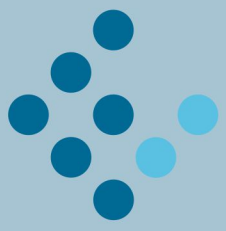

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Quarterly Monitor of Economic Trends and Policies in Serbia (QM) was created by Kori Udovički, who was the Editor-in-Chief of the first six issues of QM. For issues seven to twenty three, the Editor-in-Chief of QM was Prof. Pavle Petrović. Diana Dragutinović was the Editor-in-Chief of QM24. Since issue QM25-26 the Editor-in-Chief of QM is Milojko Arsić.

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Analytical and Notation Conventions

Values

The data is shown in the currency we believe best reflects relevant economic processes, regardless of the currency in which it is published or is in official use in the cited transactions. For example, the balance of payments is shown in euros as most flows in Serbia's international trade are valued in euros and because this comes closest to the measurement of real flows. Banks' credit activity is also shown in euros as it is thus indexed in the majority of cases, but is shown in dinars in analyses of monetary flows as the aim is to describe the generation of dinar aggregates.

Definitions of Aggregates and Indices

When local use and international conventions differ, we attempt to use international definitions wherever applicable to facilitate comparison.

Flows – In monetary accounts, the original data is stocks. Flows are taken as balance changes between two periods.

New Economy – Enterprises formed through private initiative

Traditional Economy - Enterprises that are/were state-owned or public companies

Y-O-Y Indices – We are more inclined to use this index (growth rate) than is the case in local practice. Comparison with the same period in the previous year informs about the process absorbing the effect of all seasonal variations which occurred over the previous year, especially in the observed seasons, and raises the change measure to the annual level.

Notations

CPI – Consumer Price Index

Cumulative – Refers to incremental changes of an aggregate in several periods within one year, from the beginning of that year.

H – Primary money (high-powered money)

IPPI – Industrial Producers Price Index

M1 – Cash in circulation and dinar sight deposits

M2 in dinars – In accordance with IMF definition: cash in circulation, sight and time deposits in both dinars and foreign currency. The same as M2 in the accepted methodology in Serbia

M2 – Cash in circulation, sight and time deposits in both dinars and foreign currency (in accordance with the IMF definition; the same as M3 in accepted methodology in Serbia)

NDA – Net Domestic Assets

NFA – Net Foreign Assets

RPI – Retail Price Index

y-o-y - Index or growth relative to the same period of the previous year

Abbreviations

CEFTA – Central European Free Trade Agreement

EU – European Union

FDI – Foreign Direct Investment

FFCD – Frozen Foreign Currency Deposit

FREN – Foundation for the Advancement of Economics

GDP – Gross Domestic Product

GVA – Gross Value Added

IMF – International Monetary Fund

LRS – Loan for the Rebirth of Serbia

MAT – *Macroeconomic Analyses and Trends*, publication of the Belgrade Institute of Economics

NES - National Employment Service

NIP – National Investment Plan

NBS – National Bank of Serbia

OECD – Organization for Economic Cooperation and Development

PRO – Public Revenue Office

Q1, Q2, Q4, Q4 – 1st, 2nd, 3rd, and 4th quarters of the year

QM *– Quarterly Monitor*

SORS – Statistical Office of the Republic of Serbia

SDF – Serbian Development Fund

SEE – South East Europe

SEPC – Serbian Electric Power Company

SITC – Standard International Trade Classification

SME – Small and Medium Enterprise

VAT – Value Added Tax

From the Editor

Progress made in achieving macroeconomic stability over the past three years raises the question of the long-term sustainable growth of the economy, which would gradually compensate for the historical lag of Serbia behind European countries. The issue of accelerating growth is critically important because since 2010 Serbia has seriously lagged behind Central and Eastern European countries, and so the difference in the level of development increases rather than decreases. The cumulative growth of Central and Eastern European countries in the period 2010-2017 is 18.9%, while in the same period, Serbia recorded growth of only 6.7%. Relatively high growth rate of about 4%, which will likely be achieved in this year, should not deceive us because it will partially be based on the effects of a one-time recovery of agriculture and energy production - without those effects growth would amount to about 3%, which would be one of the lowest growth rates in the region.

It is therefore understandable that there are different proposals in the public how to create the conditions for a faster growth of the Serbian economy. Some economists and politicians are proposing to increase domestic demand, i.e. private and government consumption, in order to accelerate economic growth, which is theoretically and experientially controversial. If the growth of the economy could be achieved with higher consumption then there wouldn't be any underdeveloped countries in the world, because it is economically easy and politically desirable to increase consumption by increasing wages, pensions, social assistance, subsidies, public procurements, etc. However, in the same way individuals cannot become richer by spending more, neither can societies - if consumption grows faster than GDP it leads to growth in fiscal and external deficits, than growth of external and public debt followed by the depreciation of the domestic currency and increase in inflation. The final result of such policy is stagnation or decline in economic activity, followed by the decline in consumption.

Of course, for the economy to grow consumption growth is needed, however, consumption cannot be the driver of the economic growth, it can only follow. The goal of the responsible Government is not to maximize consumption in one year but to achieve a steady growth in consumption in every year, which is only possible if the economy is recording high growth rates and a precondition for this are high investments. Therefore, responsible policy implies that consumption at present is as high as needed to enable growth in consumption in the future, which means that consumption should not squeeze out investments. This policy was implemented by all rapidly growing economies in the world from the Western European countries in the past, to the Far East and the countries of Central and Eastern Europe at present.

In the case of Serbia, there are additional reasons why an attempt to generate growth of the economy by increasing consumption would be particularly damaging, because the private consumption and the government consumption are already high compared to GDP, while the deficit in trade with the world is relatively high. Government consumption in Serbia, including transfers to citizens, amounts to 43% of GDP, which is higher than the average for Central and Eastern European countries, though it should be smaller because Serbia is one of the least developed CEE countries. Also, private consumption, although small by absolute value, is now 72.4% of GDP, while in CEE countries, the average is 56.5% of GDP. The high share of private and government consumption in GDP suggests that for a longer period of time in the past they have grown faster than GDP. Therefore, the current government and private consumption in Serbia are oversized in relation to GDP, which leads to the squeeze out of investments that are the main driver of the long-term growth of the economy. Therefore, the government and private consumption need to grow slower than GDP as long as investments do not reach the level required for the economy to grow at high rates in the long run. Last year, Serbia experienced a high deficit in goods and services trade of 8.2% of GDP, which is 1.8% more than in 2016. The faster growth of domestic consumption than GDP growth, combined with a real strengthening of the dinar, would lead to an additional increase in the external deficit. This deficit is now successfully funded by foreign investments, but foreign investments could suddenly stop, as it happened in 2009, followed by a sharp depreciation of the dinar and a fall in economic activity. To reduce these risks Serbia needs to influence the gradual reduction of external deficits through consumption an exchange rate policies, and not to encourage them.

Based on the experience of a large number of countries which have experienced high growth rates in the past it can be concluded that high investments are a direct requirement for high rates of economic growth. Other factors directly affecting growth, such as innovations, good infrastructure, etc., are closely related to investments. Numerous empirical studies suggest that for the fast growth of the economy,

which is approximately at Serbia's level of development, investments of about 25% of GDP are needed. The second lesson from empirical research is that domestic investment funds are crucial for growth in the long run. Foreign direct investments may play an important role in some stages of development, but in the long run domestic, above all private, investments are crucial. Simply put, no one has reached a high level of development relying on foreign funds in the long run.

Since the beginning of the world economic crisis Serbia's share of investments in GDP is 17-19%, and with so small investments it is not possible to achieve high rates of economic growth. Although this is well known, Serbia has not been able to increase its investment rate significantly for years. With a low level of total investments, Serbia is faced with a seemingly paradoxical situation – for several years back Serbia has been in the top of the list comparing countries by foreign direct investments, and in the past year it reached the top. In 2017, foreign direct investments amounted to 2.4 billion euros, which is 27% more than in the previous year, while their share in GDP was 6.5%, the highest among the countries of the region (see section "Balance of Payments and Foreign Trade"). High FDIs were followed by public praises of foreign entrepreneurs, and occasionally by foreign analysts, about good investment and business conditions in Serbia. Unlike foreign investments, domestic public and private investments in Serbia are among the lowest in Central and Eastern European countries. Domestic public investments have been around 3% of GDP for years now, while in other CEE countries their share is 4-5% of GDP. Domestic private investments account for about 10% of GDP, while in CEE countries that number is around 15% of GDP. As far as domestic investments are concerned, there is currently no evidence that the situation will improve, as public investments declined by 6.7% in the last year, while private investments declined by 3-4%. Unlike foreign investors, domestic investors give mostly negative reviews of business and investment conditions.

Therefore, the key issue for the growth of Serbian economy is why are domestic investments so low? When it comes to public investments the answer is quite obvious. The low level of public investments is a consequence of the low efficiency of the state, which, in spite of available financial resources, fails to realize the planned investments. The consequences of low public investments are the delay in the implementation of infrastructure projects, such as the Corridor 10, for several years now, poor condition of rail and communal infrastructure, etc. However, the answer to the question why are domestic private investments so low deserves a more detailed analysis. One possibility is that domestic investors do not see the investment opportunities foreign investors do, or they lack the resources and knowledge that foreign investors have. Another possibility is that investment conditions, in some important aspects, are more favorable for foreign than for domestic private investors. The possibility that domestic investors do not see the opportunities foreign investors do can quite certainly be excluded, as the number of potential domestic investors is incomparably higher than the number of foreign investors interested in our market. In addition, it is a realistic assumption that in most markets domestic investors are not lagging behind the foreign investors on the ability to spot investment opportunities, because they are operating for a longer period of time in the Serbian market, they mostly know trends in the world markets, etc. Also, lack of resources cannot explain low levels of domestic investments because domestic entrepreneurs have achieved good financial results over the past two years, and at the same time have a large offer of credits at interest rates which are lower than ever.

The possibility that foreign investments are higher compared to domestic due to more favorable conditions for foreign investors seems more probable. There seem to be at least three important areas in which foreign investors have advantages over domestic ones. The first advantage concerns the possibility of obtaining state subsidies, which are generally available to everyone. However, conditions for granting subsidies are defined so that they are more easily met by foreign investors. Another advantage of foreign investors is that they receive direct state aid in bypassing numerous bureaucratic barriers. Only a small part of domestic entrepreneurs can count on such assistance, and those are the ones closely connected to the government. Other entrepreneurs overcome such obstacles slowly and at a high cost. Finally, foreign entrepreneurs are better protected from various forms of law violations, such as fraud, extortion, and the like, which makes the business environment more secure for them. To sum up the above, the costs of doing business for foreign entrepreneurs in Serbia are smaller, and also they are largely protected from the risks domestic entrepreneurs are exposed to.

Based the above it can be said that rapid economic growth cannot be achieved by giving one group of entrepreneurs' high subsidies and the help of civil servants in overcoming bureaucratic barriers, protecting them from fraud, extortion etc. The prerequisite for rapid economic growth is the adoption of rules that would be equal to all, creation of competent and just state administration that would strictly adhere to these rules, effective judiciary that would equally protect all businessmen, etc.

In this issue of the Quarterly Monitor, in addition to regular analyzes of current economic trends, economic policies and reforms, there are two Highlights. In the Highlight 1 prof. Biljana Jovanović Gavrilović and Mirjana Gligorić analyze the quality of Serbia's economic growth, while in Highlight 2 Nemanja Vuksanović and Milojko Arsić analyze the determinants of average wages in Serbia.

TRENDS

1. Review

The previous year, 2017, was marked by the combination of positive and negative macroeconomic trends. On the positive side, the most important improvements in 2017 relate to public finances, low and stable inflation of around 3%, which was throughout the year within the NBS target band, and a moderate increase in employment of 2.5-3%. The main negative trends in 2017 were a weak economic growth of only 1.9%, which was practically the lowest in Central and Eastern Europe (CEE), strong deterioration of the foreign trade deficit and the delay in the implementation of structural reforms. Although in 2018 we expect some improvements in macroeconomic results, primarily concerning the increase in economic growth (we expect GDP growth of around 4%), all three negative trends from 2017 (low growth trend, rising external deficit and failure to implement reforms) will be present in 2018. Thus, the 4% economic growth expected in 2018 is not yet sufficient to reduce Serbia's lag behind the comparable CEE countries, as these countries are growing even faster – for example in 2017 they recorded a GDP growth of 4,5%. In addition, the 4% economic growth expected in Serbia in 2018 is not fully sustainable because it is based on the recovery of agriculture from the effects of drought form 2017. Also, the first January data point to further expansion of the foreign trade deficit, while the Government's readiness to accelerate structural reforms in 2018 is still under a question mark.

The observed macroeconomic weaknesses impose the need for the Government and the NBS to respond to these challenges with adequate economic policies and acceleration of reforms. Regarding low economic growth, for some time now we have been pointing out that the direct reason why Serbia is lagging behind the comparable countries in the long run is - a lack of investments. Therefore, we believe that the Government should implement the following policies to increase investment share in GDP and permanently accelerate economic growth: 1) to increase public investments, 2) reform public enterprises in order to invest more, 3) privatize the remaining state -owned enterprises such as RTB Bor and Petrohemija and 4) improve the business environment, above all in the area of the rule of law, reduction of corruption and increase of the efficiency of state administration, in order to increase private investments. For the second macroeconomic problem, a strong expansion of the foreign trade deficit, it is necessary for NBS to stop the excessive strengthening of the dinar which negatively affects net exports, but also to give up on the announced faster growth of demand compared to GDP growth. Finally, regarding the halt in the implementation of structural reforms, it is important to sign a new agreement with the IMF, but also to make a political decision that would lead to the implementation of the reforms beyond the short-term political interests of the authorities and the special interests of the privileged groups.

Economic growth in 2017 was 1.9%, which is in line with our expectations from the middle of the previous year (see section 2 "Economic activity" in previous QM issues). GDP growth of 1.9% was unsatisfactory since it was the lowest in the entire CEE (excluding Macedonia which had a political crisis). The poor performance of Serbia's economy in 2017 was partially under the influence of one-off factors - drought and a sharp fall in EPS production in the first part of the year. These two factors combined lowered economic growth by about one percentage point. However, even without such temporary factors, Serbia's GDP growth would still be relatively low, i.e. slightly below 3%. With GDP growth of 3%,' Serbia would still be the country with the lowest economic growth in the entire CEE (Table T2-1).

In 2018 we expect GDP growth of about 4%. Such estimate is led by the current GDP trends and the analysis of economic activities that recorded a major decline in 2017. Namely, economic trends in the last two quarters of 2017 indicate that the GDP growth trend with which enter 2018 is about 3%. Since in 2018 we expect a recovery of agriculture from drought from 2017

and its growth of about 10%, as well as a relatively high growth in electricity production, which will be compared with a sharp decline from the first half of 2017 - this will add to the existing growth trend of the economy another percentage point. Thus, the growth trend of around 3% with one-off contribution from agriculture and electricity production should in the aggregate result in GDP growth of about 4% in 2018. Due to poor achieved results in the first quarter of last year, the growth rate of 4% in this year is in line with GDP growth in the first quarter of this year of around 4.5%. Therefore, the high growth in the first quarter of this year should not be interpreted as the growth prognosis for the whole year.

Labor market trends in 2017 were in principle favorable. Employment rate increased by just over 2.5%, and wages increased by 0.9% (see section 3 "Labor market"). In addition to a number of indicators of employment trends, some of which we consider to be insufficiently reliable (Labor Force Survey), as the best indicator of real employment growth in Serbia we single out the movement in the registered employment. Registered employment is monitored on the basis of administrative data from the Central Registry of Compulsory Social Insurance (CROCSI) and this data shows a growth of registered employment in 2017 of 2.6%. Although at first glance data on employment growth (2.6%) and real wages growth of 0.9% are not fully consistent with somewhat lower economic growth (1.9%), it should be noted that low economic growth was affected by drought and poor EPS management, which do not have much impact on employment and wages. For this reason, for the assessment of the sustainability of the current growth of employment and wages, it is better to compare the growth of the wage mass with the growth of the underlying GDP (from which we exclude the effects of drought and poor results of the energy sector) - which is around 3% and is relatively close to the real growth of the wage mass.

In 2018 we expect similar employment trends as in 2017, i.e. employment will continue to grow at a rate of 2-3%. The growth of wages could accelerate, since at the beginning of the year the average wage in the general state (about 500,000 employees) increased by around 9% in average, and also the decision was made to increase the minimum wage by 10%, which applies to both the public and the private sector. Of these two measures, the more problematic is the wage increase to employees in the general government, which is higher than the expected growth of the nominal GDP, but also higher than private sector wage growth (which was below 4.5% in 2017). Higher growth of wages than the GDP growth, which the state is planning for its employees can have a negative impact on the increase of macroeconomic imbalances, and the accelerated growth in public sector wages unduly favors it in relation to the private sector in which the job security is smaller. The second measure of the Government, increasing the minimum wage by 10%, is not so questionable as it was made together with the increase of the non-taxable part of salary from 11,790 dinars to 15,000 dinars. Due to the simultaneous tax relief of labor, this increase in minimum wage will not pose an additional burden on employers. However, we also point out that the available fiscal space in 2018 actually allowed for a greater tax burden relief on all employees, but the government decided to spend this on the above-average increase in public sector wages.

Movements in the balance of payments in 2017 were unfavorable as the current account deficit increased from 3.1% of GDP (1.1bn euros) in 2016 to 5.7% of GDP (2, 1 billion euros) in 2017 (see section 4 "Balance of Payments and Foreign Trade"). Behind this deterioration is the largely faster growth of imports than exports which led to an increase in a foreign trade deficit of 820 million euros. The increase in the level of the foreign trade deficit in 2017 was a result of 1) unfavorable terms of trade, 2) reduction of the surplus in the trade of agricultural products, and 3) the strengthening of the dinar. Since the first two causes of the deficit growth are the consequences of external circumstances (the change in world oil prices, unfavorable weather conditions for agriculture), which cannot be influenced by domestic policies, it is crucial that the NBS more decisively prevents excessive strengthening of the dinar in order to at least stop the influence of that channel on the increase in external imbalances.

The capital inflow from abroad in 2017 also increased significantly, a good part as a result of the rise in foreign direct investments (FDI). Net FDIs increased from 5.5% of GDP (201 billion

euros) from 2016 to 6.5% of GDP (2.4 billion euros) in 2017. Although this trend is basically positive, not only the level but also the structure of the FDIs should be taken into account. Available data on FDIs structure for the first three quarters of 2017 indicate a decline in foreign investments in the manufacturing industry for over 150 mln euros, while at the same time investments in real estate and trade increased for more than 200 mln euros. Although it is still early to make long-term conclusions, the NBS should take very seriously deterioration of the trade exchange and the change in the structure of FDIs. Serbia already had a strong dinar experience, a strong increase of the current account deficit, and orientation of the economy on services and consumption instead of exports in the period 2005-2008. Such trends proved to be unsustainable and costly with the outbreak of the crisis in the second half of 2008, so Serbia should not repeat the same mistake twice.

