5. Prices and the Exchange Rate

Inflation accelerated in Q1, but was still within the limits of the target corridor of the National Bank of Serbia and at the end of the quarter amounted to 3.5%. It was also within limits of the target corridor in April and May and amounted to 4.0% and 3.4% respectively. The acceleration in inflation during Q1 is partly a consequence of the growth in the prices of energy and other products in the world market while partly a consequence of the growth in domestic demand and regulated prices. Underlying inflation (measured by the consumer price index excluding prices of food, energy, alcohol and tobacco) is also within the limits of the new NBS target band and it amounted to 2.2 % at the end of the quarter, while it remained almost unchanged in April and May (2.1% and 2.2% respectively). National bank hasn't changed the key policy rate since the beginning of the year and it amounts 4.0%. In 2017, inflation is expected to decline gradually, due to a decline in the prices of energy products, as well as due to favorable influence of seasonal factors. In Q1, the dinar nominally depreciated by around 0.4%, which was followed by the period of appreciation, so in April and May dinar strengthened by about 0.7% against the euro. Significantly higher inflation in Serbia when compared to Eurozone countries contributed to a further strengthening in the real dinar exchange rate – appreciation of 1.6% in Q1 and additional 0.7% in April and May. Such a high real appreciation affects the deterioration of the price competitiveness in Serbian economy.

Prices

Inflation increased in Q1, but it moved within the limits of the NBS target band, where it remained both in April and May

At the end of the first quarter of 2017, year-on-year inflation amounted to 3.5%, which is well above the value of late 2016 (Table T5-1). Inflation entered the limits of the National Bank of Serbia target band for the first time since Q3 2013 (i.e. since February 2014 if monthly data are observed). At a monthly level, inflation was 1.5% in January, while in February and March it amounted to 0.7% and 0.2% respectively. Year-on-year inflation in January increased to 2.4% and entered within the limits of the new NBS target band , where it remained until the end of May 2017. Monthly price growth in January amounted to 1.5% and contributed to its significant growth at year-on-year level (mostly due a growth in the prices of food and tobacco products). This trend continued in the following months, when in February and May, relatively high monthly inflation affected the year-on-year growth, while deflation was recorded only in May.

World prices that increased inflation at the end of previous and beginning of this year, affected its fall during second quarter

The November oil price growth and stabilization in the period December-February was followed by the trend of its fall in March 2017, which continued in the coming months. It is expected that the fall in world oil prices will spill over to other prices, although the effect will be modest given that it is close to a historical minimum, its further significant decline cannot be expected. The prices of basic metals, after a considerable growth, began to decline in the first months of the second quarter. National Bank did not decrease the key policy rate during Q1 and April and May of 2017, thus it amounted to 4.0% (Graph T5-3).

Underlying inflation in Q1, as well as April and May, stood as well within the limits of the target band

Underlying Inflation (measured by the consumer price index, excluding the prices of food, alcoholic, tobacco and energy) was below the mid-point of the NBS target interval in Q1 and amounted to 2.2% at the end of the quarter (Graph T5-2). In April, the underlying inflation remained at a stable level of 2.1%, or 2.2% respectively, and together with overall inflation, it moved within the limits of the target band. Stable and generally fixed dinar exchange rate (the NBS allows a movement in a narrow exchange rate range) as well as a modest growth of domestic demand are the main factors that keep underlying inflation stable over a long period of time (ranging in a narrow interval from 1.4% to 2.2% for nearly last three years). A fall in the price of crude oil and seasonal fall in the prices of agricultural products will affect the decline in inflation over the coming months, while the impact of domestic demand will crucially depend on fiscal policy. We expect that during this year, fiscal policy will be moderately restrictive, and it will also act towards reducing inflationary pressures. The character of fiscal policy in the next year, after the expiration of the arrangement with the IMF, is currently difficult to estimate, as it is not

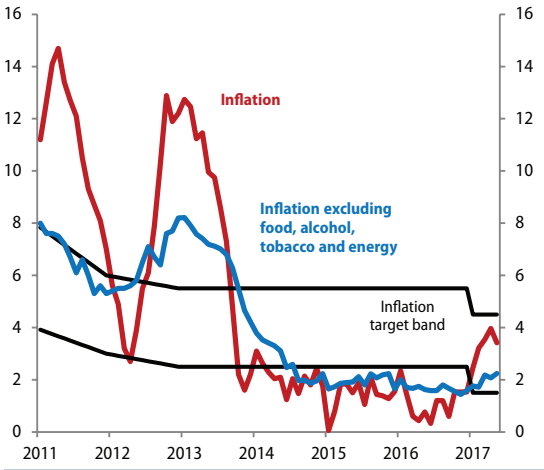
certain how serious the announcement of a large increase in wages and pensions is. However, it is quite certain that eventual fiscal expansion would have more impact on the growth of imports and inflation than it would trigger economic activity.

