base index (avg. 2006 =100)	Y-o-y growth	Cumulative index	Monthly growth	3m moving average, annualized
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					
dec	176.9	2.2	2.2	0.2	-0.9
2014					
dec	180.0	1.8	1.8	-0.4	-2.4
2015					
dec	182.8	1.6	1.6	-0.2	-1.9
2016					
mar	183.5	0.6	0.4	-0.1	1.5
jun	184.4	0.3	0.9	0.1	2.0
sep	184.8	0.6	1.1	-0.6	0.9
dec	185.6	1.5	1.5	-0.2	1.8
2017					
jan	188.3	2.4	1.5	1.5	4.8
feb	189.6	3.2	2.2	0.7	8.2
mar	190.0	3.5	2.4	0.2	9.8
apr	191.5	4.0	3.2	0.8	7.0
may	190.6	3.4	2.7	-0.5	2.1
jun	191.0	3.6	2.9	0.2	2.1
jul	190.2	3.2	2.5	-0.4	-2.7
aug	190.6	2.5	2.7	0.2	-0.2
sep	190.7	3.2	2.7	0.1	-0.6
oct	191.2	2.7	3.0	0.3	2.1
nov	191.1	2.8	3.0	-0.1	1.1
dec	191.2	3.0	3.0	0.1	1.1
2018					
jan	191.8	1.9	0.3	0.3	1.3
feb	192.4	1.5	0.6	0.3	2.7

* The moving average of the monthly increase in prices for three months raised to the annual level. (For example, the value for March was obtained by raising the average monthly price increase in January, February, and March to the annual level).
Source: SORS.

slightly decreased. This means that in 2018 we enter with the trend of very low inflation and as the year passes (and the y-o-y inflation indicator excludes several months when there was a relatively high rise in prices in 2017) we estimate that total inflation in most of this year will remain relatively low and move closer to the lower limit of allowed target deviation (1.5%).

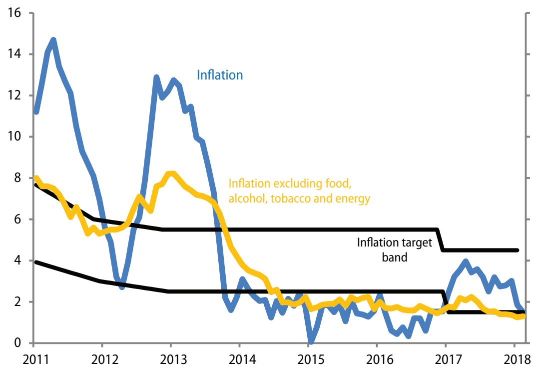
Underlying inflation was also slowing down in the second part of 2017, which is an additional confirmation of the prevailing weak inflationary pressures

Underlying inflation (measured by the consumer prices index excluding food, alcoholic beverages, tobacco, and energy) gradually decreased in the second half of 2017 (Graph T5-2), and since October it was below the NBS targeted band (in January 2018 it was at a record low 1.2%). Key factors influencing the slowdown in inflation over the last few months are still insufficiently strong recovery of domestic demand, which would generate stronger inflationary pressures, low imported inflation and especially strong strengthening of the dinar against the euro and the US dollar. Namely, personal consumption in 2017 grew in real terms about the same as GDP (around 1.8%), while domestic aggregate demand (including government consumption and investment spending) grew slightly higher (2.5%) - which was not sufficient for widespread acceleration of inflation. Low price inflation in the EU and other important trading partners also affected inflation in Serbia, and this effect was further strengthened due to the strong nominal appreciation of the dinar against the euro (by 4.5%) and the US dollar (by 15.4%). We estimate that there are several factors that will in 2018 influence the gradual acceleration of underlying inflation and its return to the NBS target band. We expect further growth of domestic demand, which will be significantly supported by a fiscal policy through the increase in salaries in the public sector (by 5-10%) and pensions (by 5%). Also, there are indications that inflationary pressures are beginning to increase in the external environment (above all in CEE), which could be reflected in a moderate rise in import prices. Strengthening of inflationary pressures could also be influenced by a turnaround of the economically unfavorable trend of strong real appreciation of the dinar from the previous year, which will be influenced by a reduction in the key policy rate.