As we already pointed out, 2017 was marked with a relatively strong strengthening of the dinar (see section 5 "Prices and the Exchange Rate"). The dinar nominally strengthened against the euro by 4% and against the US dollar by as much as 15.4%. Since inflation in Serbia in 2017 was higher than in the Eurozone and the USA the real appreciation of the dinar in the previous year was even more pronounced than the nominal. Strengthening of the dinar often has positive connotations in the public, as it increases the purchasing power of the population and reduces the indebtedness of foreign debtors (it also led to a strong reduction in public debt). However, the long-term consequences of excessive strengthening of the dinar are damaging because they seriously undermine the price competitiveness of the Serbian economy, encourage rebalance of the economy towards domestic consumption and nonexchangeable services rather than towards exports, and send wrong signals to investors.

In 2017 inflation was 3% (see section 5 "Prices and the Exchange Rate"), which is also the middle of the NBS target band (3 ± 1.5%). The rise in prices in 2017 was marked by two different periods. At the beginning of 2017 inflation was somewhat higher - from January to April inflation increased by 3%, same as the total annual inflation rate. This means that from May to December the price increase was completely stopped. As a result, we entered 2018 with the trend of very low inflation, which now due to the high base effect reflects in a relatively strong decline of the y-o-y inflation in the first two months of 2018. Y-o-y inflation in February dropped to the bottom of the NBS target band (1.5%) and there is a high probability that it will leave it in the coming months. It would desirable that the NBS uses the monetary measures for keeping inflation in the target band more boldly, as the price increases near the center of the target band is desirable not only for economic growth but also for the credibility of the National Bank.

In response to low inflation, in the second half of 2017 and at the beginning of 2018 NBS reduced the key policy rate (see section 7 "Monetary Flows and Policy"). In October 2017, the key policy rate was reduced from 3.75% to 3.5%, and in March 2018 it was again reduced to 3.25%. In 2017 credit activity grew solidly, although this was not apparent at first sight due to the significant write-offs of non-performing loans. The problem of non-performing (bad) loans had been rapidly reduced in 2017, so at the end of December, the share of bad loans fell to 11%, which is their lowest share since 2009, i.e. the number halved compared to their record level of 23% from the middle of 2015. Interest rates are still at a record low level, the banking sector is in good shape so in 2018 we expect the further increase in credit activity in Serbia.

Fiscal trends in 2017 were favorable (see section 6 "Fiscal Flows and Policy"). After more than a decade the budget was again in a surplus of over 50bn RSD (1.2% of GDP). This result was due to the widespread growth in tax revenues which increased by 4% in real terms compared to 2016, while public expenditures decreased in real terms by almost 2%. On the public revenue side, much higher than the planed were revenues from the income tax due to the extraordinary growth of the profitability of the economy in 2016, as well as revenues from contributions due to the higher employment growth in 2017 than expected. On public expenditures side, the largest decrease compared to the plan was on interest expenses (dinar appreciation and interest rate cuts) as well as with the (undesirable) decrease in public investments which were by 6.7% lower in 2017 than 2016 in real terms, although the plan was to increase them by 6% in real terms.

The achieved fiscal result in 2017 is undeniably good, especially when compared to the fiscal deficit of 2.2 billion euros (6.6% of GDP) from just three years ago. Also, the achieved budget surplus in 2017 positively influences the sustainability of public finances and the relatively strong reduction in public debt. However, Serbia should not aim to achieve fiscal surpluses in 2018 and the following years, especially in conditions of a slow economic growth. Instead, efforts should be increased to more effectively implement public investments, so that they increase from the current level of around 3% of GDP to over 4.5% of GDP, which, we estimate, instead of the budget surplus would result in a smaller fiscal deficit of 0,5 - 1% of GDP. Another economically desirable solution in the event that the fiscal surplus continues to be achieved in 2018 is the increase in public investments and abandoning the practice of taking dividends from public enterprises. If even after that there is a fiscal space it could be used for a certain fiscal easing of wages. The announced use of the expected fiscal surplus for a larger increase in public sector wages and pensions (above GDP growth) would be a big mistake, which would not only have any significant impact on the increase in economic activity, but such a policy would rapidly start to topple public finances, but also the relations between wages in the public and private sector. An additional increase in wages in the public sector in the current year would also mean the violation of the legislation on the maximum share of wage costs in the general government sector of 7% of GDP. After experiencing the immediate danger of the outbreak of a deep public debt crisis only three years ago, and the inevitable reduction in pensions and public sector wages that followed, we hope that the public and political elites in Serbia are sufficiently matured not to repeat identical mistakes which exactly led to these problems.

Serbia: Selected Macroeconomic Indicators, 2006–2017

	Annual Data												2015				2016				2017			
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Economic Growth									y-o-y, real growth[1]															
GDP (in billions of dinars)	2,055.2	2,355.1	2,744.9	2,880.1	3,067.2	3407.6	3584.2	3876.4	3908.5	4043.5	4261.9	4479.0	...	...	...	...	...	...	...	...	...	...	...	...
GDP	4.9	5.9	5.4	-3.1	0.6	1.4	-1	2.6	-1.8	0.8	2.8	1.9	-1.7	1.2	2.3	1.1	4.0	2.0	2.8	2.5	1.2	1.5	2.2	2.5
Non-agricultural GVA	5.1	6.9	4.4	-3.3	0.2	1.5	1.1	1.6	-2.5	1.9	2.7	3.1	-1.9	2.7	3.7	2.2	4.3	1.9	2.3	2.2	1.5	2.4	4.1	4.0
Industrial production	4.2	4.1	1.4	-12.6	2.5	2.2	-2.9	5.5	-6.5	8.2	4.7	3.5	-2.0	11.1	13.2	10.2	10.5	2.4	3.7	2.8	0.7	3.1	6.3	3.5
Manufacturing	4.5	4.7	1.1	-16.1	3.9	-0.4	-1.8	4.8	-1.4	5.3	5.3	6.4	4.2	7.3	6.4	3.2	6.5	5.9	4.4	5.3	7.3	5.1	7.7	4.9
Average net wage (per month, in dinars)[2]	21,745	27,785	29,174	31,758	34,159	37,976	41,377	43,932	44,530	44,437	46,087	47,888	41,718	44,717	44,719	46,592	43,588	46,450	46041	48168	45437	48670	47844	49599
Registered Employment (in millions)	2,028	1.998	1.997	1.901	1.805	1,866	1,865	1,864	1,845	1,990	1,989	2,061	1,983	1,985	1,998	1,989	1,978	2,008	2,023	2,030	2,024	2,061	2,073	2,087
Fiscal data									in % of GDP															
Public Revenues	42.4	42.1	41.5	38.6	-1.5	-4.6	0.6	-3.0	3.2	3.1	7.5	4.0	6.9	3.5	4.5	-1.4	7.4	7.8	9.2	5.6	5.3	5.5	1.3	3.5
Public Expenditures	42.7	42.8	43.7	42.7	-1.7	3.3	3.6	-5.7	5.2	-3.2	1.9	-1.7	-5.4	-3.8	-1.3	-2.6	5.7	4.9	2.3	-3.7	-1.3	-1.7	-3.6	-0.6
									in billions of dinars															
Overall fiscal balance (GFS definition)[3]	-33.5	-58.2	-68.9	-121.8	-136.4	-158.2	-217.4	-178.7	-258.1	-149.1	-57.1	52.3	-21.2	-14.2	-15.8	-98.0	-16.0	-2.1	13.8	-52.8	11.8	32.4	37.8	-29.8
Balance of Payments									in millions of euros, flows[4]															
Imports of goods[4]	-10,093	-12,858	-15,917	-11,096	-11,575	-13,614	-14,011	-14,674	-14,752	-15,350	-15,933	-18,076	-3,648	-3,869	-3,777	-4,057	-3,701	-4,230	-3,939	-4,339 0	-4,204	-4,576	-4,383	-4,912
Exports of goods[4]	5,111	6,444	7,416	5,978	6,856	8,118	8,376	10,515	10,641	11,357	12,814	14,090	2,601	2,997	2,882	2,877	2,956	3,294	3,131	3,351	3,277	3,693	3,559	3,560
Current accounts[5]	-3,137	-4,994	-7,054	-2,084	-2,037	-3,656	-3,671	-2,098	-1,985	-1,577	-1,075	-2,090	-511	-279	-343	-445	-378	-309	-293	-390	-694	-333	-384	-678
in % GDP[5]	-12.9	-17.2	-21.6	-7.2	-6.8	-10.9	-11.6	-6.1	-5.9	-4.7	-3	-6	-6.7	-3.2	-3.9	-5.2	-4.8	-3.6	-3.3	-4.5	-8	-4	-4	-7
Capital account[5]	7,635	6,126	7,133	2,207	1,553	3,340	3,351	1,630	1,705	1,205	535	1,690	427	139	243	396	184	197	127	282 0	486	328	266	610
Foreign direct investments	4,348	1,942	1,824	1,372	1,133	3,320	753	1,298	1,236	1,804	1,899	2,415	339	441	510	514	480	404	492	485 0	558	626	660	571
NBS gross reserves (increase +)	4,240	941	-1,687	2,363	-929	1,801	-1,137	697	-1,797	166	-302	228	111	-32	300	-213	-836	-317	332	519	-455	222	1,061	-600
Monetary data									in millions of dinars, e.o.p. stock[6]															
NBS net own reserves[6]	302,783	400,195	475,110	578,791	489,847	606,834	656,347	757,689	788,293	931,320	923,966	891,349	854,636	858,972	902,526	931,320	884093	846,969	899,959	923,966	894,102	881,125	936,542	891,349
NBS net own reserves[6], in mn of euros	3,833	5,051	5,362	6,030	4,609	5,895	5,781	6,605	6,486	7,649	7,486	7,482	7,094	7,125	7,509	7,649	7,180	6,864	7,303	7,486	7,217	7,221	7,851	7,482
Credit to the non-government sector	609,171	842,512	1,126,111	1,306,224	1,660,870	1,784,237	1,958,084	1,870,916	1,927,668	1,982,974	2,031,825	2,067,826	1,919,958	1,918,917	1929573	1,982,974	1,961,626	2,009,537	2,044,160	2,031,825	2,042,971	2,050,579	2,057,675	2,067,826
FX deposits of households	260,661	381,687	413,766	565,294	730,846	775,600	909912	933,839	998,277	1,014,260	1,070,944	1,074,424	1,004,948	1,010,179	995123	1,014,260	1,027,439	1,048,123	1,053,841	1,070,944	1,087,084	1,067,142	1,069,094	1,074,424
M2 (y-o-y, real growth, in %)	30.6	27.8	2.9	9.8	1.3	2.7	-2.2	2.3	6.7	5.5	8	0.6	6.4	5.8	2.6	5.5	7.2	7.3	9.4	8	6.4	4.8	2.3	0.6
Credit to the non-government sector (y-o-y, real growth, in %)	10.3	24.9	25.2 5.2		13.9	0.5	-2.1	-8.3	1.2	1.4	0.9	4.0	3.7	2	0.7	1.4	1.6	4.2	5.2	0.9	0.5	2.7	2.4	4.0
Credit to the non-government sector, in % GDP	28.6	35.0	42.0	45.8	54.0	52.4	54.7	48.3	49.5	48.4	47.2	45.4	47.4	47.0	46.9	47.8	46.8	47.6	48.0	47.2	40.4	47.7	46.6	45.4
Prices and the Exchange Rate									Y-o-y growth[1]															
Consumer Prices Index[7]	6.5	11.3	8.6	6.6	10.2	7.0	12.2	2.2	1.8	1.6	1.5	3.0	1.8	1.9	1.4	1.6	0.6	0.3	0.6	1.5	3.5	3.6	3.2	3.0
Real exchange rate dinar/euro (average 2005=100)[8]	100.0	91.2	85.4	91.3	95.8	87.7	92.9	87.4	89.2	90.6	91.6	88.9	91.3	90.5	90.0	90.7	91.0	91.9	91.6	91.8	90.6	89.9	87.7	87.4
Nominal exchange rate dinar/euro[8]	84.19	79.97	81.46	93.90	102.90	101.88	113.03	113.09	117.25	120.8	123.26	121.4	121.6	120.4	120.2	120.8	122.85	123.01	123.3	123.26	123.88	122.91	119.8	119.1

Source: FREN.

1) Unless indicated otherwise.

2) Data for 2008 represent adjusted figures based on a wider sample for calculating the average wage. Thus, the nominal wages for 2008 are comparable with nominal wages for 2009 and 2010, but are not comparable with previous years.

3) We monitor the overall fiscal result (overall fiscal balance according to GFS 2001) – Consolidated surplus/deficit adjusted for "budgetary lending" (lending minus repayment according to the old GFS).

4) The Statistical Office of the Republic of Serbia has changed its methodology for calculating foreign trade. As from 01/01/2010, in line with recommendations from the UN Statistics Department,

Serbia started applying the general system of trade, which is a broader concept that the previous one, in order to better adjust to criteria given in the Balance of Payments and the System of National Accounts. A more detailed explanation is given in QM no. 20, Section 4, "Balance of Payments and Foreign Trade".

5) The National Bank of Serbia changed its methodology for compiling the balance of payments in Q1 2008. This change in methodology has led to a lower current account deficit, and to a smaller capital account balance. A more detailed explanation is given in QM no. 12, Section 6, "Balance of Payments and Foreign Trade".

6) The NBS net own reserves represent the difference between the NBS net foreign currency reserves and the sum of foreign currency deposits of commercial banks and of the foreign currency deposits of the government. More detailed explanations are given in the Section Monetary Flows and Policy.

7) Data for 2004, 2005 and 2006 are based on the Retail Prices Index. SORS has transferred to the calculation of the Consumer Price Index from 2007.

8) The calculation is based on 12-m averages for annual data, and the quarterly averages for quarterly data.

2. Economic Activity

The growth of the Serbian economy in 2017 was rather modest. The achieved GDP growth of 1.9% was the lowest in the entire Central and Eastern Europe (CEE), excluding Macedonia which had a political crisis. The structure of Serbia's GDP growth in 2017 was also not good enough. Two main levers that should be generators of Serbia's economic growth in the medium term - investments and net exports - were not convincing. Investments had a solid growth of 6%, but for a more significant increase of their share in the GDP and the acceleration of economic activity their y-o-y growth should be around 10%. Net exports, due to the faster growth of imports from exports, had a negative impact on GDP growth instead of supporting it. In 2018 we expect somewhat better results of economic activity than in 2017. Namely, we enter 2018 with the year-on-year GDP growth from the last quarter of 2017 of 2.5%, the highest in the previous year, and the first data for January 2018 are also favorable. In addition, in 2018 recovery of agriculture after drought should be expected and the usual level of electricity production after a deep decline in the first half of 2017 should be reestablished. These one-off factors, along with the existing trends, should lead to the GDP growth of at least 4% in 2018, which would be Serbia's highest economic growth since the outbreak of the crisis in the second half of 2008. However, it should not be forgotten that a 4% increase, if achieved in 2018, would not yet be fully sustainable (as it rests partly on a one-off recovery of agriculture), and in relation to other comparable countries it would not be impressive - as the CEE countries in 2017 achieved an average growth of 4.5%. Therefore, the Government should support economic growth through structural public-sector reforms and reforms of public enterprises that fell short during the implement of the fiscal consolidation, increase efficiency in public investments and improve the economic environment (the rule of law, reduction of corruption, increase the efficiency of public administration, etc.). For the necessary acceleration of economic growth, it is very important that the NBS more decisively halts the excessive strengthening of the dinar, which negatively affects the international price competitiveness of the economy, thus affecting further deterioration of net exports.

Gross Domestic Product

In 2017 a low GDP growth of 1.9% was achieved

Economic growth rate in 2017 was a modest 1.9%, which is in line with the forecasts we made in the previous issues of QM. The achieved GDP growth in 2017 is lower by almost one percentage point from the GDP growth in 2016 and is practically the lowest in the whole Central and Eastern Europe (lower growth in 2017 was recorded only by Macedonia, which in the first half of the year had a political crisis). The negative results of economic activity in Serbia in 2017 were affected by temporary and permanent factors. The temporary factors are the reduction of agricultural production due to drought and the problems in the operation of EPS in the first half of 2017. Drought and the problems caused by poor EPS management combined lowered economic growth by about one percentage point. However, even without such temporary factors, Serbia's GDP growth would be slightly below 3% and would again be the lowest in the CEE (except for Macedonia). This indicates that the temporary circumstances from 2017 were not the only reason behind Serbia's low economic growth, but that there are other, more permanent problems behind it.

Table T2-1 shows the growth of the GDP of Serbia and other countries in the region since 2014. In addition to the GDP growth of Serbia the Table shows its underlying economic growth - from which we excluded temporary factors that affect the growth of GDP (agricultural seasons, changes in electricity production and coal mining that were under the significant influence of floods from 2014, and problems in EPS's operations in the first half of 2017). The data from the Table clearly show that Serbia systematically significantly lags behind the growth rates of comparable countries, because in the past four years it almost always had the lowest economic

growth in the entire CEE. Therefore, the cumulative economic growth of Serbia from 2013 to 2017 was around 5%, while the cumulative growth of comparable countries in the region and the CEE countries was in average over 15% in the same period. These data confirm that there are systematic, structural, problems influencing Serbia's economic growth to be low and to lag behind comparable countries in the long run[1].

Table T2-1. Serbia and Countries in the Region: GDP Growth, 2014-2017

	2014	2015	2016	2017[1)]
Serbia	-1.8	0.8	2.8	1.9
Serbia – underlying growth [2)]	-0.8	1.2	2.3	2.9
Neighbouring countries (weighted average)	2.9	3.8	3.2	4.5
Albania	2.7	3.5	3.7	4.8
Bosnia and Herzegovina	1.8	2.2	3.4	3.9
Bulgaria	1.3	3.1	3.3	3.0
Croatia	1.3	3.6	3.9	3.8
Hungary	-0.1	2.3	3.2	3.0
Macedonia	4.2	3.4	2.2	3.8
Montenegro	3.6	3.9	2.9	-0.4
Romania	1.8	3.4	2.9	4.0
CEE (weighted average)	3.1	4.0	4.8	6.9

1) For countries for which GDP growth in Q4 has not yet been published, growth in 2017 is estimated on the basis of y-o-y growth in the first three quarters
2) Excessive effect of drought, floods and poor EPS control
Source: Eurostat, statistical offices of individual countries and the EU Commission

The direct causes of the low growth of Serbian economy are small investments and relatively low exports

A long period of time ago we have recognized a much worse structure of GDP use in Serbia than in other countries as the direct reason for systematically considerably lower Serbian economic growth in relation to comparable countries. Namely, Serbia in relation to comparable countries stands out with a low share of investments in the GDP and a low exports share, while on the other hand the share of private consumption in the GDP is extremely high, even 15pp. above the CEE average. Table T2-2 comparatively shows the structure of GDP in Serbia in relation to the (weighted) average of the CEE and the countries in the region in the period 2014-2017.

Table T2-2. Serbia and the CEE Countries: Structure of GDP by Consumption, Average 2014-2017.