Table T5-1. Serbia: Consumer Price Index, 2011-2017

	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					
mar	179.1	2.3	1.2	-0.3	5.1
jun	180.4	1.2	2.0	0.1	2.9
sep	181.2	2.1	2.4	0.7	1.6
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
apr	184.2	0.4	0.8	0.4	0.9
may	184.3	0.8	0.8	0.1	1.3
jun	184.4	0.3	0.9	0.1	2.0
jul	184.3	1.2	0.8	-0.1	0.2
aug	185.9	1.2	1.7	0.9	3.5
sep	184.8	0.6	1.1	-0.6	0.9
oct	186.1	1.5	1.8	0.7	4.0
nov	185.9	1.5	1.7	-0.1	0.0
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

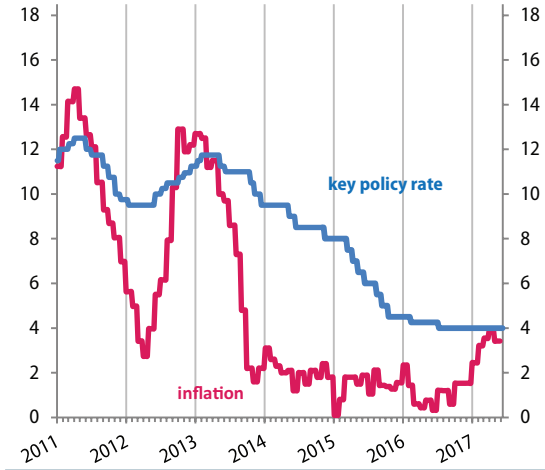
Source: SORS.

Graph T5-2. Serbia: Y-o-y Inflation Rate and Underlying Inflation and the NBS Target Band 2011-2017



Source: NBS and *QM* estimates

Graph T5-3. Serbia: NBS Reference Interest Rate and y-o-y Inflation Rate, in %, 2011-2017



Source: NBS

The acceleration of inflation in the first quarter is significant, but this is a temporary tendency

In the first quarter of 2017, there was a relatively high price increase of 2.4% (Table T5-4). January achieved a high price increase of 1.5%, while February and March recorded a lower inflation of 0.7% and 0.2% respectively. Inflation in Q1 was mostly contributed by: food price increase of 4.9%, which represents a contribution to inflation of 1.4 percentage points (pp), mainly due to vegetable price growth (21.0%, contribution of 1.0 pp) and fruits (14.7%, contribution of 0.3 pp), followed by petroleum products (5.8%, contribution of 0.3 pp), telephone services (5.1%, contribution of 0.2 pp), tobacco products (4.5%, contribution of 0.2 pp) and solid fuels (6.5%, contribution of 0.2 pp). The largest disinflation effect was caused by the seasonal fall in clothing and footwear prices (a decline of 3.9%, contribution of -0.2 pp) and prices from the group of recreation and culture (1.2%, contribution of -0.1 pp).

Moderate monthly inflation in April and deflation in May

In April 2017, the price increase was 0.8%, which was mainly due to food price increases (growth of 2.5%, contribution to inflation of 0.7 pp), clothing and footwear (growth of 1.4%, contribution of 0.06 pp) and oil derivatives (1.0% increase, contribution of 0.06 pp) while the fall of solid fuel prices had disinflationary effect (fall of 0.9%, contribution of -0.09 pp). The prices of other groups of products and services did not significantly affect the April inflation. The rise in food prices occurred due to the continuation of the seasonal increase in vegetable prices (growth of 7%, contribution of 0.3 pp) and fruits (8.5%, contribution of 0.2 pp). However, as weightings for products whose prices change significantly at the monthly level also change significantly (due to the effect of substitution with other, cheaper products - for example, other types of fruits and vegetables instead of those that at that time have a high price), this would in particular mean that in January and April inflation measured using monthly weightings was to a certain extent lower than inflation whose calculation includes price indices weighted by fixed weighting on an annual level. The opposite effect shall occur when the prices of vegetables and fruits have a seasonally expected decline (at the end of Q2 and early Q3 for vegetables, or during Q4 and Q1 for fruits). Given that the seasonal effect of growth and decline in the prices of certain products (fruits, vegetables, meat, clothing and footwear, tourist arrangements) usually occur in the same months of the year, when calculating the year-on-year rate they annul each other to a large extent, while large deviations occur in monthly rates. Consumer price index declined by 0.5% in May, mostly due to a beginning of a seasonal fall in the prices of vegetables (14.6%, contribution of -0.8 pp), further decline in the prices of solid fuels and the fall in the prices of petroleum products. The continuation of fruit prices growth (10.3%, contribution of 0.2 pp) and meat (2.0%, contribution of 0.15 pp) had an inflationary effect.