In 2017, the key policy rate was reduced from 4% to 3.5%, and low underlying inflation, new appreciation pressures, and the latest mid-term inflation projection suggest that there is probably room for further monetary policy relaxation

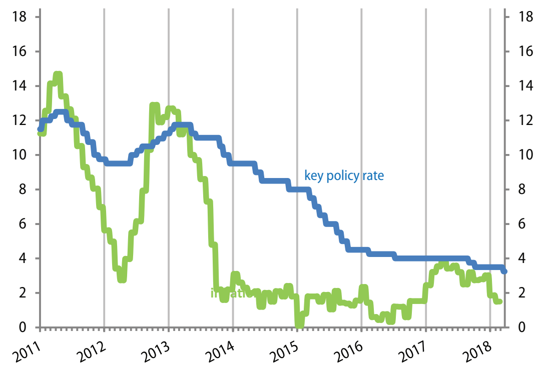
The National Bank of Serbia reduced the key policy rate on two occasions - in September and October - by 25 base points from 4% to 3.5% (Graph T5-3). The decision on the mild relaxation of monetary policy in the second part of 2017 was influenced by low inflationary pressures (as evidenced by declining underlying inflation in H2), and probably more important, strong appreciation pressures on the dinar. Despite this reduction of the key interest rate, similar trends are visible at the beginning of 2018. Underlying inflation in January and February decreased below the NBS target band, and after temporary depreciation pressures on the dinar at the beginning of the year (which NBS soften by selling 180 million Euros) a new wave of the dinar strengthening occurred. Consequently, NBS was forced to intervene on interbank exchange rate market purchasing 510 million Euros (ending with March 12th) and prevent the excessive daily strengthening of the dinar. Although there are several factors from external environment which could somewhat push inflation upward in the next year (for example, the announced possibility of faster interest rate growth by American FED) we estimate that in Serbia there is still room for further monetary policy relaxation which should be exploited. This statement is also supported by the February mid-term inflation projection of the NBS, according to which inflation at least in the following two years will remain in the lower part of the target band (3 ± 1,5). We estimate that reducing the key policy rate on 3.25% in the mid-March represents an adequate reaction of monetary policy on macroeconomic trends in Serbia. Lower key policy rate will reduce pressures on the dinar strengthening, and possibly influence its mild weakening, which will contribute to the return of inflation towards the middle of the target band.

Graph T5-2. Serbia: Y-o-y Inflation Rate and Underlying Inflation and the NBS Target Band 2011-2018



Source: SORS and *QM* calculations

Graph T5-3. Serbia: NBS Key Policy Rate and y-o-y Inflation Rate, in %, 2011- 2018



Source: NBS

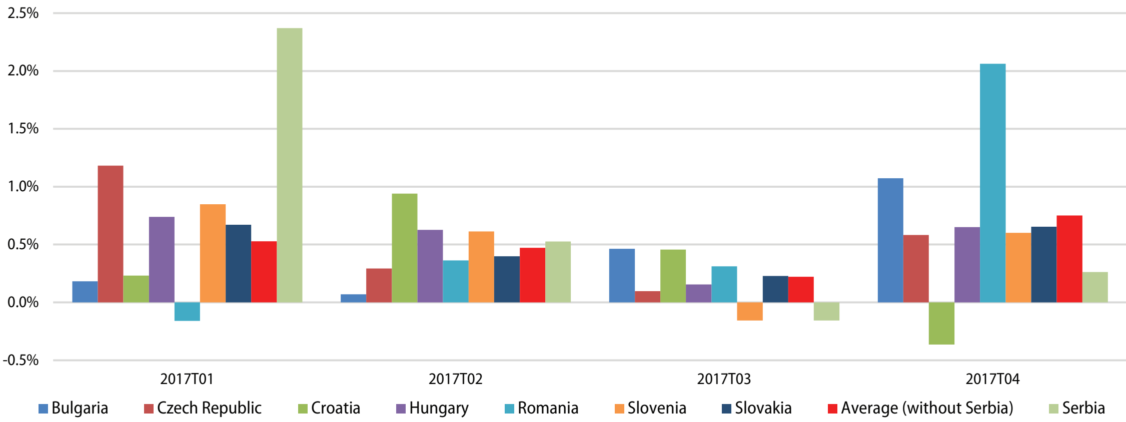
Although food and energy prices are largely responsible for the acceleration of inflation in 2017 in some CEE countries there was an increase in inflationary pressures and underlying inflation