	Private consumption (C)	Public Consumption (G)	Investment (I)	Exports (X)	Imports (M)
			Share in GDP		
Serbia	73.7	16.5	17.7	48.1	57.4
Central and Eastern Europe (weighted average)	57.8	17.7	21.2	60.9	58.6
Neighbouring countries (weighted average)	60.7	16.7	22.0	56.1	56.5

Source: Eurostat

Table 2-2 clearly shows that Serbia cannot support the acceleration of economic growth with further increase in private consumption. which is already too high in relation to the production. Instead, the main drivers of Serbia's economic growth in the medium term should be investments and (net) exports, and consumption should grow somewhat slower than the GDP. For this reason, both the Government and the NBS, in order to accelerate economic growth, have to lead policies that would stimulate investments and net exports rather than consumption. In terms of investments, the Government should: 1) increase public investments, 2) reform public enterprises so they can invest more, 3) privatize remaining state-owned enterprises such as RTB Bor and Petrohemia, and 4) improve the business environment above all in the areas of the rule of law and reduction of corruption and increase the efficiency of the state administration. In addition, it is very important that the NBS prevents the excessive dinar strengthening which negatively affects net exports, while excessive cheap imports stifle domestic production.

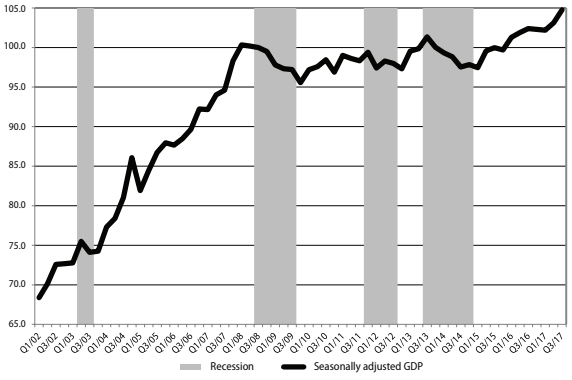
1 The lagging of Serbia's economy behind the countries of Central and Eastern Europe begun in 2010. See Arsić et al., "Quality of Institutions as a barrier to the long-term growth of Serbia's economy", Proceedings of Economic Policy in 2018, Faculty of Economics and NDES.

GDP growth in Q4 was 2.5%

Short-term indicators of economic activity improved slightly at the end of 2017. In the last quarter of 2017, the y-o-y GDP growth of 2.5% was achieved, with Q4 being the quarter with the highest y-o-y growth in the whole 2017. The structure of the achieved economic growth is also somewhat more favorable compared to the previous quarters. The biggest contribution to GDP growth, on the spending side, came from investments, and from the production side – from the construction activity. The only important component of GDP which deteriorated in Q4 compared to the previous quarters was net exports. In principle, somewhat more favorable economic trends in Q4 came too late to change the bad impression on GDP growth in 2017, but are important for the coming year as with these trends we enter 2018.

Seasonally adjusted GDP growth in Q4 compared to the previous quarter was 0.6%

Graph T2-3. Serbia: Seasonally Adjusted GDP Growth, 2002-2017 (2008 = 100)



Source: *QM* estimates based on SORS

Graph T2-3 shows a series of seasonally adjusted GDP growth which somewhat more reliably indicates short-term economic activity trends from the y-o-y indices (the shaded periods represent a recession according to the Bry-Boschan procedure). Seasonally adjusted GDP growth in Q4 was 0.6%. Although this result at first glance indicates a certain slowdown of GDP growth compared to Q3 (Graph T2-3), it should be noted that in Q3 seasonally adjusted GDP growth was one-off slightly higher due to the recovery of electricity production, which was exhausted by Q4. Taking this into account, as well as the usual oscillations of seasonally adjusted indicators at quarterly level, the seasonally adjusted data on GDP in the second half of 2017 confirm that in 2018 we enter with a growth trend of economic activity of approximately 3%.

Strong growth of investment in Q4 of over 12%

The structure of the achieved GDP growth in Q4 observed by use is presented in Table T2-4. The table shows that in Q4 there was significant acceleration of the year-on-year growth of investments, which amounted to 12.4% in Q4. After slow growth of only 2.5% in the first half of the year, investments accelerated sharply in the second half of the year. Thanks to this change, total growth in investments in 2017 was somewhat over 6%. As for the high and sustainable growth rates of the Serbian economy the share of investments in GDP has to be between 23% and 25%, the y-o-y growth of 6% is still not sufficient for Serbia. Namely, with this growth rate of investments, their share of 23% of GDP could be reached in eight years. That is why it is very important that the two-digit trend of investments growth from Q4 continues in the coming years.

Unlike investments which had positive trends at the end of 2017, net exports in Q4 declined. Exports significantly slowed down its growth, while imports accelerated (Table T2-4). Such trends in net exports from 2017 are very unfavorable, and the Government and the NBS will have to pay special attention to them. We particularly emphasize that the last strengthening of the dinar is dangerous as it negatively affects the movement of net exports. This channel could undermine Serbia's economic growth, i.e. it could lead to re-expansion of the economic imbalance which, from the outbreak of the crisis in 2008 and until 2017, has been strongly reduced. Therefore, in the forthcoming period NBS would have to take stronger measures to prevent the strengthening of the dinar.

Table T2-4. Serbia: GDP by Expenditure Method, 2009-2017

	Y-o-y indices																	Share
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2016				2017				
										Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2016
GDP	96.9	100.6	101.4	99.0	102.6	98.2	100.8	102.8	101.9	104.0	102.0	102.8	102.5	101.2	101.5	102.2	102.5	100.0
Private consumption	99.4	99.4	100.9	98.2	99.4	98.7	100.5	101.0	101.8	101.0	101.2	100.7	101.1	102.0	101.6	101.8	101.9	72.4
State consumption	100.6	100.8	101.1	102.4	98.9	99.4	98.5	102.2	101.0	102.3	103.7	100.9	102.3	100.4	101.5	101.0	101.1	16.0
Investment	77.5	93.5	104.6	113.2	88.0	96.4	105.6	105.1	106.2	106.9	104.6	106.5	102.7	102.4	102.6	106.2	112.4	17.7
Export	93.1	115.0	105.0	100.8	121.3	105.7	110.2	112.0	109.8	112.5	110.8	110.9	114.0	109.0	111.2	111.6	107.5	50.0
Import	80.4	104.4	107.9	101.4	105.0	105.6	109.3	109.0	110.7	106.5	113.4	108.0	108.1	111.2	108.9	110.8	112.0	57.5

Source: SORS

Along with the large decline in agriculture, which marked the whole 2017, Q4 records a high growth in construction activity

Table T2-5 shows GDP growth by activity. In Q4, a sharp decline in agriculture of about 10% continues as a result of the impact of drought on farming. On the other hand, construction activity strongly accelerated in Q4 achieving a year-on-year growth of almost 18%. Such high growth in construction activity represents a strong turnaround compared to the trend from the first half of the year, when according to the SORS data construction activity recorded a y-o-y decline. Other production sectors in Q4 generally had similar growth rates as in previous quarters. Only the industry somewhat slowed down its growth compared to Q3 (in Q4 a 3.7% y-o-y growth was achieved and in Q3 it was around 6%), which we still do not consider as worrying trend but as temporarily oscillations (Table T2-5).

Table T2-5. Serbia: Gross Domestic Product by Activity, 2008-2017

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2016				2017				Share
										Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2016
Total	96.9	100.6	101.4	99.0	102.6	98.2	100.8	102.8	101.9	104.0	102.0	102.8	102.5	101.2	101.5	102.2	102.5	100.0
Taxes minus subsidies	98.6	99.5	101.1	97.8	98.9	99.2	100.9	101.0	102.1	101.0	101.7	100.2	101.2	102.2	101.8	102.3	102.1	15.7
Value Added at basic prices	96.6	100.8	101.5	99.2	103.3	98.0	100.7	103.2	101.8	104.6	102.1	103.3	102.8	100.9	101.4	102.2	102.6	84.3
Non agricultural Value Added	96.7	100.2	101.5	101.1	101.6	97.5	101.7	102.7	103.1	104.1	102.0	102.3	102.1	101.5	102.4	104.1	104.0	90.1[2)]
Agriculture	95.2	106.4	100.9	82.7	120.9	102.0	92.3	108.1	90.5	107.5	104.4	111.6	107.8	93.7	90.9	88.1	90.5	9.9[2)]
Industry	96.8	100.8	103.2	105.6	106.0	92.4	103.2	102.6	103.5	106.6	99.2	102.0	102.9	101.2	103.0	106.1	103.7	24.3[2)]
Construction	87.1	97.6	105.9	90.2	96.1	98.5	102.7	103.2	105.5	109.5	104.6	105.4	96.5	96.3	98.0	106.1	117.8	5.2[2)]
Trade, transport and tourism	92.9	100.0	99.5	99.3	102.3	101.1	102.2	103.7	104.6	105.0	103.0	103.2	103.8	103.0	104.1	105.9	104.9	18.5[2)]
Informations and communications	97.0	103.2	102.6	102.8	99.9	96.1	101.7	105.8	101.2	106.6	106.7	105.5	104.2	99.9	101.4	101.0	102.7	5.2[2)]
Financial sector and insurance	102.6	101.9	98.4	92.0	90.5	97.2	102.3	104.0	102.4	103.6	104.0	104.6	104.1	104.8	101.6	101.8	101.2	3.2[2)]
Other	99.7	99.8	100.9	101.8	100.2	99.9	99.8	101.5	101.1	101.7	101.8	101.0	101.5	100.7	101.1	101.2	101.3	33.8[2)]

Source: SORS

We expect GDP growth in 2018 to be around 4%

As we have shown, low GDP growth of around 1.9% in 2017 was partially affected by some one -off factors (drought and EPS production decline in the first half of the year). The real growth trend of the economy with which we enter 2018 is, however, somewhat higher and amount to about 3%. In addition to the continuation of these trends, in 2018 we expect the impact of one -off factors to change its course compared to 2017. Namely, the recovery of agriculture from the drought that we expect in 2018, with the establishment of the usual level of electricity production, will lead to a one-off GDP increase of about 1 pp. This, together with the continuation of the growth trend of about 3% will lead to a total GDP growth of about 4%. Such an increase in economic growth in 2018, if it does happen, is good, but it should not be interpreted in a positive way without criticism. It is enough just to point out that in 2018 the basic trend of economic growth is expected to be around 3% and that the average growth of the CEE countries in 2017 was around 4.5%, which suggests that Serbia's economic growth even with the 4% growth in 2018 will continue to structurally lag behind comparable countries.

Industrial production

Industrial production growth of 3.5% in Q4

Industrial production in Q4 recorded an increase of 3.5% (Table T2-6), which was around the average level recorded in 2017. However, these results are somewhat less favorable given that in the first half of the year, poor production performance has temporarily been affected by the decline in electricity production due to the problems in EPS production. Therefore, it was expected that industrial production growth in Q4 would be above the 2017 average, or slightly higher than the achieved one.

Table T2-6. Serbia: Industrial Production Indices, 2009-2017

	Y-o-y indices																	Share
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2016				2017				2016
										Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	
Total	87.4	102.5	102.2	97.1	105.5	93.5	108.2	104.7	103.5	110.5	102.4	103.7	102.8	100.7	103.1	106.3	103.5	100.0
Mining and quarrying	96.2	105.8	110.4	97.8	105.3	83.3	110.5	104.0	102.7	114.3	99.2	103.4	100.5	93.7	107.3	105.3	105.4	6.5
Manufacturing	83.9	103.9	99.6	98.2	104.8	98.6	105.3	105.3	106.4	106.5	105.9	104.4	105.3	107.3	105.1	107.7	104.9	80.0
Electricity, gas, and water supply	100.8	95.6	109.7	92.9	108.1	79.9	118.8	102.7	93.8	120.9	90.2	102.1	95.9	85.5	94.1	100.7	97.4	13.5

Source: SORS

The previous conclusion, that industrial production in Q4 achieved somewhat worse results than expected, is also confirmed by the analysis of individual sectors. The manufacturing industry, which is the largest and most heterogeneous part of the industry and consequently best describes

the actual trends of industrial production, in Q4 had a year-on-year increase of 4.9%, which is the lowest in 2017 (Table T2-6). The average y-o-y growth of the manufacturing industry in the first three quarters of 2017 was almost 7%. Mining and electricity generation in Q4 recorded a y-o-y growth of 5.4 and -2.6% respectively.

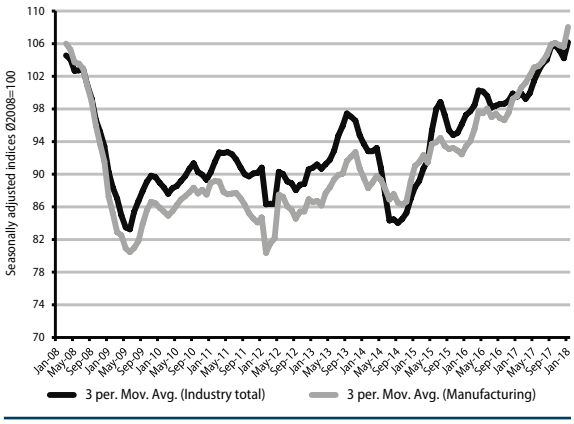
The industry slowdown in Q4 is probably temporary

The observed slowdown of industrial production in Q4 is most likely temporary. Namely, poor performance of the industry was only achieved in December and this slowed down the whole quarterly growth of industrial production. Unlike December, the October and November results were pretty good. For example, the manufacturing industry averaged 7.2% y-o-y growth in October and November and recorded just 0.4% in December. Also, data from January 2018 in which industrial production recorded a high y-o-y growth of more than 10% confirms that the December deceleration was only temporary.

Seasonally adjusted data show that industrial production exceeded its pre-crisis level

The assessment of the industrial production trend in Q4 we made based on the y-o-y indices is confirmed by the seasonally adjusted indices we present in Graph T2-7, ending with January 2018 (last available data). The graph shows that overall industrial production (darker line on the graph) and manufacturing industry (lighter line on the graph) had a certain stagnation at the end of 2017, but the wider trends in industrial production were undoubtedly positive (slowdown occurred at a relatively high level of production, and strong seasonally adjusted growth continued again in January). Also, the graph shows that the overall industry in Q4 finally exceeded its highest, pre-crisis, level of production from the first half of 2008. Although the total volume of production is the same, in contrast to 2008 the structure of this production in 2017 is much more favorable as it is far more oriented towards exports and therefore more competitive.

Graph T2-7. Serbia: Seasonally Adjusted Industrial Production Indices, 2008-2017



Source: SORS

The production of intermediate products continued with its high growth, while other special purpose groups slowed down

Observed by the purpose of industrial products (Table T2-8), in Q4 majority of special purpose groups slowed down their growth. The only group which continued its strong y-o-y growth from the previous quarter in Q4, of almost 10%, is the production of intermediate goods. Other purpose groups in Q4 recorded a fairly moderate y-o-y growth - ranging from 0% (energy production) to 3.5% (production of investment goods). It is interesting to note that the production of investment goods significantly slowed down its growth compared to Q3 (when it was 14.6%), which at first glance is not in line with data on the strong acceleration of investments growth. This suggests that the increase in investments in Q4 was primarily influenced by the growth of construction activity, although it should not be forgotten that the industrial group production of investment goods also includes the production of motor vehicles (primarily FAS), which in Serbia is mainly oriented towards exports.

Table T2-8. Serbia: Industrial Production by Purpose, 2009-2017

	Y-o-y indices																
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2016				2017			
										Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Total	87.4	102.5	102.1	97.1	105.5	93.5	108.2	104.7	103.5	110.5	102.4	103.7	102.8	100.7	103.1	106.3	103.5
Energy	98.8	97.7	106.2	93.6	113.2	82.6	116.9	101.9	97.2	118.3	94.3	96.5	97.1	88.0	95.2	108.7	100.1
Investment goods	79.3	93.6	103.2	103.8	127.6	95.9	103.0	101.6	109.2	97.7	100.3	104.7	102.6	113.0	107.0	114.6	103.6
Intermediate goods	78.4	109.2	102.2	91.2	99.0	96.8	105.3	109.5	110.0	111.2	110.6	108.0	106.5	110.3	109.5	110.3	109.3
Consumer goods	86.8	102.1	95.4	103.2	100.7	100.7	104.0	105.6	102.4	107.4	103.9	107.0	105.6	105.8	105.3	98.7	100.9

Source: SORS

Construction activity

According to SORS construction activity growth strongly accelerated to almost 18% in Q4

According to the SORS estimates construction activity in Q4 achieved a very high real y-o-y growth of 17.8% (Table T2-5). This data had an impact on the observed acceleration of investments growth and increased economic activity growth in Q4, and also represents a strong turnaround in construction activity compared to the first half of the year when the construction industry recorded a declined according to SORS data. However, the real trend of construction activity is actually very difficult to evaluate correctly. The problem with the monitoring of this sector of the economy is that a large number of small private companies that are quickly set up and quickly closed operate within it, which official statistics has a difficulty to monitor, and a good part of the activity is carried out in the gray zone, out of the sight of the statistics. In addition, construction activity in Q4 (as well as Q1) seasonally depends on meteorological conditions, i.e. the number of working days in these quarters where construction works can be performed unobstructed by weather conditions. A more detailed QM analysis shows that there is a real improvement in construction trends in the second half of 2017, especially in Q4, although these improvements are probably not as high as official statistics shows.[2]

For a somewhat more reliable monitoring of the construction activity trend in QM we analyze a whole series of additional indicators related to this activity (the value of construction works in Serbia, the movement of registered employment, cement production and others). These additional indicators indeed show improvements in the second half of the year, and especially in Q4, but also show that these improvements were probably not as extreme as the official data on construction growth show. The production of cement is presented in Table T2-9. This production (along with its usual oscillations) indicates that construction activity probably did not fall at all in the first six months of 2017, but also that there was some acceleration in construction activity in the second half of the year. A similar conclusion is also made based on the analysis of registered employment in construction. In the first half of the year the number of registered employees increased by about 1%, which would be unlikely if the construction activity really recorded a fall, and in the second half of the year the growth of registered employment in construction slightly accelerated to about 2%.

Table T2-9. Serbia: Cement Production, 2001-2017

	Y-o-y indices				
	Q1	Q2	Q3	Q4	Total
2001	89.5	103.5	126.9	148.1	114.2
2002	83.6	107.9	115.6	81.6	99.1
2003	51.1	94.4	92.7	94.4	86.6
2004	118.8	107.4	98.5	120.1	108.0
2005	66.1	105.0	105.8	107.4	101.6
2006	136.0	102.7	112.2	120.2	112.7
2007	193.8	108.9	93.1	85.0	104.4
2008	100.1	103.7	108.1	110.1	105.9
2009	34.1	81.4	86.0	75.3	74.4
2010	160.7	96.9	96.0	97.4	101.1
2011	97.7	101.3	96.2	97.7	98.3
2012	107.9	88.3	58.2	84.9	79.6
2013	83.5	78.7	127.6	93.5	94.9
2014	136.2	90.3	96.2	104.7	101.5
2015	77.9	112.4	104.5	108.7	103.1
2016	120.2	109.8	109.9	100.4	108.9
2017	110.4	104.1	96.4	118.7	105.9

Source: SORS

Probably the real acceleration of construction activity is not so great, but positive trends are undeniable

Based on all of the above we believe that the statistics data on total construction growth in 2017 of around 6% is roughly appropriate. However, trends throughout the year were in all probability somewhat more modest. Most probably construction activity grew by 5% in the first half of the year (instead of declining), and then in the second half of the year it accelerated to almost 10% (instead of over 10% growth).

In 2018 we expect construction activity growth to be close to 10%. The acceleration of construction activity in 2018 is indicated by better trends at the end of 2017 with which we enter 2018, the State announcements on increasing investments in infrastructure (public investments increase from 3% of GDP to 3.7% of GDP) but also good market conditions for investments (a favorable economic cycle throughout Europe, still low interest rates on borrowing and so on).