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

	Share in CPI (in %)	price increase in Q1 2017	Contribution to overall CPI increase (in p.p.)	Price increase in April 2017	Contribution to overall CPI increase (in p.p.)	Price increase in May 2017	Contribution to overall CPI increase (in p.p.)
Total	100.0	2.4	2.4	0.8	0.8	-0.5	-0.5
Food and non-alcoholic beverages	32.0	4.8	1.5	2.1	0.7	-1.4	-0.5
Food	28.4	4.9	1.4	2.5	0.7	-1.6	-0.5
Alcoholic beverages and tobacco	7.3	3.6	0.3	-0.1	0.0	0.0	0.0
Tobacco	4.6	4.5	0.2	0.0	0.0	0.0	0.0
Clothing and footwear	4.5	-3.9	-0.2	1.4	0.1	0.2	0.0
Housing, water, electricity and other fuels	13.7	1.2	0.2	-0.7	-0.1	-0.2	0.0
Electricity	5.0	0.0	0.0	0.0	0.0	0.0	0.0
Furniture, household equipment, routine maintenance	4.6	0.4	0.0	0.4	0.0	-0.1	0.0
Health	5.0	0.6	0.0	0.0	0.0	0.4	0.0
Transport	12.8	2.9	0.4	0.5	0.1	-0.3	0.0
Oil products	5.9	5.8	0.3	1.0	0.1	-0.5	0.0
Communications	5.0	4.5	0.2	0.0	0.0	0.1	0.0
Other items	15.1		-0.1		0.1		0.0

Source: SORS and *QM* estimates

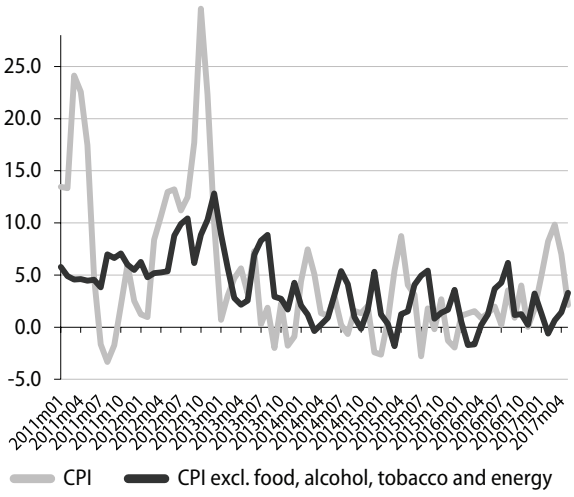
Overall inflation is relatively high in Q1 and April, while underlying inflation is at a stable low level

Overall inflation (3m annually) at the end of Q1 was 9.8% (Graph T5-5), while in April it fell to 4.8% (largely due to the output of January inflation rate from the average calculation), and in May it stood at relatively low 2.1% (due to May deflation and February inflation output from the calculation). Underlying inflation (3m annual average inflation without food, alcohol, tobacco and energy) was 0.7% at the end of Q1, while in April it increased to 1.4% and in May to 3.3%. The high volatility of an annualized 3m average of the overall inflation is a result of, in addition to the way it is calculated, the absence of a stable trend in the movement of monthly values of prices that determine them and can be explained by the changes in the prices of one-off and seasonal character (e.g. a significant rise in total inflation is largely a result of January increase in vegetable prices and the use of constant weightings in the calculation of this product group throughout the year, regardless a significant substitution with cheaper products and consequent weighting changes). When there are one-off or seasonal changes that greatly affect inflation, 3m average does not represent a reliable indicator of its movement, and a better indicator would be an annual average over a longer period (e.g. 6m), in which the impact of one-off price change or year-on-year inflation is

The acceleration in inflation during Q1 is a result of the impact of external and internal factors