In 2017 there was a noticeable acceleration of inflation in the region of Central and Eastern Europe - from an average of 0.7% in 2016 to about 2% in the previous year. Similarly to Serbia, reasons for this rise in inflation are largely the increase in food and energy prices and not acceleration of underlying inflation. Since food prices in most countries increased in 2017 by 4-6% and food participation in the average consumer basket in these countries is over 20%, we can conclude that the contribution of rising food prices to total inflation in CEE was 0.8 -1,2 pp. This means that relatively strong aggregate demand growth and widespread improvements in labor markets in 2017 have not yet reflected on a significant increase in inflationary pressures in the region, but there are several exceptions that suggest a change in existing trends. For example, at first signs of overheating of the economy and the growth of inflationary pressures the central banks of Romania and the Czech Republic have already begun to increase the key policy rate, and this trend can be expected in the following months of 2018. However, macroeconomic data for Serbia indicate that the domestic economy is late with recovery in relation to these CEE countries and that it is far from overheating, which is why we believe that Serbia still has room for the accommodating role of monetary policy.

In Q4 2017 a low inflation of 0.3% was recorded, primarily thanks to the rise in prices of a limited number of products in October

In Q4 2017, a slight increase in the price level of 0.3% was recorded (Table T5-4), thanks to inflation in October (0.3%), while prices in November and December stagnated (first deflation in November of 0.1 % followed by inflation in December of 0.1%). Observed by product groups the largest contribution to inflation in Q4 was given by October's increase in electricity prices for households by 2% (contribution of 0.1 pp) and other energy products – prices of fuel and lubricants for passenger vehicles increased by 1.7% (contribution 0,1 pp), while prices of solid fuels increased by 2.6% due to the seasonal increase in demand (contribution of 0.1 pp). Seasonal factors also caused a rise in prices of clothing and footwear by 3.3% (contribution of 0.1 pp), while food prices moved in the opposite direction (disinflationary) (1.1% decrease, contribution -0.3 pp). In addition, changes in prices of fresh fruits (decrease of 12.6%, contribution -0.3 pp) and fresh vegetables (increase of 5.9%, contribution 0.3 pp) were mutually neutralized, so the complete fall in food prices is owed to the fall of fresh meat prices by 4.7% (contribution -0.3 pp). Prices of other groups of products did not change significantly in Q4, with a total contribution to inflation of 0.1 pp. The final result of such price movement in Q4 was the y-o-y inflation of 3% at the end of 2017, which is fully in line with our previous expectations.

Graph T5-4. Inflation in Serbia and selected CEE countries in 2017



Source: Eurostat, SORS and *QM* calculations

Table T5-5. Serbia: Consumer Price Index: Contribution to Growth by Selected Components

	Share in CPI (in %)	price increase in Q4 2017	Contribution to overall CPI increase (in p.p.)	Price increase in 2017	Contribution to overall CPI increase (in p.p.)	Price increase in January and February 2018	Contribution to overall CPI increase (in p.p.)
Total	100.0	0.3	0.3	3.0	3.0	0.6	0.6
Food and non-alcoholic beverages	31.7	-1.0	-0.3	4.1	1.3	1.7	0.5
Food	28.1	-1.1	-0.3	4.1	1.2	1.8	0.5
Alcoholic beverages and tobacco	6.9	0.2	0.0	6.7	0.5	2.6	0.2
Tobacco	4.4	0.0	0.0	8.9	0.4	4.1	0.2
Clothing and footwear	4.7	3.3	0.1	-1.4	-0.1	-3.7	-0.2
Housing, water, electricity and other fuels	13.8	1.3	0.2	2.2	0.3	0.0	0.0
Electricity	5.1	2.0	0.1	2.0	0.1	0.0	0.0
Furniture, household equipment, routine maintenance	4.9	1.0	0.0	1.5	0.1	-0.1	0.0
Health	4.9	0.6	0.0	1.6	0.1	0.1	0.0
Transport	12.4	0.9	0.1	1.7	0.2	0.8	0.1
Oil products	5.9	1.7	0.1	4.5	0.3	1.8	0.1
Communications	5.0	-0.5	0.0	5.3	0.3	-0.6	0.0
Other items	15.7		0.1		0.3		0.1

Source: SORS and *QM* estimates

In January and in February 2018 inflation was 0.3%, but due to the base effect y-o-y inflation was halved