2 According to SORS construction activity recorded a decline by about 3% in the first half of the year and a growth of 12% in the second half of the year

3. Labour Market

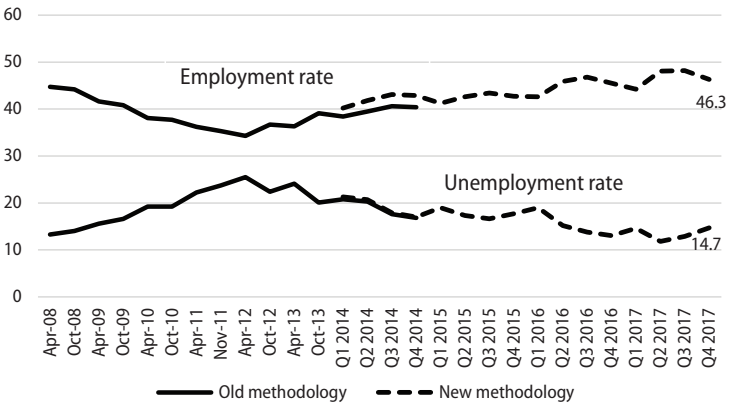
According to the Labour Force Survey (LFS), in Q4 2017, the activity rate was 54.2%, the employment rate was 46.3% and the unemployment rate was 14.7%. Compared to the same period last year, all three rates have slightly increased. The total number of employed persons was 2,764 thousand, while the total number of unemployed persons was 476 thousand. The number of unemployed persons increased by 16%, while the number of the employed increased by 1.2% yoy. Total employment is growing less than formal employment due to a significant yoy decline in informal employment. The informal employment rate is 19.8%. The rate of growth in total employment (LFS) is lower than the growth rate of real gross value added (GVA) in Q4 2017, yoy. In Q2 2016 - Q3 2017, the trend was reversed, formal employment grew at a higher rate than the real growth rate of GVA. According to the Central Register of Compulsory Social Insurance (CRCSI), the employment increase is 3% yoy. Earnings in Q4 were nominally higher by 3%, while in real terms they were higher by 0.1% compared to the same period of the previous year. As a result of the strengthening of the dinar, earnings in euros increased in Q4 by 6.6% yoy, almost entirely due to the growth of the real value of the dinar against the euro. In Q4, the majority of activities recorded a growth of seasonally adjusted real net wages compared to the same period of the previous year, with activities predominately in the state sector recording lower wage growth. Using the data of CRCSI, total productivity was reduced in Q4 2017 compared to the same period of the previous year by 0.4%. In the same period, productivity excluding agricultural activity slightly increased (1%). Compared to the 2014 average, productivity in 2017 decreased by 5.3%, or by 3.9% when excluding agriculture. Unit labour costs increased by 7.4% and 5.8% in total and excluding agriculture, respectively.

Employment and Unemployment

In Q4 2017, the unemployment rate was 14.7%, while the employment rate was 46.3%

The activity rate, employment rate and unemployment rate increased in Q4 2017 compared to the same quarter of the previous year. Activity rate was 54.2% and was higher by 1.9 pp yoy. An increase in the rate of activity has enabled simultaneous growth in the employment rate and unemployment rate. The employment rate was 46.3% in Q4 2017, and was higher by 0.8 pp yoy, while the unemployment rate was 14.7%, which is 1.7 pp more than in the same period of the previous year.

Graph T3-1. Trends in the Unemployment and Employment Rates, 15+, 2008-Q4 2017

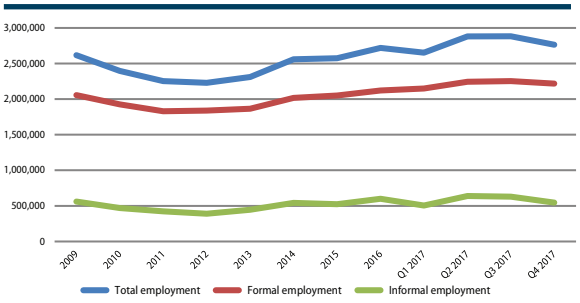


Note: Due to a change of methodology, the data for the period before and after 2014 are not completely comparable.
Source: SORS, LFS

According to LFS, the number of unemployed persons in Q4 2017 amounted to 475.6 thousand, which is 65.7 thousand more than in the same quarter of the previous year. The number of active persons increased by 3.1% yoy, and the number of unemployed persons increased by 16% yoy, which led to a growth of unemployment rate of 1.7 pp. The total number of employed persons was 2,784 thousand in Q4 2017, which is 1.2% more than in the same quarter of the previous year. Total employment is growing less than the real GDP growth rate, which in Q4 was 2.5% yoy.

Total employment and formal employment are on the rise, while informal employment is declining

Graph T3-2. Trend in Total, Formal and Informal Employment, 15+, 2009-Q4 2017, in thousands



Note: Due to a change of methodology, the data for the period before and after 2014 are not completely comparable.
Source: SORS, LFS

Chart G3.2 shows the trend of total, formal and informal employment in the period 2009-2017. Out of a total of 2,764 thousands of employed persons, the number of formal employees was 2,217, while the number of informal employees was 546 thousand. The number of formal employees increased by 2.6% yoy, while informal employment declined by 4.3%. The informal employment rate was 19.8% and was lower by 1.1 pp compared to the same quarter of the previous year.

In Q4 2017, registered employment (CRCSI) increased by 3%, while formal employment (LFS) grew by 2.6% year-on-year

In Q4 2017, formal employment according to LFS increased at a slower rate than the rate of increase in registered employment by CRCSI. In all previous quarters (Q1 2016-Q3 2017) the trend was reversed, the growth rates of total and formal employment according to LFS were significantly higher than the rate of registered employment growth according to CRCSI. The annual growth of total employment according to LFS was 1.2% and was lower in relation to the rate of growth according to CRCSI (3%). In all quarters of 2017, employment in agriculture recorded a yoy decline. Also, the real growth rate of GVA in agriculture was negative. Employment in industry is growing by 6.3% yoy, which is faster than the real growth rate of GVA in the industry of 3.7%. The growth rate of the number of employees in services has recorded an increase of 2% yoy, while the real growth rate of GVA is 2.5%.

Employment is growing in industry, construction and services, while it declined in agriculture in Q4 2017 compared to the same period of the previous year

Table T3-1. Trends in the Number of the Employed and GVA by Sectors, 15+, Q1 2016-Q4 2017, year-on-year change, %

	2016				2017			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Total employment CRCSI	-0.3	1.2	1.3	2.1	2.3	2.6	2.7	3.0
Formal employment LFS	1.9	2.7	3.8	5.2	4.9	5.1	5.5	2.6
Total employment LFS	2.7	6.7	7.2	5.8	3.2	4.3	2.4	1.2
Total GVA	4.6	2.1	3.3	2.8	0.9	1.4	2.2	2.6
Employment- agriculture	-3.7	6.0	6.1	-3.4	-8.0	-1.6	-2.9	-7.8
GVA-agriculture	7.5	4.4	11.6	7.8	-6.3	-9.1	-11.9	-9.5
Employment-industry	4.2	7.8	7.9	7.6	9.3	8.4	7.7	6.3
GVA-industry	6.6	-0.8	2.0	2.9	1.2	3.0	6.1	3.7
Employment-construction	-2.9	4.0	-2.1	-1.8	-12.6	8.2	-0.6	2.5
GVA-construction	9.5	4.6	5.4	-3.5	-3.7	-2.0	6.1	17.8
Employment-services	4.7	6.8	8.2	9.1	5.7	4.6	2.7	2.0
GVA-services	3.2	2.7	2.2	2.6	1.5	2.1	2.7	2.5

Note: Source for employment was LFS, except for total employment where data of both LFS and CRCSI were used. Employment data for Q4 2017 according to CRCSI does not include December data.
Source: Authors' calculations according to SORS data (LFS, CRCSI and SNA).

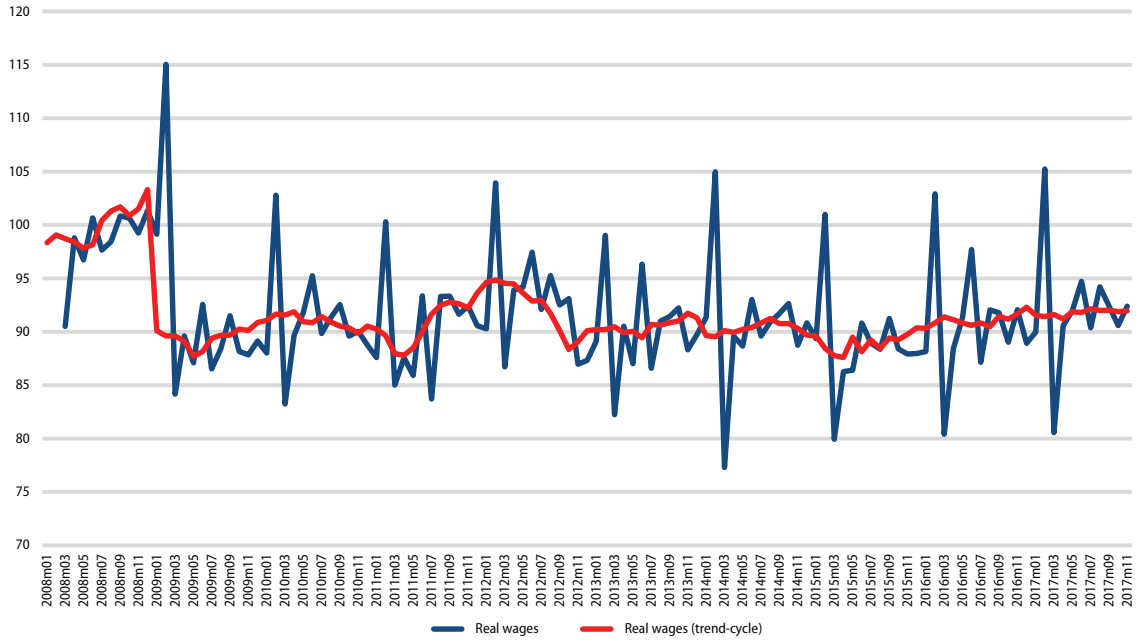
Wages

In Q4 2017, wages nominally increased by 3%, while the real growth compared to the same period of the previous year was 0.1%

In Q4 2017, the average net nominal earnings amounted to 49,599 RSD, i.e. 416 EUR. They were nominally higher by 3% yoy, while real growth was 0.1%. Average wages were nominally higher by 3.9% in 2017 compared to 2016, while in real terms they were higher by 0.7%.

Chart G3.3 shows the movement of real net wages in the period 2008-2017, (2008 =100). Monthly data show large seasonal fluctuations, but the trend in the observed period is stable. According to official data at the end of 2017, the average real net wages still have not reached the pre-crisis level of 2008. Compared to 2009, the real net wage trends in 2017 were slightly positive and quarterly growth was moving in the range of 1.9% to 2.8%, while in Q4 it was around 2.7%.

Graph T3-3. Index of Real Average Net Wages (2008=100), M01 2008-M12 2017



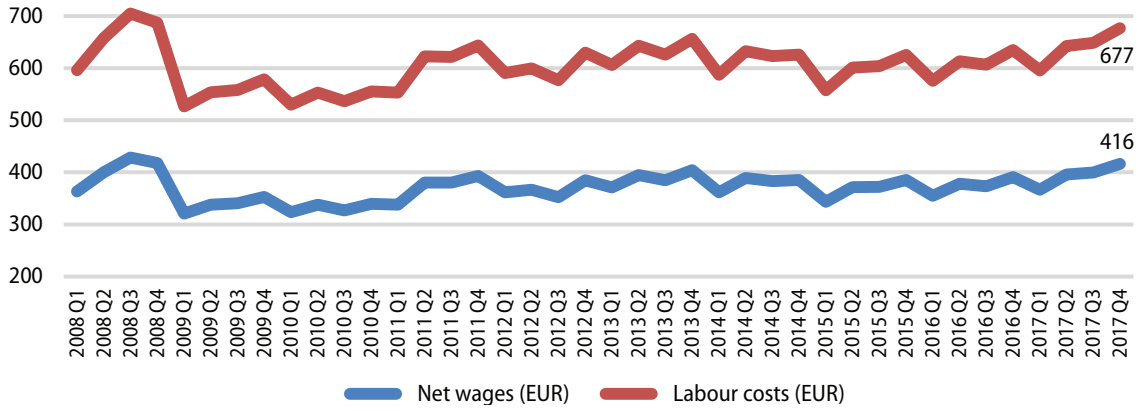
Source: Authors' calculations according to SORS data.

Net wages and labour costs were higher by 6.6% yoy in Q4 2017.

Higher growth of net earnings in euros relative to the growth in dinars is the result of the strengthening of the dinar in Q4 2017.

Average net earnings and labour costs expressed in euros were higher by 6.6% yoy in Q4. Higher growth of earnings in euros relative to growth in dinLFS (3%) was the result of the strengthening of the dinar against the euro in the observed period (see Chapter on inflation and exchange rate). The growth in the value of earnings in euros in the past year was significantly faster than the growth of labour productivity in Serbia, which is not the case with the countries that are Serbia's main economic partners. The deviations between the trends in earnings in euro and productivity are somewhat smaller when we observe the non-agricultural activities, but they still exist. Such trends in earnings in euros and productivity have already affected the growth of Serbia's external deficit in 2017, but their negative impact on the Serbian economy will be higher if they last longer and if they are deepened. Trend of net earnings in euros and labour costs in euros is shown in Chart G3.4.

Graph T3-4. Trends in Net Wages and Labour Costs in Euro, Q1 2008 – Q4 2017



Source: Authors' calculations using NBS data.

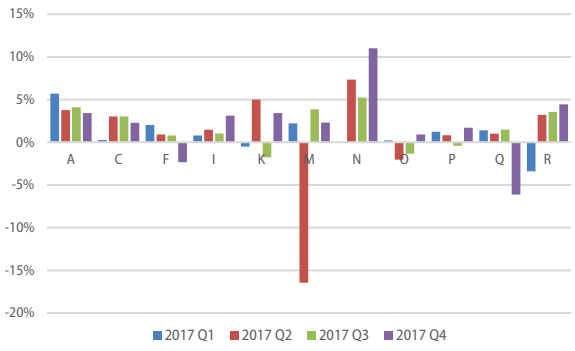
Most of the activities recorded a yoy growth of seasonally adjusted real net wages

In Q4 2017, most activities recorded growth of seasonally adjusted real earnings compared to the same period of the previous year. Chart G3.5 shows the trend of earnings in several activities that we will analyse. Wage growth is highest in administrative and support services, accounting for as much as 11%. The achieved yoy growth in Q4 was significantly higher compared to the

The highest growth was recorded in administrative and auxiliary services

previous quarters in 2017 in administrative and support services. In Q1, yoy growth was 0%, growth was 7.3% in Q2, while in Q3 it was 5.2% (in administrative and support services). Agriculture recorded a yoy growth of wages in all four quarters of 2017, with a growth of 3.4% in Q4. Growth of earnings in the manufacturing industry was 2.3% yoy.

Graph T3-5. Year-on-Year Trend of Seasonally Adjusted Real Net Wages by Activities



Legend: A - Agriculture, Forestry and Fishery; C - Manufacturing; F - Construction; I - Accommodation and Food Services; K - Financial and Insurance Activities; M - Professional, Scientific and Technical Activities; N - Administrative and Support Services; O - State Administration and Defence; Compulsory Social Security; P - Education; Q - Health and Social Protection; R - Art, Entertainment and Recreation.
Source: Authors' calculations using SORS data.

On the other hand, the activities that are predominantly in the state sector recorded a modest growth of seasonally adjusted real net wages. State administration and defence, compulsory social insurance and education recorded a slight increase in wages of 0.9% and 1.7%, respectively, yoy. Health and social protection recorded a significant decline of 6.1%. Construction had a fall in earnings in Q4 2017 compared to the same quarter of the previous year (2.3%), although construction activity has realised a real growth of GVA of as much as 17.8%. Although year-on-year growth in earnings in agriculture was recorded in all quarters of 2017, real GVA in agriculture, forestry and fishery recorded a constant decline in 2017, and in Q4 2017, the yoy decline was 9.5%. This difference is due to the fact that a large part of agricultural production is carried out within individual agricultural holdings in which salaries are not paid.

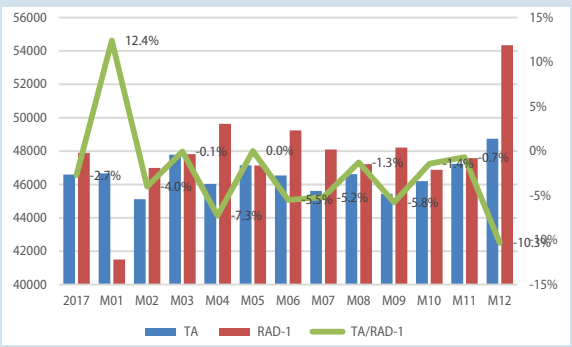
Box: New Methodology of Calculating Salaries in Serbia

Since January 2018, SORS has been using the Tax Administration's data for the calculation of average earnings

As of January 2018, SORS will base its earnings statistics on the data from the Tax Administration's records and will terminate the implementation of the Monthly Survey on Employee Earnings (RAD-1). The Tax Administration collects its data from the electronic tax return applications for deduction tax (PPP-PD). Thanks to the new data source, it will be possible to calculate different indicators, such as salary schedules at income intervals, median earnings, difference in earnings between women and men, average wages per occupational sectors and type of work engagement, etc. Previous calculations of average earnings included wages paid during the reporting month, regardless of the month in which the wages were earned. Also, the RAD-1 survey did not cover the salaries of employees in the Ministry of Defence and the Ministry of the Interior, nor the salaries of employees under temporary contracts. Advantages of using administrative data on earnings are numerous, e.g. greater coverage, data quality improvement, harmonisation with EU practice, reduced burden on data providers. The average monthly wages in 2017 are available from both data sources. Data from the Tax Administration shows less seasonal fluctuations, which is particularly noticeable for December and January. In December 2017, according to the Tax Administration data, the average wages were 10.3% lower than in the RAD survey, while in January 2017, the average wages were higher by 12.4%

Transferring to a new source of data for calculating average wages represents a significant improvement in statistical practice.

Graph T3-6. Wages According to the Old (RAD-1) and New (TA) Methodology in RSD (left axes), Relative Difference in Wages According to the Old (RAD-1) and New (TA) Methodology in % (right axes)



Source: SORS

compared to the average earnings by the Tax Administration's survey. The lower seasonality of the data according to the new methodology is due to the fact that within it the average wages are calculated on the basis of calculated wages for a certain month, while according to the old methodology, the average earnings are calculated on the basis of wages paid in that month. The new methodology is in line with international statistical standards and will provide plenty of additional information on earnings, but the link between paid wages and taxes and contributions will be lower than it was by the old methodology.