During the first quarter, inflation accelerated in other countries of the region and throughout the EU. The growth of inflation in Europe is a consequence of the growth of energy prices in that period, and probably the expansionary monetary policy of the ECB and of some national banks had some impact. However, inflation growth in Serbia was higher than in other countries of the region. The average inflation rate in selected countries of Central and Eastern Europe was 0.5% in Q1, 0.3% in April and 0.16% in May, while in Serbia inflation in Q1 was 2.4%, in April 0.8% and May recorded deflation of 0.5%. In Q1, the growth in oil derivative prices had a similar impact on inflation in Serbia and other countries in the region (this growth had somewhat lower contribution to inflation in Bulgaria and Czech Republic and significantly higher in Hungary). Higher inflation in Serbia points to the existence of specific domestic factors that have influenced its growth. Specific factors for Serbia are related to the

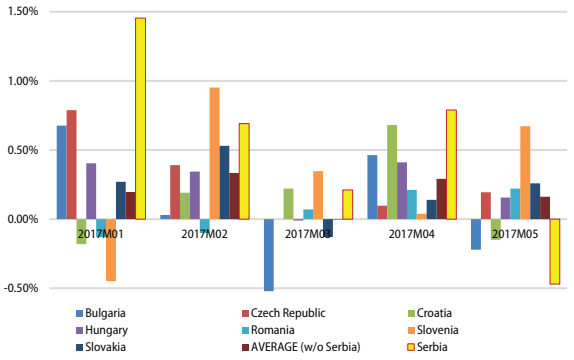
Graph T5-5. Serbia: CPI and Underlying Inflation Trend, Annualized Rates, in %, 2011-2017



Source: SORS and *QM* estimates

At the end of Q1 the dinar slightly depreciated, while it strengthened to about 122 dinars per euro from April to June

Graph T5-6. Inflation in Serbia and in selected CEE countries



Source: Eurostat, RZS and *QM* estimates

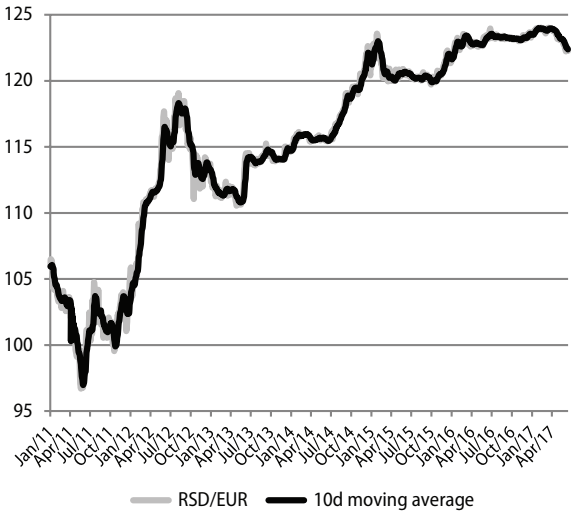
The Exchange rate

In Q1, the dinar weakened against the euro by 0.4% in relation to the end of 2016 (i.e. by 0.5%, observed at the quarterly average), in April it increased by 0.6% (0.2% on monthly average), while in February it increased by 0.4% (0.5% on a monthly average) (Graph T5-7), when the exchange rate was slightly below 123 RSD per euro. The appreciation continued in June and the current exchange rate is just over 122 dinars per euro. From January to the end of May, the appreciation was significantly higher in relation to the US dollar and the Swiss franc. In relation to the dollar, during Q1, the dinar increased by 0.9% (i.e. it fell by 1.7% at the level of the quarter average), while in April and May it increased by 2.4%, i.e. by 3.2%, respectively

(0.5% and 3.5% at the monthly average). The dollar depreciated by 1.0% in Q1 against the Swiss franc (by 1.4% at the quarter average), appreciating by 1.7% in April, and in February appreciated by an additional 1.3% (0.4% and 2.1% on a monthly average).

The movement of the exchange rate in Serbia is different than the movement of the exchange rates in most of the countries in the region, while in April and May was at the level of the average