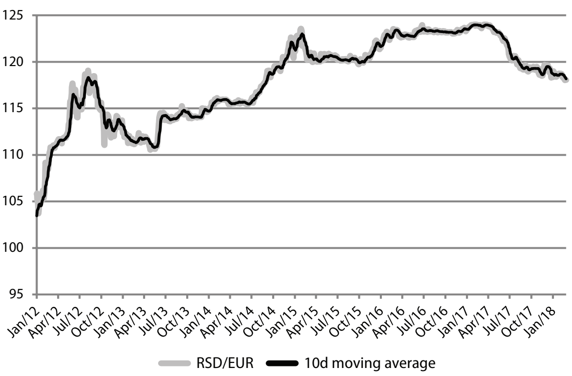
In first two months of 2018, moderate inflation of 0.6% was recorded (Table T5-4), largely due to the seasonal increase in food prices of 1.7% (contribution of 0.5 pp). As usual for the beginning of the year prices of fresh vegetables increased by 9.1% (contribution of 0.4 pp) and fresh fruits by 7.2% (contribution of 0.2 pp), while on the other hand fresh meat prices in average decreased by 1.3% (contribution of -0.1 pp). Prices of tobacco products increased by 4.1% (contribution of 0.2 pp) due to the harmonization of the excise tax in January, but the effect of this increase on total inflation was completely neutralized by the seasonally usual decrease in clothing and footwear prices by 3.7% (contribution of -0.2 pp). Of the other products, we highlight the continuation of the trend of a slight increase in prices of fuel and lubricants for passenger vehicles, which increased by 1.8% since the beginning of 2018 (contribution of 0.1 pp). Despite moderate monthly inflation in January and February, at the same time, there was a sharp reduction in y-o-y inflation - from 3% in December 2017 to 1.9% in January, and then to 1.5% in February. This is the result of the exit of last year's rise in energy prices from the calculation of the y-o-y inflation, as well as the fact that due to the sharp winter the increase in food prices in January and February 2017 was considerably more pronounced than in this year. Considering that in first two months of 2017 the price increase was 2.2% and in the same period of this year only 0.6%, due to the base effect y-o-y inflation was halved and lowered to the lower limit of the allowed deviation from the target. A similar effect of the base effect will continue until April, which is why we estimate that in the first half of 2018 y-o-y inflation will move around the lower limit of the target band interval (1.5%). Only in the second half of the year, it is possible to expect a gradual acceleration of inflation and its approach to the target level under the influence of the growth of domestic demand, the mentioned external factors and eventual additional relaxation of monetary policy.

The Exchange Rate

In Q4 the dinar continued to strengthen in nominal terms compared to the euro (by 0.7%), so at the annual level it appreciated by about 4%

In spite of the usual seasonal depreciation pressure on the dinar at the end of the year, domestic currency nominally strengthened against the euro by 0.7% in Q4 compared to the end of September, i.e. by 0.5% observed at the quarterly level (Graph T5-6). One of the reasons why there was no significant and expected weakening of the dinar in this part of the year are the interventions of the NBS in late November and early December when NBS sold a total of 240 million Euros on the interbank foreign exchange market. At the annual level the dinar nominally appreciated against the euro by 4%, so at the end of the year, the exchange rate was 118.5 RSD per euro – which is the highest value of the domestic currency since September 2014. This movement of the exchange rate in 2017 was somewhat supported by gradual improvement of the macroeconomic fundamentals and increased FDI inflows, but also the expansive monetary policy of the ECB whose effects spill over to Serbia (growth in the euro supply) and restrictive domestic fiscal policy (the withdrawal of the dinar from the money market due to the achieved surplus of over 50 billion RSD). In other words, the appreciation pressures on the dinar in the past year largely arise from changes in demand and the supply of the dinar and the euro which are not necessarily related to real improvements in the domestic economy. Considering that in Q4 strengthening of the euro against the US dollar and the Swiss franc was also recorded, the appreciation of the dinar against these currencies was even more pronounced. In relation to the dollar, the dinar strengthened by 2.2% in Q4 (by 0.8% at the quarterly average), i.e. by 2.9% against the Swiss franc (by 3.3% at the quarterly average). At the annual level, the nominal strengthening of the dinar against the US currency reached even 15.4%, and against the Swiss franc 11.8%.