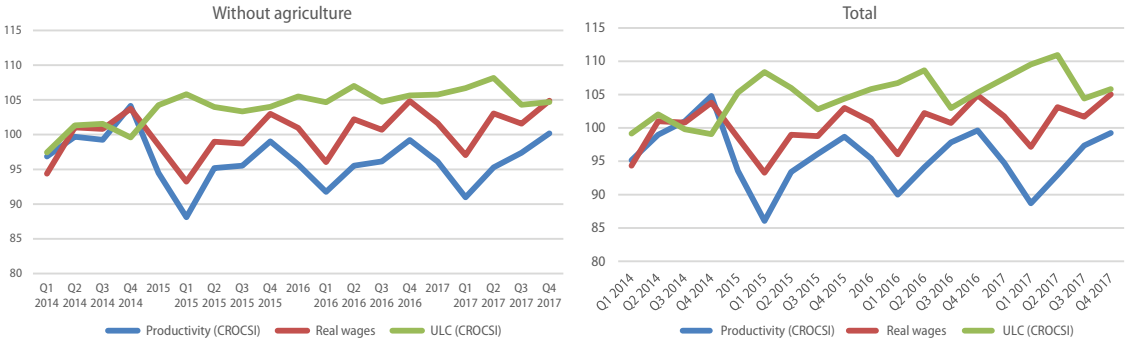
Productivity

Compared to the same quarter of the previous year, in Q4 2017 productivity was slightly lower due to somewhat higher growth of the registered number of employees compared to the real GVA growth rate, while unit labour costs slightly increased

Productivity decreased, while unit labour costs increased in 2017 compared to the 2014 average

The yoy growth of real GVA of 2.6% and 3.0% growth of employment according to CRCSI data led to a slight decline in productivity of 0.4% in Q4 2017 compared to the same period of the previous year. If we look at productivity in non-agricultural activities, productivity increased yoy by 1% due to the 4% growth of GVA excluding agriculture and growth of CRCSI employment by 3.1%. In 2017, compared to the average in 2014, total productivity declined by 5.3%, real wages increased by 1.8%, while unit labour costs increased by 7.4%. When considering non-agricultural activities, productivity decreased (-3.9%), while unit labour costs increased by 5.8% in 2017 compared to the average in 2014. According to the Survey, total employment in Q4 2017 grew slower than the real growth rate of GVA in relation to the same quarter of the previous year. This implies productivity growth and decline in unit labour costs in Q4 2017 compared to the same period of the previous year, if we use LFS data for the number of employed. Productivity excluding agriculture increased by 1.3% in Q4 yoy, which, with a slight increase in real wages (0.1%), led to a decline in unit labour costs by 1.2% when using employment according to the LFS source. Trends in the basic index of productivity, real wages and unit labour costs (2014 = 100) in total and excluding agricultural activity is shown in Chart G3.3, using the data on CRCSI employment.

Graph T3-7. Labour Productivity, Real Wages and Unit Labour Costs, Indices (2014=100), 2014-Q4 2017



Note: In the number of the employed, CRCSI data was used. Registered employment in 2017 does not include December data, as it was not available.
Source: Authors' calculations using SORS data.

Annexes

Annex 3-1. Basic Labour Market Indicators According to LFS and CRCSI, Q1 2014-Q4 2017

	2014				2015				2016				2017			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Activity rate (%)	51.0	52.6	52.5	51.6	50.8	51.5	52.0	51.9	52.6	54.1	54.3	52.3	51.8	54.5	55.3	54.2
Employment rate (%)	40.2	41.8	43.1	42.9	41.2	42.6	43.4	42.7	42.6	45.9	46.8	45.5	44.2	48.1	48.2	46.3
Unemployment rate (%)	21.3	20.7	17.9	17.0	19.0	17.3	16.6	17.7	19.0	15.2	13.8	13.0	14.6	11.8	12.9	14.7
Informal employment rate (%)	19.7	20.4	22.8	21.8	19.7	19.7	21.5	20.4	20.3	22.7	24.1	20.9	19.0	22.1	21.8	19.8
Employment in 000, (LFS)	2,454	2,548	2,627	2,609	2,504	2,588	2,624	2,581	2,571	2,762	2,814	2,731	2,652	2,881	2881.9	2763.6
Employment, index, (2014=100), (LFS)	95.9	99.6	102.6	101.9	97.8	101.1	102.5	100.8	100.4	107.9	109.9	106.7	103.6	112.6	112.6	108.0
Formal employment in 000, (LFS)	1,969	2,030	2,028	2,041	2,011	2,078	2,059	2,054	2,049	2,135	2,137	2,161	2,148	2,243	2253.5	2217.2
Formal employment, index, (2014=100), (LFS)	97.6	100.6	100.5	101.2	99.7	103.0	102.1	101.8	101.6	105.9	105.9	107.1	106.5	111	112	110
Total employment in 000, (CROCSI)	1,836	1,845	1,850	1,851	1,977	1,982	1,994	1,994	1,978	2,008	2,023	2,030	2,024	2,061	2,078	2,092
Total employment, index, (2014=100), (CROCSI)	99.5	100.0	100.3	100.3	107.1	107.4	108.0	108.0	107.2	108.8	109.6	110.0	109.7	111.7	112.6	113.3

Note: Registered employment in 2017 does not include December data, as it was not available.
Source: Authors' calculations using SORS data.

Annex 3-2. Real Net Wages and Labour Productivity, Q1 2014-Q4 2017

	2014				2015				2016				2017			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Average real net wages, index, (2014=100)	94.3	101.0	100.8	103.8	93.3	99.0	98.8	103.0	96.1	102.2	100.7	104.9	97.2	103.1	101.7	105.0
Average net wages, total, (€)	361	389	383	386	343	371	372	386	355	378	373	391	367	399	398	416
Average net wages, industry, (€)	359	382	378	378	351	376	379	389	369	391	382	399	376	417	411	429
Labour coss, total (€)	588	633	623	626	557	601	603	626	576	613	607	635	596	648	647	677
Labour costs, industry (€)	582	622	617	615	570	611	617	632	599	635	623	649	611	677	669	699
Productivity, without agriculture, index, (2014=100)	96.9	99.7	99.3	104.2	88.1	95.2	95.5	99.0	91.8	95.5	96.1	99.2	91.0	95.3	97.4	100.2
Productivity, total, index, (2014=100)	95.2	99.0	101.0	104.8	86.1	93.4	96.1	98.7	90.0	94.1	97.8	99.6	88.7	93.0	97.4	99.2

Note: Industry includes activities B, C and D, weighted average of wages. Dinar exchange rate against the euro, average for the period (NBS). Labour productivity was calculated using data on registered employment. Registered employment in 2017 does not include December data, as it was not available.
Source: Authors' calculations using SORS and NBS data

4. Balance of Payments and Foreign Trade

In 2017, the Balance of Payments Current Account deficit was 2.1 billion euros and was 5.7% of GDP. Higher current deficit in 2017 compared to the level of 2016 was mostly due to a considerable growth of trade deficit, because of the faster growth of imports than exports, as well as the high deficit on the Primary Income account. On the other hand, these results have been mitigated by a certain inflow from Secondary Income with almost unchanged surplus on the Services account. The inflow of capital in 2017 was primarily the result of FDI inflow. Inflow of FDI was quite high in 2017 – 2.4 billion euros, i.e. 6.5% of GDP, which is above the share of FDI in GDP in 2015 and 2016, as well as above the level of the countries in the region. High deleveraging was recorded on the Portfolio Investments account, where a large outflow was recorded in November, due to the repayment of Eurobonds 2012. Forex reserves increased in 2017 by 228 million euros, which is a net result of a reduction in Q1 and Q4 and an increase in Q2 and Q3. During Q4 2017, a relatively high level of the current deficit was recorded – 678 million euros, i.e. 7.0% of GDP. The significant increase of the current deficit during 2017 was the result of the growth of trade deficit and Primary Income deficit, which was compensated to a lesser extent by increased inflow from the Secondary Income, as well as the increased surplus on the Services account. In Q4 2017, imports increased significantly, while exports had a more modest increase. Still, the good news is the acceleration of the growth of exports in January, which had the same year-on-year increase as the imports, i.e. 21.6%. The increase in the level of trade deficit during 2017 occurred primarily due to: deteriorated trade ratio, decreased surplus in trade of agricultural products, as well as a significant strengthening of the local currency. As the first two causes of increased deficit are the result of external factors (change in the global price of oil, weather conditions unfavourable for agriculture), which cannot be affected in the coming period, the key is to lead an economic policy that will work toward a reducing external imbalance.

Current deficit in 2017 was at a higher level than in 2016...

In 2017, the Balance of Payments Current Account deficit was 2.1 billion euros, i.e. 5.7 of GDP (Table T4-1 and Graph T4-2). This level of deficit is significantly higher than that of 2016, which was 1.075 billion euros or 3.1% of GDP.

...which is the result of increased trade deficit and Primary Income deficit

Significantly higher current deficit in 2017, compared to 2016 (by 2.6 pp of GDP), is mostly due to the significant growth of trade deficit (by 1.8 pp of GDP), as well as a higher deficit on the Primary Income account[1] (by 1.1 pp of GDP). On the other hand, this was mitigated by a certain increase of inflow from secondary income (by 0.4 pp of GDP), while the share of services in GDP remained almost unchanged.

Although exports continued to record a year-on-year growth at the level of the entire year…

Trade deficit in 2017 was 3.986 billion euros or 10.8% of GDP (see Table T4-1). This deficit expressed as a percentage of GDP was higher than the deficit realised in 2016 by 1.8 pp. Actually, in 2017, there was a higher growth of imports than exports. Exports still recorded a significant year-on-year growth of 10.0%, while at the same time imports grew by 13.4%. The share of exports in GDP in 2017 was higher by 1.2 pp, while in the same period the share of imports in GDP was 3.0 pp of GDP.

...the deficit was higher due to the faster growth of imports

Increased level of foreign trade and trade deficit[2] during 2017 occurred mostly due to: deteriorated trade ratio, decreased surplus in the trade of agricultural products, as well as the strengthening of the local currency. The growth of deficit in 2017 would have been even more pronounced if the fiscal policy had not been so restrictive, limiting the growth of domestic demand and thus contributing to a more moderate growth of deficit.

Trade ratios, after improving in the second half of 2015 and 2016, deteriorated in 2017. Trade ratio index reached its minimum (the worst deterioration) in Q1 2017 and was 93.4 (Graph

1 Primary income includes income from factors of production, such as income from dividends, interest, and other income from capital and labour.

2 Since services were at an almost the same level in 2016 and 2017, the growth of deficit in trade and foreign trade was the same – 1.8 pp of GDP.

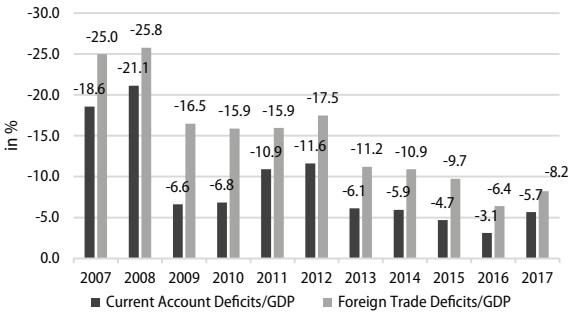
Table T4-1. Serbia: Balance of Payments

	2015	2016	2017	2016				2017			
				Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
				mil. euros							
CURRENT ACCOUNT	-1,577	-1,075	-2,090	-305	-284	-239	-247	-694	-333	-384	-678
Goods	-3,993	-3,119	-3,986	-662	-849	-718	-890	-927	-883	-824	-1,352
Credit	11,357	12,814	14,090	2,976	3,310	3,160	3,369	3,277	3,693	3,559	3,560
Debit	15,350	15,933	18,076	3,638	4,159	3,878	4,258	4,204	4,576	4,383	4,912
Services	725	907	951	186	196	268	258	220	167	236	327
Credit	4,273	4,571	5,240	993	1,068	1,258	1,252	1,106	1,241	1,424	1,470
Debit	3,548	3,664	4,289	807	872	990	994	886	1,074	1,187	1,143
Primary income	-1,658	-2,022	-2,570	-499	-524	-581	-418	-700	-564	-638	-668
Credit	682	630	568	142	185	140	164	105	153	132	179
Debit	2,340	2,653	3,138	641	709	721	583	805	717	769	847
Secondary income	3,349	3,159	3,516	670	894	792	803	713	946	842	1,015
Credit	3,795	3,635	4,098	771	1,009	921	933	848	1,086	986	1,178
Debit	446	476	583	102	115	130	129	135	139	145	164
Personal transfers, net [1]	2,671	2,510	2,758	521	735	624	630	565	790	630	773
Of which: Workers' remittances	2,077	1,874	2,049	379	577	458	460	414	595	475	565
CAPITAL ACCOUNT - NET	-18	-10	5	5	-4	-1	-9	1	-3	11	-4
FINANCIAL ACCOUNT	-1,205	-535	-1,690	-99	-180	-95	-162	-486	-328	-266	-610
Direct investment - net	-1,804	-1,899	-2,415	-470	-454	-533	-443	-558	-626	-660	-571
Portfolio investment	289	917	827	363	332	-10	232	219	-29	-92	728
Financial derivatives	2	9	-21	0	1	5	3	-5	-2	-9	-5
Other investment	141	740	-310	845	257	110	-473	313	106	-566	-162
Other equity	0	-1	-1	0	-1	-1	0	0	-1	0	0
Currency and deposits	-218	220	-623	318	20	-19	-99	-79	-23	-550	29
Loans	230	303	-203	317	260	-1	-272	316	23	-317	-226
Central banks	153	23	9	12	7	4	0	4	0	4	0
Deposit-taking corporations,	434	279	-272	100	199	80	-99	271	-316	11	-239
General government	-464	-308	30	30	11	5	-355	34	290	-314	20
Other sectors	107	309	31	176	42	-91	182	6	49	-18	-7
Insurance, pension, and standardized	0	8	0	3	7	-6	4	0	0	0	0
Trade credit and advances	129	209	518	207	-29	137	-105	75	106	301	36
Other accounts receivable/payable	0	0	0	0	0	0	0	0	0	0	0
SDR (Net incurrence of liabilities)	0	0	0	0	0	0	0	0	0	0	0
Reserve assets	166	-302	228	-836	-317	332	519	-455	222	1,061	-600
ERRORS AND OMISSIONS, net	390	549	395	201	109	145	94	208	8	107	72
PRO MEMORIA				in % of GDP							
Current account	-4.7	-3.1	-5.7	-3.8	-3.2	-2.7	-2.8	-8.3	-3.6	-4.0	-7.0
Balance of goods	-11.9	-9.0	-10.8	-8.2	-9.7	-8.0	-10.0	-11.1	-9.6	-8.5	-14.0
Exports of goods	33.8	37.0	38.2	36.9	37.7	35.4	38.0	39.4	40.1	36.9	36.8
Imports of goods	45.7	46.0	49.0	45.1	47.4	43.5	48.0	50.5	49.6	45.4	50.7
Balance of goods and services	-9.7	-6.4	-8.2	-5.9	-7.5	-5.0	-7.1	-8.5	-7.8	-6.1	-10.6
Personal transfers, net	8.0	7.2	7.5	6.5	8.4	7.0	7.1	6.8	8.6	6.5	8.0
GDP in euros [2]	33,564	34,619	36,885	8,061	8,768	8,921	8,869	8,324	9,222	9,658	9,680

Note: Balance of Payments of the Republic of Serbia is aligned with the international guidelines stated in the IMF's Balance of Payments Manual no. 6 (BPM6).
Source: NBS
1) Personal transfers present current transfers between the resident and non-resident households.
2) Quarterly values. Conversion of annual GDP to euro was done according to the average annual exchange rate (average of official daily exchange rates of NBS).

Deteriorated trade ratio, decreased surplus in the trade of agricultural products and strengthened local currency are basic determinants of the growth of deficit

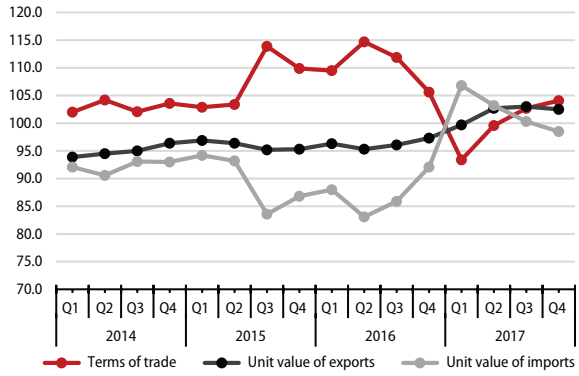
Graph T4-2. Serbia: Current and Foreign Trade Deficits, 2007-2017



Source: NBS, *QM*

T4-3). In Q2, this index was again below 100 (99.6), which indicates a relatively poor trade ratio compared to the same quarter of 2016. It increased again in the second half of the year (above 100 in Q3 and Q4, see Graph T4-3). Recorded trends in the trade ratio index was mostly determined by the trend of global energy prices, as indicated in Graph T4-3 by the trend in the unit value of imports. The decrease in the unit value of imports, observed year-on-year, began in 2015, continued in 2016, and for the most of 2017 (the first three quarters), the unit value of imports was above last year's.

Graph T4-3. Year-on-Year Indices of Trade Ratios, 2014-2017



Source: SORS, *QM*

In 2017, the trade deficit was by around 20% higher compared to the level of 2016, i.e. by 735 million euros[3]. The increase in trade deficit was affected by the deteriorated trade ratio at the level of 2017. Trade ratio index in 2017 was 98.5, which indicates that the quotient of export and import prices was lower by 1.5% compared to 2016. This deterioration increased the trade deficit by around 350 million euros. What also affected the growth of trade deficit was the reduction of surplus in the trade of agricultural goods. In 2017, the realised surplus in the foreign trade in the sector of *Agriculture, Fishery and Forestry* was lower by 40% or 168 million euros. The rest of the growth in deficit in 2017 can be ascribed to the effects of the appreciation of dinar, for which we can give an estimate. As the reduction in surplus in the trade of agricultural products increased the amount of trade deficit by around 170 million euros, and because of the deterioration of the ratio of import and export prices by additional 350 million euros, the rest of the increase of trade deficit by around 210 million euros was probably the result of the effects of the strengthening of the domestic currency on the value of foreign trade trends[4]. Since the deterioration of the trade ratio and the reduction of net value of exports of agricultural products is the result of external factors (change in the global price of oil, weather conditions that are unfavourable to agriculture), which cannot be controlled in the coming period, it is crucial to lead a foreign exchange policy that will work toward reducing the external imbalance.

High primary income deficit

Deficit at the Primary Income account in 2017 was 2.57 billion euros, and was significantly higher compared to 2016 (when it was 2.0 billion euros). Primary deficit reached as much as 7.0% of GDP in 2017. This is a very high amount, which is mostly the result of the outflow of funds from dividends. Therefore, the Primary Income deficit has a growth trend (share of primary deficit in GDP 2013-2017, respectively: Primary deficit reached as much as 7.0% of GDP in 2017. This is a very high amount, which is mostly the result of the outflow of funds from dividends. Therefore, the Primary Income deficit has a growth trend (share of primary deficit in GDP 2013-2017, respectively: 3.5%, 4.1%, 4.0%, 4.9%, 5.8% and 7.0%), which is quite unfavourable considering the tendency to reduce the current deficit, which we already warned about, having in mind the high inflow of FDI[5]. Compared to other countries, Serbia had the share of primary income deficit in GDP in 2016 the same as the Czech Republic (around 6%), but above this account's deficit of other comparable countries, which was: 4% in Macedonia, 3% in Croatia, Slovenia and Romania, 2% in Bulgaria and Hungary (Albania and Montenegro recorded a surplus of around 2%). The outflow of funds from capital income is approximately equal to the inflow of Foreign Direct Investments, but it is still lower than the inflow from remittances and pensions from abroad. However, with increased value of foreign capital in Serbia in the form of equity capital, loans, etc. a growth of this outflow is expected in the future, as was the case in previous years as well. High outflow of funds from capital income can generate an external economic imbalance and, therefore, a macroeconomic instability as well, which usually happens in the crisis. Therefore, in order to maintain a long-term sustainable economic growth, it is necessary to rely more on our own funds from the economy, the citizens and the state.