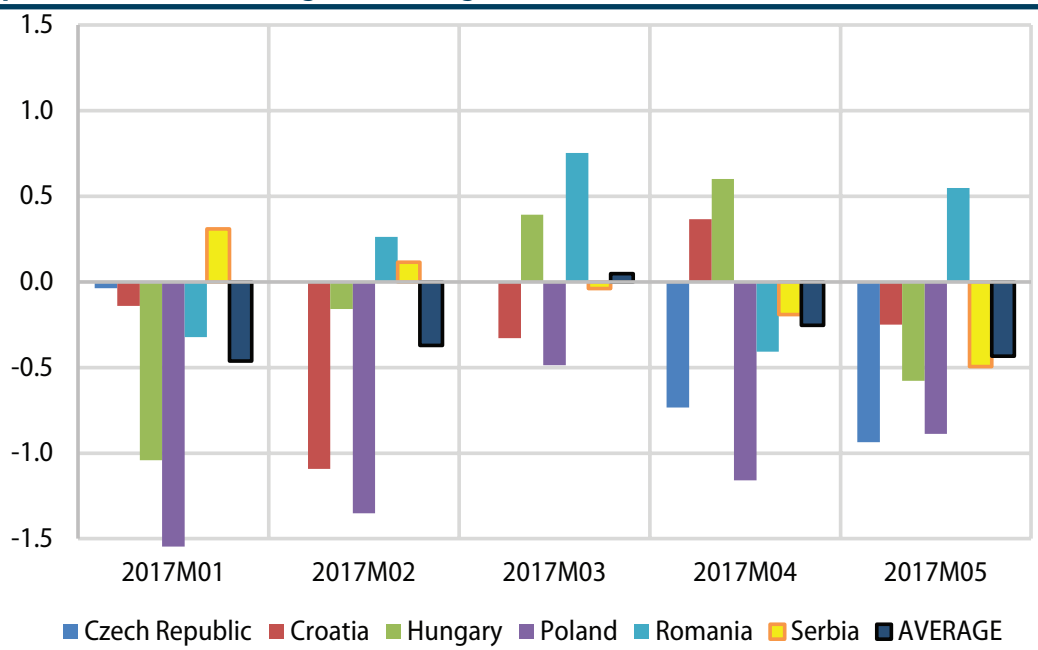
Graph T5-7. Serbia: Daily RSD/EUR Exchange Rate, 2011-2017



Source: NBS

During Q1, compared to the currencies in countries in the region with a similar exchange rate regime, the dinar had relatively small changes in value against the euro (Graph T5-8) and the change in the exchange rate was occurring in the opposite direction from the movement of other currencies. This is largely a consequence of the influence of the National Bank of Serbia on the movement of the exchange rate - selling foreign exchange on the interbank foreign exchange market (IFEM) to prevent significant depreciation. Central banks in countries with a lower degree of euroisation than in Serbia can implement measures aimed at achieving price and financial stability relatively independent to the changes in the foreign exchange rate, which in a highly-evolved economy, such as Serbia, is possible only in the relatively narrow corridor of the exchange rate. During April and May, in the period when moderate appreciation was recorded, the dynamics of the dinar exchange rate was at the level of the average of all selected currencies.

Graph T5-8. Nominal Exchange Rate Change (in %) in Selected Countries

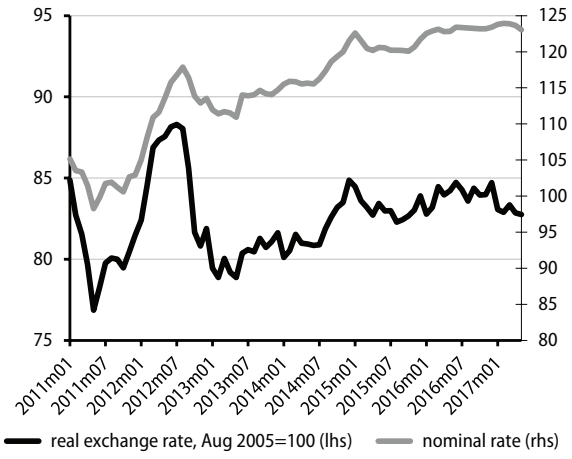


Source: Eurostat, NBS, *QM* estimates
Note: an increase represents depreciation

Relatively high real appreciationin Q1 and continuation of this trend in April and May

In Q1, the Dinar real appreciated by 1.6%, in April by 0.6% and in May by an additional 0.1% against the euro. In the observed period, the dinar has nominally strengthened to a lesser extent, but the large real appreciation is the result of significantly higher inflation in Serbia compared to the eurozone countries. The relatively modest growth of competitiveness of the Serbian economy realized with real depreciation in Q4 2016 of about 0.4% was annulled by significantly higher appreciation in Q1, so the overall outcome by competitiveness is negative (from January to May,

Graph T5-9. Serbia: Nominal and Real RSD/EUR Exchange Rate, Monthly Averages, 2011-2017



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

the dinar really appreciated by 2.3%). Historically, the real exchange rate of the dinar in January was approximately the same as in the same period of 2015 (Graph T5-9). Real appreciation of the dinar in the last part of the year is in contrast with the relative decline in the productivity of the Serbian economy in relation to productivity in EU countries, the main trading partners of Serbia. Strengthening of the dinar together with a relative decline in productivity aggravates the competitiveness of the Serbian economy.