Graph T5-6. Serbia: Daily RSD/EUR Exchange Rate, 2011-2018

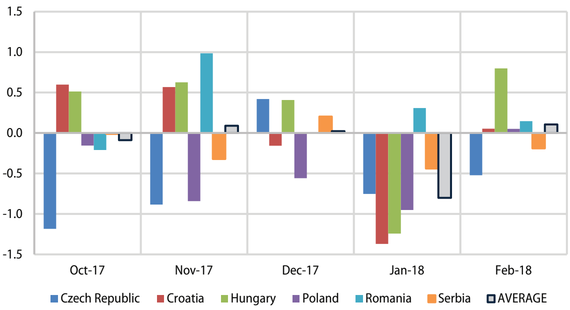


Source: NBS

In January 2018, the dinar weakened in nominal terms against the euro by 0.2%, and the usual depreciation trends at the beginning of the year were partially offset by NBS by selling 180 million Euros on the interbank foreign exchange market (IFEM). However, already since February we recorded a further strengthening of appreciation pressures on the dinar, so the domestic currency strengthened against the euro by 0.6%, despite the fact that the National Bank of Serbia purchased on the IFEM a total of 510 million euros (by half of March) in order to prevent excessive daily strengthening of the dinar exchange rate. We estimate that the active participation of the NBS on the interbank foreign exchange market significantly contributed to the fact that the dinar in the past five months is one of the more stable currencies in the CEE region (Graph T5-7). On the other hand, with other currencies, we clearly see expressed trends towards nominal strengthening (for example, the Czech crown and Polish zloty) or the opposite tendencies towards nominal weakening against the euro (Hungarian forint and Romanian leu). As the euro strengthened against the US dollar at the same time, the dinar appreciated against

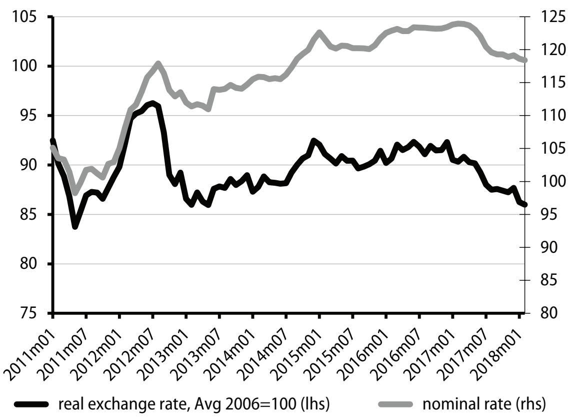
Since a higher inflation rate in Serbia than in the EU or the USA was recorded in 2017, the real appreciation of the dinar was even stronger – which is not in line with the movements of macroeconomic fundamentals

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



Source: Eurostat, NBS, *QM* estimates
Note: an increase represents depreciation

Graph T5-8. Serbia: Nominal and Real RSD/EUR Exchange Rate, Monthly Averages, 2011-2017



Source: Eurostat, NBS, *QM* estimates
Note: an increase represents depreciation

the US currency from the beginning of the year by additional 2.6%, while compared to the Swiss franc it depreciated by 1.4%.

In Q4 the dinar in real terms slightly depreciated against the euro (by 0.1%) despite the fact that the nominal appreciation of 0.7% was recorded in the same period - because at the same time the inflation rate in Serbia was significantly lower than in the Eurozone countries. The real appreciation trend of the dinar against the euro was practically present throughout the whole of 2017, so by the end of the last year, the dinar appreciated in real terms against the European currency in total by 5%. As a result of the strengthening of the euro against the dollar in the same period, real appreciation against the US currency was as high as 19.2%. Similar trends are also present at the beginning of 2018, so in January the dinar appreciated in real terms against the euro by additional 1.6%. Historically, the real exchange rate of the dinar has not been on the January level since the beginning of 2013 (Graph T5-7). This trend of the dinar exchange rate in 2017 had some beneficial effects on the fiscal policy (the major part of the sharp decline in public debt in 2017 was driven by the strengthening of the dinar, the budget expenditures for interest rates were also lower) and the monetary policy (strong strengthening of the dinar reduced inflationary pressures through impact on import prices). However, already at first glance it is clear that such strong real appreciation of the dinar towards the euro in 2017 was not in line with the movement of macroeconomic fundamentals, having in mind the worsening of the current account deficit and the relative decline in productivity of the domestic economy compared to productivity in the EU countries - the most important trade partners of Serbia. We believe that the strong strengthening of the dinar in 2017 had seriously undermined the price competitiveness of the domestic economy, which may have adverse effects on the performance of the real (primarily export) sector of the economy. This can be best seen if we observe the movement of the real effective exchange rate which in the course of 2017 appreciated by almost 8% - significantly more than the currencies of the countries in the region (Hungarian forints 2.1%, Croatian kuna 2% or Romanian lev 0.7%).