3 NBS data for import and export of goods, as well as trade balance, differ from the SORS data, because they do not include processing goods. Therefore, there is a certain difference in the levels of exports and imports, as well as growth rates, depending on the source (NBS or SORS). For example, according to NBS the trade deficit in 2017 was higher by 867 million euros, i.e. by 28% compared to the previous year (see Table T4-1). Data source used in this part of the text (Balance of Payments) is NBS, while in the following sections (Export and Import) it is SORS. Still, only in this paragraph of the Balance of Payments section, we used the SORS data in order to estimate the effects of local currency on foreign trade trends.

4 The estimate made with the data of the Statistical Office of the Republic of Serbia for the period January-December, according to SORS December press release for foreign trade of goods.

5 See previous issues of *QM*.

Significant level of inflow on the Secondary Income account

Inflow on the Secondary Income account was 3.5 billion euros, which is around 9.5% of the annual GDP. This is a slightly higher inflow than that of 2016, but still within the standard frame of its share in GDP: 9-10%.

Capital inflow in 2017 primarily the result of FDI inflow

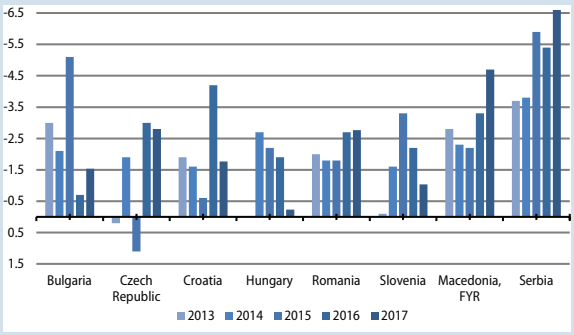
Inflow of capital in 2017 was primarily the result of FDI inflow. Capital inflow was very high in 2017 and was 2,415 million euros or 6.5% of GDP. This is by 1 pp of GDP above the share of FDI in the GDP of 2015 and 2016. There was a significant increase in Other Investments (by 310 million euros net), because of the increase in balance on the *Cash and Deposit* account and net deleveraging of loans (as a result of additional borrowing of the banks), while a significant net deleveraging of trade loans was recorded. At the Portfolio Investment account, a deleveraging of 827 million euros net was recorded in 2017. From May to October, a net inflow was realised, primarily because of the investments of foreign investors in the seven-year government securities, while the biggest outflow was recorded in November (698.8 million euros) due to repayment of Eurobonds 2012[6]. Forex reserves at the level of 2017 increased by 228 million euros (Table T4-1).

Box 1. Significant inflow of FDI in Serbia

In the last few years, Serbia recorded a significant inflow of Foreign Direct Investments. Graph T4-4 shows data for the net FDI inflow in the period 2013-2017 (data for 2017 shows an average of first three quarters, except in the case of Macedonia where the Q1 value is stated due to the availability of data). Compared to other selected countries, Serbia has a very high net annual inflow of foreign investments.

Annual FDI inflow in Serbia in 2013 and 2014 was around 4% of GDP, while in the following two years it was 5.9% and 5.4% respectively, reaching 7% of GDP in 2017.

Graph T4-4. Net FDI inflow in Serbia and selected countries



Source: Eurostat, *QM*
Note: 1) 2017 value presents the average of the share of first three quarters, 2) For Macedonia, 2017 data show the value of net inflows in Q1 2017.

According to Eurostat data, in the first nine months of 2017, the net FDI inflow in Serbia was around 6.6% of GDP. That is a considerable amount of inflow of funds, especially considering that it is significantly above the level recorded in other countries. The net FDI inflow recorded in % of GDP in the first three quarters of 2017 was 0.2% in Hungary, 1% in Slovenia, 1.5% in Bulgaria, 1.8% in Croatia, 2.8% in the Czech Republic and Romania, 4.7% in Macedonia, and 6.6% in Serbia (Graph T4-4).

It is interesting to note that Serbia has a higher FDI inflow compared to the countries in the region, even though it is lagging behind most of them in conditions of doing business according to the ranking of the Global Economic Forum, quality of governance according to the World Bank's ranking, transition progress according to EBRD, while it is ahead by the level of corruption according to Transparency International. Higher foreign investments, despite significantly poorer investment environment, can be explained by the special benefits enjoyed by foreign investors, which are not available to most domestic companies, such as large subsidies, protection from bureaucratic barriers, extortion and racketeering, protection from unfair competition, etc.

In Q4 2017, the current deficit was relatively high – 7.0% of GDP...

Current account deficit in Q4 2017 was 678 million euros, i.e. 7.0% of GDP (Table T4-1). Share of current deficit in GDP was as much as 4.2 pp higher compared to the level of Q4 and by 3 pp compared to the level of Q3 2017. Therefore, current deficit in 2017 was at a relatively low level in the two quarters: 3.6% in Q2 and 4.0% in Q3, while it was quite high in other two quarters: 8.3% in Q1 and 7.0% in Q4.

6 Source: Ministry of Finance.

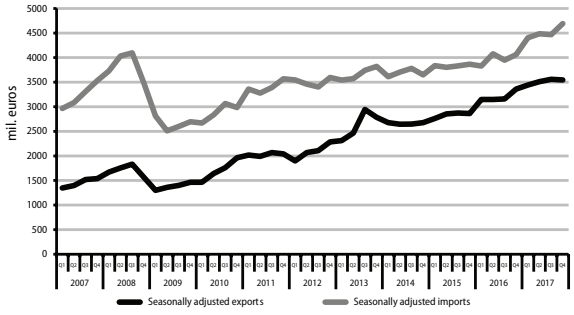
...which was primarily the result of a significant increase of trade deficit, as well as the increase in primary income deficit

Realised increase in current deficit in the last quarter of 2017, compared to the same period in 2016, was the result of the significant increase of trade deficit (by 3.9 pp of GDP), as well as a higher deficit on the Primary Income account (by 2.2 pp of GDP). At the same time, there was a certain increase of inflow from secondary income in GDP (by 1.4 pp), and to a lesser extent, an increase in surplus on the Services account in GDP (by 0.5 pp).

Trade deficit was 1,352 million euros, i.e. 14% of GDP. In Q4 2017, goods in the value of 3560 million euros were exported, which was 36.8% of GDP. Imports in the last quarter of 2017 were 4912 million euros, which is more than a half of the estimated quarterly value of GDP (50.7%, see Table T4-1). In Q4 2017, imports had a high two-figure year-on-year increase (15.4%), while exports recorded a more modest y-o-y increase of 5.7%, even though trade ratios improved again at the end of 2017 (Graph T4-3). Seasonally adjusted value indicate that exports in Q4 were lower by 0.4% compared to the value of Q3 2017, while imports in the same period recorded an increase of 5.0% (Graph T4-5). These trends affected the growth of trade and foreign trade deficits, as well as the reduction of coverage of imports by exports (which went from 81% in Q3 to 72% in Q4 2017).

In Q4, imports had a high two-figure year-on-year increase, while exports recorded a moderate growth

Graph T4-5. Serbia: Seasonally Adjusted Exports and Imports, Quarterly, 2007-2017



Source: NBS, SORS, *QM*

The share of net inflow on the Secondary Income account during Q4 was 1,015 million euros and was 10.5% of GDP. Out of that, the inflow from Personal Transfers was 773 million euros (8.0% of GDP).

During Q4, high FDI inflow and outflow of Portfolio Investments Decline of forex reserves by 600 million euros

Capital of inflow of 78 million euros[7] was recorded in Q4 (Table T4-1). There was an inflow of FDI (571 million euros), lower inflow from other investments (162 million euros), as well as a significant outflow of portfolio investments (728 million euros, primarily the result of repaying matured Eurbonds 2012 on the international market). In other investments, there was a significant increase in borrowing of the banks (by 239 million euros) and a smaller increase in the balance of the Cash and Deposit account by 29 million euros, as well as deleveraging of the public sector (by 20 million euros). Deleveraging was also recorded in the Trade Loans and Advances account by 36 million euros. Forex reserves in Q4 2017 were lower by 600 million euros.

Exports

Export of goods in 2017 was 15.05 billion euros....

....by 12.0% above the level of 2016 An unfavourable trend of decelerating year-on-year growth was recorded in Q4

During 2017, goods in the value of 15,047 million euros were exported, which is a significant growth of 12.0% year-on-year. Growth of exports was positively influenced by the fast growth of economic activity in the Eurozone countries and most other important foreign trade partners. In addition, there were some favourable circumstances in 2017, such as the increase in the price of metal and energy on the global market. On the other hand, bad agricultural season and the real appreciation of dinar compared to the euro recorded in 2017 has negatively contributed to the growth of exports. And so did the further reduction in the value of automobile exports[8].

In Q4 2017, exports were 3,786 million euros, i.e. they recorded an increase of 7.8% compared to Q4 2016.

Year-on-year growth of exports in Q4 2017 was 7.8% - less than the growth in the previous quarters

Compared to all the previous quarters of 2017, exports decelerated their growth – the year-on-year growth in the first three quarters was 13.4%, 13.2% and 12.7%, respectively (Table T4-6). In Q4, as in the entire 2017, the value of exports recorded a faster growth after excluding the export of road vehicles. The year-on-year growth of exports excluding road vehicles was 8.6% in the last quarter.

7 6 million euros including the Errors and Omittances account.

8 According to the data from the Ministry of Finance, despite this negative trend in the exports of road vehicles, FIAT is still the largest domestic exporter.

Observed by purpose, all export groups except the unclassified exports (Other) positively contributed to this growth

Still, the good news is the accelerated exports in January. Year-on-year growth of total exports in January was quite high – 21.6%. Therefore, the exports in January recorded the same growth as imports.

The pronounced year-on-year increase in exports is the result of the growth of all export groups by purpose, except unclassified/other exports. In fact, the fast growth of total exports was primarily the result of the fast growth of exports of *Intermediate Goods* (32.9%), *Capital Goods* (20.5%) and *Non-Durable Consumer Goods* (13.3%), which also have the highest share in total exports (in 2017: 38%, 24% and 22%, respectively).

Table T4-6. Serbia: Exports, Year-on-Year Growth Rates, 2016–2017

	Exports share in 2017	2016	2017	2017				2016		2017			
				Q1	Q2	Q3	Q4	Q3	Q4	Q1	Q2	Q3	Q4
	in %			in mil. euros						in %			
Total	100.0	13,432	15,047	3,504	3,933	3,778	3,786	10.2	15.9	13.4	13.2	12.7	7.8
Total excluding road vehicles	91.7	12,057	13,797	3,143	3,562	3,536	3,511	11.2	18.9	16.7	16.9	14.6	8.6
Energy	2.5	329	379	67	81	107	117	-15.0	7.0	-15.2	-6.8	24.0	55.7
Intermediate products	38.2	4,669	5,743	1,297	1,496	1,496	1,445	12.3	19.8	23.3	24.4	24.7	18.8
Capital products	24.1	3,352	3,633	872	961	821	979	11.5	7.3	4.3	4.3	7.8	17.4
Capital products excluding road vehicles	15.8	1,977	2,383	511	589	579	703	18.6	19.1	16.5	20.0	17.5	26.8
Durable consumer goods	5.4	739	811	186	214	204	207	6.6	11.6	19.1	14.3	6.5	1.2
Non-durable consumer goods	22.3	3,198	3,358	774	835	888	860	9.6	12.2	7.4	4.6	6.2	2.0
Other	7.5	1,145	1,124	307	347	262	179	12.7	45.5	24.4	23.7	-5.8	-47.2

Source: SORS

In Q4 2017, exports of *Capital Goods* accelerated their growth. After the year-on-year growth of 7.8% in Q3, exports of these products in Q4 were by 17.4% above the value realised in Q4 2016. At the same time, export of capital goods after excluding road vehicles recorded a high and accelerated growth. After a year-on-year growth of 17.5% in Q3 2017, export of *Capital Goods without Road Vehicles* realized a 26.8% growth in Q4 (Table T4-6).

The value of exports of *Intermediate Goods* in Q4 was by 18.8% above the value realised in the same quarter of the previous year, recording a certain decelerated growth. As the value of exports of Intermediate Goods makes the biggest part of the total value of exports (38.2%), the growth dynamic of export of these goods is very significant since it determines the trend of total exports. Together with *Capital Goods, Intermediate Goods* make almost two thirds of the total value of domestic exports (Table T4-6).

Export of *Durable Consumer Goods* in Q4 2017 decelerated its growth and was by 1.4% above the value realised in the same period of 2016. In fact, the exports of these goods has a considerably lower growth compared to that of the previous quarters of 2017. Export of *Non-Durable Consumer Goods* also decelerated its growth compared to Q3, and in Q4 recorded an annual increase of 2%. The so-called *Other Exports* were by 47.2% below the exported value of Q4 2016 (Table T4-6).

Continued good forecast of the economic growth of the Eurozone countries and acceleration of the growth of the countries in the region, together with investments from the previous period, will have a positive effect on the growth of domestic exports in 2018. On the other hand, delayed effect of real appreciation of the local currency against the euro will have a negative effect, i.e. it will decelerate the growth of exports. That is why it is important to pay attention to the effects that the strengthening of the local currency has on exports, which, together with investments, should be the main driver of economic growth in the coming period.

Imports

The value of imported goods in 2017 was 19.4 billion euros…

Imports in 2017 were 19,419 million euros, i.e. they had a year-on-year growth of 13.8%. Quarterly data shows that, after a certain deceleration of growth in Q2, imports accelerated their growth in the second half of 2017 (Table T4-7). The growth of imports in 2017 was affected by the increase of global price of energy and the strengthening of the dinar, as well as the growth of domestic demand.

…which is by 13.8% above the value of 2016. In the second half of 2017, the growth of imports accelerated

In the last quarter of 2017, the value of imported goods was 5,265 million euros, which is 15.5% above the value of Q4 2016 (Table T4-7). The year-on-year growth of imports recorded in January was the same as the growth of exports and was 21.6%. Growth of imports in January was mostly because of the fast growth of imports of Intermediate Goods and unclassified (other) imports and Non-Durable Consumer Goods.

In Q4, year-on-year growth of imports was 15.5%, while imports excluding energy were 14.8%

The rise of global energy prices during 2017 contributed to the value of *Energy* imports being considerably higher in all quarters of 2017 compared to the quarterly values of 2016. Energy imports in Q4 was 21.2% above the value of imports of these goods recorded in the same quarter of the previous year. Imports excluding Energy recorded a year-on-year growth of 14.8%, and the quarterly growth rates in 2017 (Table T4-7) indicate an accelerated growth of thus observed imports.

Table T4-7. Serbia: Imports, Year-on-Year Growth Rates, 2016-2017

	Imports share in 2017	2016	2017	2017				2016		2017			
				Q1	Q2	Q3	Q4	Q3	Q4	Q1	Q2	Q3	Q4
	in %			in mil. euros						in %			
Total	100.0	17,068	19,419	4,587	5,004	4,730	5,265	3.7	5.5	15.4	10.2	13.3	15.5
Energy	10.4	1,544	2,025	526	462	485	549	-19.0	-1.6	55.2	19.2	32.2	21.2
Intermediate products	35.3	5,880	6,862	1,513	1,734	1,737	1,779	5.5	5.8	16.8	15.9	16.2	14.0
Capital products	21.2	4,128	4,120	821	1,086	909	1,087	2.6	2.5	-9.3	-3.8	-6.9	4.5
Durable consumer goods	2.1	380	411	93	104	100	115	-3.9	-3.7	14.9	4.2	10.7	4.1
Non-durable consumer goods	15.0	2,595	2,906	648	686	709	796	4.0	4.5	17.7	6.5	7.3	10.3
Other	15.9	2,541	3,095	987	932	790	940	23.8	18.4	22.7	19.1	34.7	39.2
Imports excluding energy	89.6	15,524	17,393	4,061	4,542	4,245	4,716	6.6	6.3	11.7	9.4	11.5	14.8

Source: SORS

Import of *Intermediate Goods and Durable Consumer Goods* recorded a decelerated growth (Table T4-7). On the other hand, *Non-Durable Consumer Goods and Other Imports* accelerated their imports.

A very important change was recorded in the growth trend of imports of *Capital Goods*. Imports of these goods recorded lower levels in the first three quarters of 2017 compared to the same period of the previous year, only to record a year-on-year increase of 4.5% in Q4. The level and dynamic of growth of Capital Goods is especially significant as it indicates the level of country's production activity, as well as the production potential in the coming period. Therefore, it is good that the year-on-year growth of Capital Goods imports in Q4 continued in January as well at a rate of 5.2%.

Non-Durable Consumer Goods had a year-on-year increase of 10.3% in Q4. This is an acceleration of growth compared to the previous quarter (when a 7.4% year-on-year growth was recorded). *Intermediate Goods* recorded a year-on-year growth of 14.0% in Q4. Therefore, the growth of these goods decelerated (year-on-year growth in the previous three quarters was 16-17%). High growth of these goods' import value in 2017 was mostly determined by the recovery of industrial production, which is estimated as positive[9]. Import of *Durable Consumer Goods* recorded a more pronounced deceleration of growth (year-on-year growth of 10.7% in Q3 and 4.1% in Q4 2017). However, since they make only 2%, it did not have a significant impact on the total import value. Import of goods classified under *Other* in Q4 2017 was by 39.2% above the level of Q4 2016, which indicates a certain acceleration of growth (year-on-year growth in Q3 was 34.7%, see Table T4-7).

In 2018, we expect the growth of imports to be influenced by the delayed effects of the appreciation of dinar, as well as the further gradual recovery of domestic demand. The value of imports in 2018 will greatly depend on the prices of importable goods on the global market, primarily global price of oil and other energy products, as well as agricultural products.

9 See the section Economic Activity in this issue, as well as a few previous issues of QM.

Foreign Debt

Foreign debt at the end of September 2017 was 26.0 billion euros, i.e. 72.2% of GDP Compared to the end of 2016, the foreign debt was lower by 455 million euros…

…primarily the result of reduced public sector debt, but also the depreciation of dinar against the euro

The state of foreign debt in Serbia at the end of September 2017 was 26.0 billion euros, i.e. 72.2% of GDP (Table T4-8). In the first nine months of 2017, total foreign debts was reduced by 455 million euros, or expressed in percentage of GDP, by 4.3 pp. This reduction of total foreign debt is exclusively due to the reduction of the public sector's foreign debt, but also of the weakening of the dinar against the euro.

Public sector's foreign debt since the end of 2016 has been lower by 1.04 billion euros net (by 4.7 pp of GDP). At the same time, the private sector recorded a net increase in foreign debt by 581 million euros, i.e. by 0.4 pp of GDP. Long-term foreign debt of the private sector was higher by 524 million euros, short term by 57 million euros, compared to end of December 2016. Almost entire amount of the private sector's increase of long term debt in the period January-September 2017 was the result of private sector's borrowing (519 million euros), while at the same time, the same type of the debt of the banks increased by 2 million euros. Compared to the end of previous year, the amount of short-term debt of the banks is higher by 51 million euros, and of the business sector by 6 million euros (see Table T4-8). Increased borrowing of the private sector, considering that its entire debt is not that large, could indicate a growth of private investments and also of employment and production in this sector.

During Q3 2017, there was an increase of foreign debt by 597 million euros, i.e. by 0.2 pp of GDP. This increase was the result of the fact that the private sector additionally borrowed 543 million euros, while the public sector borrowed 55 million euros net.

Foreign debt during Q3 increased by 597 million euros, which is mostly the result of the private sector's borrowing

The recorded increase of private sector's debt in Q3 (543 million euros) was mostly the result of additional long-term borrowing (by 503 million euros), primarily the growth of borrowing abroad of companies (by 484 million euros). At the same time, the banks increased their long-term debt by 18 million euros. The state of short-term debt at the end of September was by 41 million euros higher that at the end of June. Most of that amount was the increased amount of 40 million euros of the short-term debt of the banks. Contrary to that, the short-term debt of the business sector at the end of Q3 was by one million euros above the amount recorded three months earlier (Table T4-8).

Table T4-8 Serbia: Foreign Debt Trend Dynamic, 2013–2017

	2013	2014	2015	2016				2017		
				Mar.	Jun	Sep.	Dec.	Mar.	Jun	Sep.
	stocks, in EUR millions, end of the period									
Total foreign debt	25,644	25,679	26,234	25,682	25,622	25,601	26,488	26,135	25,435	26,033
(in % of GDP) [4]	*74.8*	*76.8*	*78.2*	*75.5*	*75.0*	*74.5*	*76.5*	*74.9*	*72.0*	*72.2*
Public debt[1]	13,120	14,145	15,295	14,934	15,031	14,923	15,680	15,508	14,589	14,644
(in % of GDP)[4]	*38.3*	*42.3*	*45.6*	*43.9*	*44.0*	*43.4*	*45.3*	*44.5*	*41.3*	*40.6*
Long term	13,120	14,140	15,295	14,934	15,031	14,923	15,680	15,508	14,589	14,644
o/w: to IMF	697	152	15	7	0	0	0	0	0	0
o/w: Government obligation under IMF SDR allocation	434	463	493	483	488	484	494	495	472	465
Short term	0	5	0	0	0	0	0	0	0	0
Private debt[2]	12,525	11,534	10,939	10,748	10,591	10,678	10,808	10,628	10,846	11,389
(in % of GDP) [4]	*36.5*	*34.5*	*32.6*	*31.6*	*31.0*	*31.1*	*31.2*	*30.5*	*30.7*	*31.6*
Long term	12,328	11,441	10,636	10,436	10,316	10,229	10,132	10,101	10,154	10,656
o/w: Banks debt	3,219	2,503	2,057	1,912	1,730	1,514	1,403	1,342	1,387	1,405
o/w: Enterprises debt	9,108	8,935	8,576	8,520	8,582	8,709	8,723	8,751	8,759	9,242
o/w: Others	1	3	4	4	4	6	6	7	7	8
Short term	196	94	303	312	275	450	676	527	693	733
o/w: Banks debt	171	57	186	237	220	404	590	382	602	641
o/w: Enterprises debt	25	37	116	75	55	46	86	145	91	92
Foreign debt, net 3), (in% of GDP)[4]	42.2	47.2	47.2	47.6	47.8	46.7	47.0	47.0	44.6	42.7

Note: Foreign debt of the Republic of Serbia is calculated according to the "matured debt" principle, which includes amounts of debt from capital and amounts of calculated interest not paid in the moment of agreed maturity.

Source: NBS, *QM*

1) Foreign debt of the Republic of Serbia's public sector includes the debt of the state (not including the debt of Kosovo and Metohija, for loans concluded before the arrival of KFOR, unregulated debt toward Libya and the clearing debt toward former Czechoslovakia), National Bank of Serbia, local self-governments, funds and agencies formed by the state, and the debt for which state guarantee was issued.

2) Foreign debt of Republic of Serbia's private sector includes the debt of banks, companies and other sectors for which no state guarantee has been issued. Foreign debt of the private sector does not include loans concluded before December 20, 2000 for which no payments are done (945.7 million euro, out of which 407.4 million euro is from domestic banks, and 538.3 million euro is from domestic companies).

3) Total foreign debt reduced by NBS forex reserves.

4) Sum value of GDP of the observed quarter and previous three quarterly values of GDP.

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

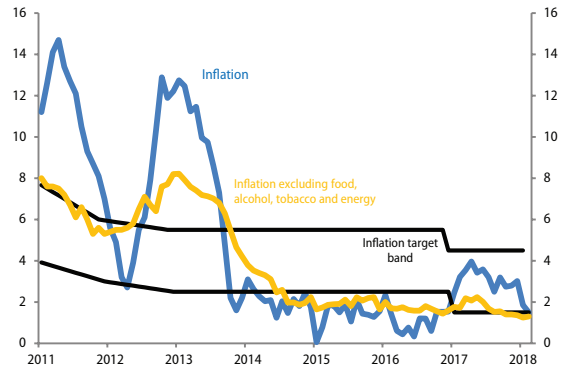
Underlying inflation (measured by the consumer prices index excluding food, alcoholic beverages, tobacco, and energy) gradually decreased in the second half of 2017 (Graph T5-2), and since October it was below the NBS targeted band (in January 2018 it was at a record low 1.2%). Key factors influencing 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

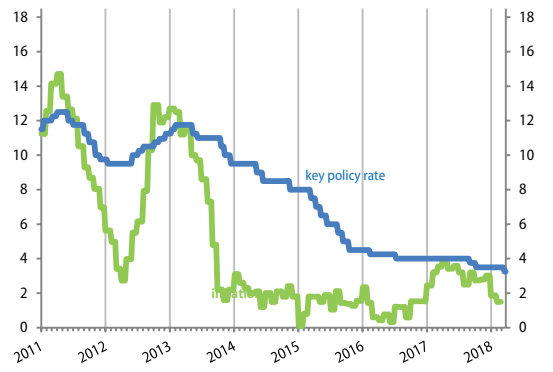
market purchasing 510 million Euros (ending with March 12th) and prevent the excessive daily strengthening of the dinar. Although there are several factors from external environment which could somewhat push inflation upward in the next year (for example, the announced possibility of faster interest 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

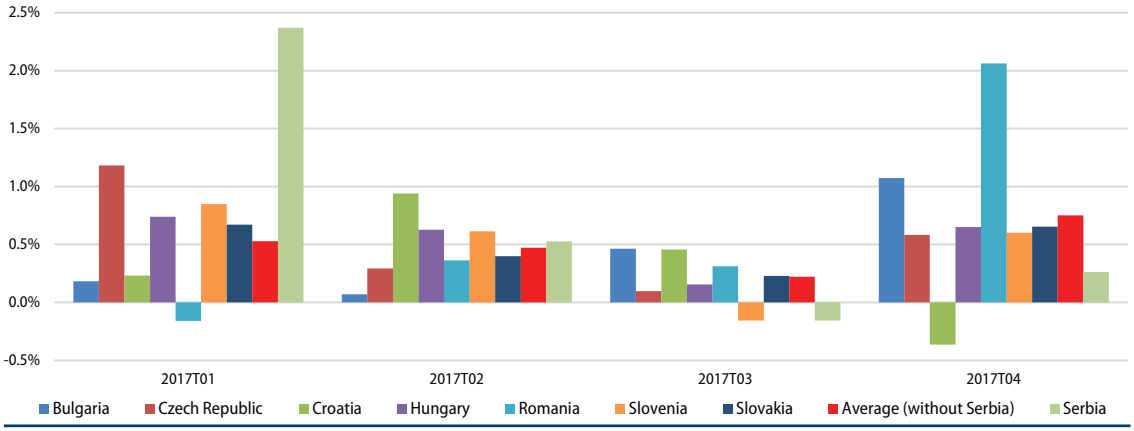
In 2017 there was a noticeable acceleration of inflation in the region of Central and Eastern Europe - from an average of 0.7% in 2016 to about 2% in the previous year. Similarly to Serbia, reasons for this rise in inflation are largely the increase in food and energy prices and not acceleration of underlying 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

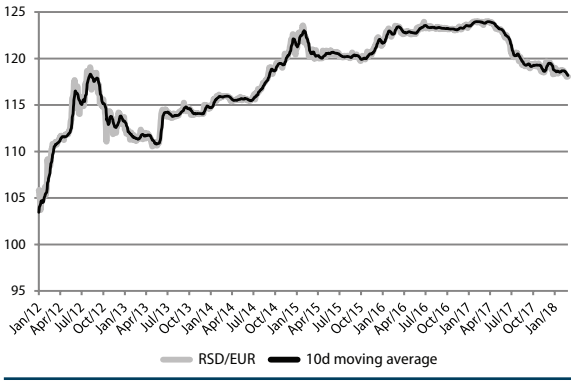
well as the fact that due to the sharp winter the increase in food prices in January and February 2017 was considerably more pronounced than in this year. Considering that in first two months of 2017 the price increase was 2.2% and in the same period of this year only 0.6%, due to the base effect y-o-y 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

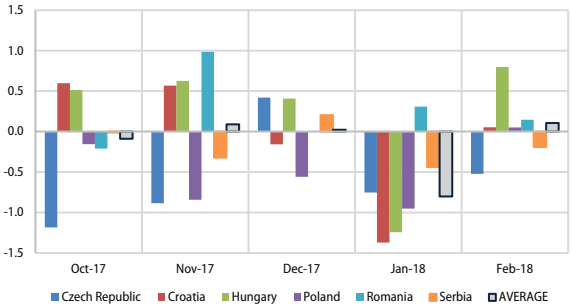


Source: NBS

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

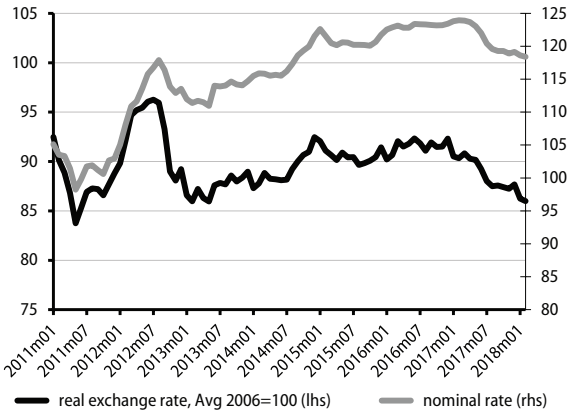
Since a higher inflation rate in Serbia than in the EU or the USA was recorded in 2017, the real appreciation of the dinar was even stronger – which is not in line with the movements of macroeconomic fundamentals

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%).

6. Fiscal Trends and Policy

In Q4 the fiscal deficit was 29.8 billion dinars (2.6% of GDP), as a result of continued year-on-year growth of public revenue and moderate decline of public spending. At the level of the entire 2017, there was a consolidated fiscal surplus of 52.3 billion dinars (1.2% of GDP). This result was mainly a consequence of a significant growth of tax revenue, which was widely spread and had occurred due to the growth of GDP, irregular growth of economy's profitability in 2016, because of the improved trade ration, but also probably due to combatting grey economy, while the non-tax revenue stagnated nominally. In addition, the result in 2017 was influenced by the decline of certain expenditures, such as interest payments due to the appreciation of dinar and favourable conditions on global markets, as well as capital spending, which was by around 6.7% lower in real terms in 2017 than in 2016 (and was 3% of GDP), even though a 6% growth was planned. Weak realisation of capital spending is estimated as negative and it is the result of inefficient state in planning and realisation of infrastructure projects, proven by multiple deadline extensions for finalising the construction of large infrastructure objects. The realised fiscal deficit in 2017 had a positive impact on the sustainability of public finances and the public debt dynamic, but it is estimated that in the conditions where the economy is growing slower than planned, it is unjustified to lead a policy of high fiscal surplus. Instead, efforts should have been increased toward an efficient implementation of public investments, so that the fiscal deficit is between 0.5 and 1% of GDP. In Q1 2018, the three-year arrangement with IMF finished, which was estimated as successful from the perspective of stabilising public finances. But there were no structural reforms in important segments of the public sector. It is our recommendation to conclude a new agreement with IMF, which would mostly focus on restructuring and privatisation of public and state-owned enterprises, as well as on the sectoral structural reforms, which would directly affect the fiscal performance in the long term. Public debt at the end of 2017 was 62.4% of GDP, which is by around 11% of GDP lower than at the end of 2016, primarily due to a strong real appreciation of dinar against the dollar and euro, as well as the rise of GDP and favourable current fiscal trends. At the end of January 2018, public debt was 61.4% of GDP.

Fiscal Tendencies and Macroeconomic Implications

Fiscal deficit in Q4 was 29.8 billion dinars (2.6% of GDP)…

Consolidated fiscal deficit in Q4 was 29.8 billion dinars (2.6% of quarterly GDP), and once the spending on interest is excluded, the primary deficit was around 12.7 billion dinars (around 1.1% of quarterly GDP).

Public revenue in Q4 recorded a real year-on-year growth by 3.5%, which is the result of the growth of tax and non-tax revenue. In Q4, tax revenue recorded a real year-on-year growth by 3.1%, primarily due to the considerable growth of revenue from corporate income tax (by 21.3%), and the moderate growth of tax on income, excise and customs, while the revenue from VAT and social contributions recorded a mild year-on-year decline. Non-tax revenue in Q4 recorded a mild increase (by 2.5%).

Compared to Q3 2017, seasonally adjusted public revenue recorded a mild real decline in Q4 (by 0.5%), primarily due to the considerable decline of revenue from VAT and excise tax, and a mild decline in revenue from income tax, while other types of tax revenue recorded a mild growth.

Real year-on-year reduction of public spending continued in Q4 by 1.7%, which was mostly due to the strong decline of spending on interest (24.3%), significant decline of subsidies (by 11.3%), and continued mild real decline of spending on wages and pensions (by 3% and 1.9%, respectively), while capital spending recorded a mild year-on-year growth of 3.6%.

At the level of the entire 2017, fiscal surplus was 52.3 billion dinars (1.2% of GDP)

At the level of the entire 2017, consolidated fiscal surplus was 52.3 billion dinars (1.2% of GDP), while the primary surplus was 173.5 billion dinars (3.9% of GDP). Fiscal surplus in 2017 was

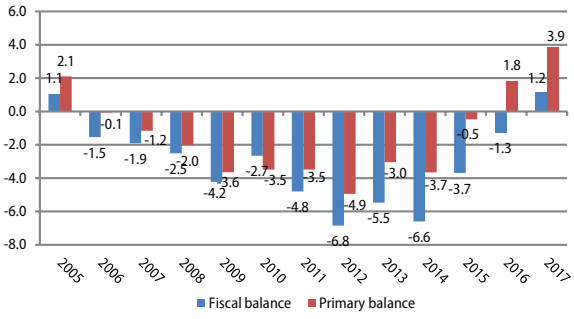
the result of the considerable real growth of public revenue (by 4%), as well as the continued mild real decline of public spending (by 1.7%) compared to 2016. Even though the implementation of fiscal consolidation was economically justified, it is necessary to balance between securing sustainability of public finances and the effects of fiscal policy on economic growth.

Realising high fiscal surplus in a period when the economy is growing at a rate that is significantly lower than expected is deemed inadequate. Therefore, in the coming period, restrictiveness of fiscal policy should be reduced by significantly increasing capital spending. The policy in 2018 should be the one of a mild fiscal deficit (0.5-1% of GDP) with a significant increase of capital spending. In addition, with the aim of securing long-term sustainability of public finances, restructuring and privatisation of public and state-owned companies should go significantly faster. In that sense, it is our recommendation to conclude a new arrangement with IMF that would focus on structural reforms, increasing their chances of implementation.

Growth of revenues continued in January, and spending also accelerated its growth

Positive trends on the side of revenues continued in January 2018 and were higher in real terms by 3.2% compared to the same month of the previous year, because of the solid growth of almost all categories of public revenue (except VAT), as well as the non-tax revenue. At the same time, public spending was significantly higher in real terms than in January 2017 (by 5.7%), primarily due to the significant growth of spending on the employed (by 19.4%), on goods and services (by 15.7%), and capital spending (by 2.8 times). Considerable growth of individual types of spending could be the result of the specific dynamic of implementation, so in order to have a more reliable estimate of the alignment of spending dynamics with the plans, we need to look at the trends over several months. As a result of these trends in revenue and spending, a surplus of 18.7 billion dinars was created in January 2018, which is not unusual considering the seasonal factors at the beginning of the year, as indicated by the fact that surplus has been created in January in four out of five previous years, and one mild deficit.

Graph T6-1. Serbia: Consolidated Fiscal Balance and Primary Balance (% of GDP)



Source: *QM* calculations

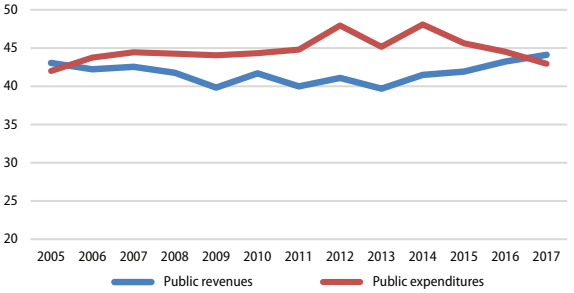
A more precise assessment of fiscal trends in 2018 could be given only after observing the trends in the first several months

In order to have a more precise assessment of fiscal trends in 2018 and forecast possible irregular increase of expenditures (e.g. on wages and pensions), it is necessary to observe trends in 1-2 quarters.

Tax revenue in 2017 increased significantly

Significant growth of public revenue in 2017 was primarily the result of a considerable growth of tax revenue (by 5.2%), while non-tax revenue recorded a moderate real decline (by 3.1%), even though nominally they practically stagnated. Growth of tax revenue in 2017 was widely spread, since the real increase was recorded in almost all types of tax revenue. Still, the higher real growth was realised in revenue from corporate income tax (by 35%), because of the strong growth of economy's profitability in 2016. Moderate growth was realised from customs (by 5.8%), because of the growth of imports, as well as from tax on income and contributions (by 3.8% and 5.1%, respectively), because of the mild growth of employment and wages. Real growth of revenue from excise tax and VAT was modest (2.3% and 2.6%, respectively).

Graph T6-2. Serbia: Consolidated Public Revenue and Public Spending (% of GDP)



Source: *QM* calculations based on MoF data

Public spending in 2017 recorded a mild real decline

In 2017, public spending recorded a mild real decline, which was widely spread, since the real decline compared to 2016 was recorded in most of the types of current spending, as well as capital spending.

Public spending in Serbia is coming close to the average of comparable CEE countries

Due to the real decline of public spending and a mild real growth of GDP, the share of public spending in Serbia's GDP in 2017 fell to 43%, which is close to the average of Central and Eastern European countries (CEEC) of around 42% of GDP, which is estimated as economically justified. Therefore, the fiscal policy in the coming period should avoid a new relative growth of public spending by improving the spending structure, so that the relative share of productive spending increases (investments, investments into education, science and innovation, etc.), while unproductive spending decreases.

Decline of spending was widely spread, and was most pronounced in spending on interest

The highest relative decline in 2017 was recorded in spending on interest (by 10.6%), which was the result of the appreciation of dinar against the euro and dollar, but also due to the reduction of public debt. Spending on wages in 2017 declined in real terms by 0.9% due to the continued implementation of the hiring freeze in the public sector, and weaker implementation of severance pays for redundant workers, as well as low indexation of wages. Spending on pensions significantly decline by around 2.2%, due to the low indexation and implementation of restrictive rule for the retired and calculations of pensions defined in the previous cycles of parameter pension reforms. Spending on subsidies in 2017 also mildly declined in real terms (by 2.3%), which is estimated as economically justified, while spending on goods and services recorded a real growth (3.3%). Significant growth of spending on goods and services was partially the result of the hiring freeze in the last few years, which affected the increased engagement of external service providers, as well as increased number of persons hired on contract bases or part-time.

Capital spending recorded a decline in 2017, even though the plan was to increase them significantly…

Despite the mild increase in Q4, capital spending in 2017 were lower in real terms by 6.7% compared to 2016, even though the fiscal strategy had planned around 6% growth in 2017. Weak realisation of capital spending is estimated as negative, especially in the conditions where the economy is developing slowly and the potential effect of capital spending on economic growth, according to econometric studies, can be considerable. Inefficient implementation of infrastructure projects and low level of capital spending are characteristic of Serbia's public finances in the past several years. Capital spending (public investment) in Serbia in the last 10 years were on average lower by 1.3% of GDP annually compared to the CEEC average, which at the level of the entire decade led to the cumulatively lower investment in infrastructure by around 13% of GDO, i.e. around 4 billion euros. Low level of public investments, in addition to low domestic private investments, represents one of the causes of low total investments in Serbia's economy compared to other CEE countries.

Table T6-3. Public Investments in Serbia and CEE Countries (% of GDP)

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	*2007-2016 average*
Bulgaria	5.2	5.6	5.0	4.6	3.4	3.4	4.0	5.2	6.6	2.6	*4.6*
Czech Republic	4.8	5.3	6.0	5.1	4.5	4.2	3.7	4.1	5.1	3.3	*4.6*
Estonia	6.0	6.2	6.2	4.8	4.9	6.3	5.6	5.1	5.3	4.8	*5.5*
Croatia	6.1	5.9	5.8	3.6	3.5	3.5	3.7	3.6	3.0	3.1	*4.2*
Latvia	5.9	5.2	4.9	4.7	5.0	4.9	4.4	4.5	4.8	3.6	*4.8*
Lithuania	5.4	5.4	4.4	5.0	4.7	4.0	3.7	3.5	3.7	3.0	*4.3*
Hungary	4.2	3.2	3.4	3.7	3.3	3.7	4.4	5.3	6.6	3.1	*4.1*
Poland	4.5	4.8	5.0	5.6	5.9	4.7	4.1	4.5	4.4	3.3	*4.7*
Romania	6.3	6.7	6.0	5.7	5.5	4.8	4.5	4.3	5.1	3.6	*5.3*
Slovenia	4.5	4.7	5.0	5.0	4.1	4.1	4.3	5.1	4.7	3.2	*4.5*
Slovakia	3.2	3.4	3.9	3.6	3.8	3.4	3.3	4.0	6.3	3.2	*3.8*
Serbia	4.8	3.9	3.2	3.4	3.3	3.5	2.2	2.5	2.8	3.3	*3.3*
CEE	5.1	5.1	5.1	4.7	4.4	4.3	4.2	4.5	5.1	3.3	*4.6*

Source: Eurostat and Ministry of Finance of the Republic of Serbia

Poor realisation of capital spending in the past decade is the result of unproductive spending (on wages, pensions, subsidies) pushing out the productive one, as well as the incompetence of the Government to efficiently organise and manage the implementation of investments in

infrastructure projects, which could be the result of the declining quality of human capital in the public sector due to the inadequate staff policy, as well as the inefficient management at the strategic level.

Fiscal result in 2017 was better than in 2016, because of the higher collection of tax revenue and reduced spending on interest and public investments

The fiscal result achieved in 2017 was better than the result realised in 2016 by around 108 billion dinars, primarily because of the significant growth of public revenues and, to a certain extent, because of the saving in some of the spending categories, such as spending on interest and capital spending. Tax revenue in 2017 was higher by around 132 billion dinars compared to 2016, while non-tax revenue remained almost unchanged. It is estimated that the growth of tax revenue was dominantly affected by the growth of economy and the irregular increase of profitability of economy thanks to the improved trade ratio in 2016, which affected the significant growth of revenue from corporate income tax. Still, economic growth and improved collection of corporate income tax cannot explain the entire growth of tax revenue, so our conclusion is that a certain contribution to the growth of tax revenue (by 20-30 billion dinars) was made by combatting the grey economy. Public spending in 2017 was by around 24 billion dinars higher compared to the previous year, primarily because of the considerable growth of revenue on goods and services (18 billion), growth of spending on the employed and pensions (by around 13 billion dinars), while spending on interest was lower by around 10 billion dinars, and capital spending by around 5 billion dinars. Spending on subsidies in 2017 was almost the same as in 2016 in the absolute amount.

Fiscal strategy foresaw a fiscal deficit in 2017 of around 75 billion dinars. The realised fiscal deficit in 2017 was better than planned by around 137 billion dinars, thanks to the improved collection of tax revenue (by around 109 billion dinars), higher collection of non-tax revenue compared to the plan (by 36 billion dinars), and lower public spending (by around 18 billion dinars). Lower realisation of public spending compared to the plan was primarily the result of lower spending on interest (by 15 billion dinars), due to the appreciation of dinar and favourable conditions on global financial markets, as well as the inefficient realisation of capital spending (lower than planned by around 11 billion dinars). In addition, in 2017 the spending on the employed was lower compared to the plan (by around 9 billion dinars), probably due to the reduction in the number of the employed, since there were no extraordinary correction in wages. Spending on pensions in 2017 was also considerably lower (by around 12 billion dinars) compared to the plan, which can be ascribed to the effects of stricter conditions for retirement, introduced parameter pension reform in 2014, as well as previous reforms.

Box 1. State Efficiency in Combatting Grey Economy

The success of fiscal consolidation in the past three years has also been affected by combatting the grey economy. In 2014, the Government adopted several system reforms (Labour Law, Law on Inspection Control, the reform of the penal policy for non-compliance with tax regulations, etc.), which affected the reduction of benefits and increase of cost of participating in the grey economy. According to an empirical research conducted in 2012/2013, grey economy in Serbia was estimated by using the MIMIC method to around 30% of GDP, which is around one sixth higher than the CEEC average. Using the HTC methods on national accounts data, the study shows that the grey economy in households is estimated to around 23.6% of GDP, while based on the data from the survey conducted on the representative sample of companies, the grey economy is estimated to 21.4% of GDP (Krstic and Schneider, 2015). A new study was published at the end of 2017 (NALED, 2017), which shows that based on data from the survey conducted among companies, the grey economy is estimated to 15.4% of GDP. It is, therefore, necessary to give a few notes regarding the interpretation of the stated results. Firstly, the result gained from surveys cannot be compared to the results gained by other methods (e.g. MIMIC). According to the MIMIC method, the average level of grey economy in EU is around 19% of GDP, and in the CEE countries around 25% of GDP, so the survey cannot be used to conclude that the grey economy in Serbia is significantly below the European average. Secondly, the survey data, for which the study states is conducted on a comparable sample as in 2012, shows that the grey economy in the period 2012-2017 decreased by one third. This result should be interpreted cautiously because of the general issue with estimating the

grey economy by survey method (insincerity in answering questions, etc.). Generalisation of this result would imply that according to the MIMIC method, we should expect the grey economy in Serbia to be almost at the level of the European average, and by one quarter lower compared to the CEEC average. Fiscal trends in the previous three years indicate that the growth of tax revenue was significantly higher than can be explained by the growth of tax base and tax rates, which could be ascribed to the effects of combatting the grey economy. However, reduction of the grey economy by one third would imply an autonomous growth of tax revenue by around 3.5% of GDP, which is significantly higher than the real effect of reducing the grey economy on the growth of tax revenue in the last three years. Therefore, it is estimated that they grey economy has been reduced in the last few years, but that it is highly unlikely that it is now at the level lower than the CEEC average. In order to achieve these results, it is necessary to take considerable steps toward reforming the Tax Authority and other inspection services, as well as toward improving the quality of public goods and services which are financed from taxes.

Fiscal surplus policy is not justified that the economy is quickly growing

After three years of implementing the programme of fiscal consolidation and the IMF arrangement, Serbia managed to neutralise the fiscal deficit in 2017 and significantly reverse the trend of public debt. Still, in order to secure macro-fiscal stability, it is necessary for the fiscal deficit to be between 0.5% and 1% of GDP. Further reduction of deficit or moving in to the area of fiscal surplus could be characterised as overly restrictive, especially since the economic growth in 2017 was significantly slower than planned. Since it was clear already in mid-2017 that the fiscal result will be significantly better than planned, and that the economic growth is significantly slower than expected, it was justified to start in that period an implementation of some infrastructure projects or to accelerated the implementation of the existing ones, in order to stimulate economic growth through spending on public investments. However, there was no such reaction from the Government, probably due to the lack of adequate project and technical documentation for the project implementation, which is one of the bottlenecks in the realisation of public investments in Serbia.

Permanent sustainability of public finances requires a step toward restructuring and privatisation of public and state-owned enterprises…

Positive fiscal result in 2017 and successful finalisation of the IMF arrangement in the first quarter of 2018, indicate the end of the first phase of fiscal consolidation. However, such an estimate can partially be justified only when observing public sector in a narrow sense, since virtually no progress has been made in the restructuring and reforms of public and state-owned enterprises (with a few positive exceptions – Serbia Railways, Smederevo Steelworks, and Galenika). These enterprises pose a potential fiscal risk, since any changes on the global markets (increased price of gas, reduced price of copper, etc.) could lead again to huge losses in these enterprises, which would spill over into the budget deficit. Therefore, in order to ensure long-term stability of public finances, it is necessary to take considerable steps in this respect in the coming period.

…and in order to provide conditions of growth, it is necessary to conduct structural reforms of the public sector

Ensuring macro-fiscal stabilisation has created a necessary but not a sufficient condition for the faster growth of economy, so the next phase of public sector reforms should focus on structural changes in important social activities, such as education, science, healthcare, administration, justice, etc.

It would be justified to conclude a new arrangement with the IMF

In that respect, it would be justified to conclude a new three-year arrangement with the IMF, which would focus on, in addition to maintaining the realised fiscal results, taking steps toward restructuring and privatisation of public enterprises, as well as the abovementioned structure reforms of the public sector. The experience of Serbia, as well as the empirical studies of CEE countries, indicate such an arrangement would increase the probability of leading a responsible fiscal policy and implementing economic reforms.

Analysis of Public Debt Trends

Serbia's public debt at the end of 2017 was 23.2 billion euros (61.5% of GDP)…

At the end of 2017, Serbia's public debt was 23.2 billion euros (61.5% of GDP), and once the non-guaranteed debts of the local communities are included, the debt was around 62.4% of GDP, which was by around 900 million euros lower than at the end of Q3 2017. Reduction was

...and including the debt of local communities – 62.4% of GDP

also recorded in direct and indirect debt. Strong decline of the debt during Q4 2017 was the result of 750 million euro payment of Eurobonds 2012 from previously accumulated deposits of the state, as well as the continued appreciation of dinar against the euro and dollar.

Tabela T6-4. Serbia: Public debt dynamics 2000-2017

	2000	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	Q1 2017	Q2 2017	Q3 2017	Q4 2017
I. Total direct debt	14.2	9.6	8.6	8.0	7.9	8.5	10.5	12.4	15.1	17.3	20.2	22.4	22.7	22.5	22.0	22.3	21.4
Domestic debt	4.1	4.3	3.8	3.4	3.2	4.1	4.6	5.1	6.5	7.0	8.2	9.1	8.8	8.7	9.0	9.1	9.1
Foreign debt	10.1	5.4	4.7	4.6	4.7	4.4	5.9	7.2	8.6	10.2	12.0	13.4	13.9	13.8	13.0	13.1	12.4
II. Indirect debt	-	0.7	0.8	0.8	0.9	1.4	1.7	2.1	2.6	2.81	2.5	2.4	2.1	2.0	1.9	1.8	1.8
III. Total debt (I+II)	**14.2**	**10.3**	**9.4**	**8.9**	**8.8**	**9.8**	**12.2**	**14.5**	**17.7**	**20.1**	**22.8**	**24.8**	**24.8**	**24.5**	**23.9**	**24.1**	**23.2**
Public debt / GDP (MF)[2]	**201.2%**	**50.2%**	**35.9%**	**29.9%**	**28.3%**	**32.8%**	**41.8%**	**45.4%**	**56.2%**	**59.6%**	**70.4%**	**75.5%**	**72.9%**	**69.2%**	**65.7%**	**64.6%**	**61.5%**
Public debt / GDP (QM)[3]	**169.3%**	**52.1%**	**36.1%**	**29.9%**	**28.3%**	**32.8%**	**41.9%**	**44.4%**	**56.1%**	**59.4%**	**70.4%**	**74.6%**	**72.2%**	**70.7%**	**66.3%**	**65.2%**	**61.5%**

1) According to the Public Debt Law, public debt includes debt of the Republic related to the contracts concluded by the Republic, debt from issuance of the t-bills and bonds, debt arising from the agreement on reprogramming of liabilities undertaken by the Republic under previously concluded contracts, as well as the debt arising from securities issued under separate laws, debt arising from warranties issued by the Republic or counterwarranties as well as the debt of the local governments, guaranteed by the Republic.
2) Estimate of the Ministry of Finance of the Republic of Serbia
3) QM estimate (Estimated GDP equals the sum of nominal GDP in the current quarter and three previous quarters)
Source: QM calculations based on the MoF data.

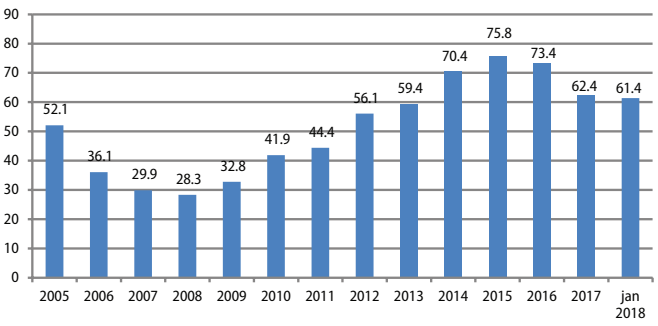
During 2017, the public debt was reduced by around 11% of GDP…

Serbia's public debt at the end of 2017 was by around 1.6 billion euros lower compared to the end of 2016, due to the reduction of the direct debt by around 1.2 billion euros and indirect debt by around 400 million euros. The significant decline of public debt in 2017 was affected by several factors, most important of which being the strong real appreciation of dinar against the euro (by over 6%) and the significantly high real appreciation of dinar against the US dollar (by almost 18%). In addition, what also affected the decline of public debt were the positive current fiscal trends, i.e. realisation of consolidated surplus.

…half of which is the result of the appreciation of dinar, while the other half is the result of fiscal surplus and the growth of GDP

Public debt in 2017 was reduced by around 11% of GDP, half of which is owed to the appreciation of dinar, while the other half to the positive fiscal trends and a mild growth of GDP. Even though the direct effects of appreciation on the level of the debt are positive, since almost one fifth of the public debt is denominated in foreign currency, the appreciation trends have a negative effect on export performance of Serbia's economy, as well as the future growth rates, which can have a long-term negative effect on the sustainability of the public debt, especially since the appreciation pressures are not the result of stronger competitiveness of Serbia's economy, but of the trends in the financial sectors of Serbia and the world.

Graph T6-5. Serbia's Public Debt Trends (% of GDP)



Source: QM calculations[2]

Public debt at the end of January 2018 was lower by around 309 billion euros compared to the end of 2017 and was 61.4% of GDP

At the end of January 2018, the public debt was 29.2 billion euros and was by around 309 million euros lower than at the end of December 2017. Public debt at the end of January, together with the non-guaranteed debt of the local communities, was around 61.4% of GDP. According to the Ministry of Finance data, the public debt at the end of January 2018 was 57.2% of GDP, which is the figure they got by comparing the nominal public debt with the projected GDP for 2018. Since the public debt is repaid from value created, and since it is uncertain how much GDP will grow in the current year, as well as what the trends will be in the exchange rate, inflation and other parameters, it is our estimate that it would be more adequate to compare the relative amount of public debt based on the sum of GDP realised in the last four quarters, which is the approach we use in our analyses.

Sustainable level of public debt for a mid-developed country is estimated at below 50% of GDP. Therefore, fiscal deficit policy in the coming years should ensure continued decline of the level of debt compared to GDP and under unchanged conditions compared to the exchange rate, since fluctuations in the exchange rate of global currencies can be strong and unpredictable.

1 Including the non-guaranteed debt of the local communities

Annexes

Annex 1. Serbia: Consolidated General Government Fiscal Operations, 2010-2017 (bn RSD)

	2010	2011	2012	2013	2014	2015	2016					2017				
							Q1	Q2	Q3	Q4	Q1-Q4	Q1	Q2	Q3	Q4	Q1-Q4
I PUBLIC REVENUES	**1,278.4**	**1,362.6**	**1,472.1**	**1,538.1**	**1,620.8**	**1,694.8**	**414.7**	**460.8**	**476.9**	**490.3**	***1,842.7***	**450.0**	**503.8**	**497.5**	**522.1**	**1,973.4**
1. Current revenues	1,215.7	1,297.9	1,393.8	1,461.3	1,540.8	1687.6	413.3	458.8	472.5	488.7	*1833.3*	448.1	502.4	496.4	518.0	1964.9
Tax revenue	1,056.5	1,131.0	1,225.9	1,296.4	1,369.9	1463.6	353.2	405.0	405.3	422.2	*1585.8*	386.4	444.9	438.7	447.9	1717.9
Personal income taxes	139.1	150.8	35.3	156.1	146.5	146.8	34.5	37.7	40.5	42.4	*155.1*	37.5	40.7	43.4	46.3	167.9
Corporate income taxes	32.6	37.8	54.8	60.7	72.7	62.7	13.3	31.1	18.1	17.8	*80.4*	18.9	49.0	21.6	22.2	111.8
VAT and retail sales tax	319.4	342.4	367.5	380.6	409.6	416.1	103.8	114.9	112.7	122.0	*453.5*	109.6	119.5	127.0	123.2	479.3
Excises	152.4	170.9	181.1	204.8	212.5	235.8	57.4	65.5	75.2	67.5	*265.6*	64.9	65.2	78.3	71.6	279.9
Custom duties	44.3	38.8	35.8	32.5	31.2	33.3	8.6	8.7	9.2	9.9	*36.4*	9.3	9.7	9.9	10.8	39.7
Social contributions	323.0	346.6	378.9	418.3	440.3	505.7	120.5	130.8	132.6	143.6	*527.5*	16.6	18.4	17.8	19.0	71.9
Other taxes	46.0	43.5	42.6	43.5	57.3	63.3	15.1	16.3	16.9	19.0	*67.3*	129.6	142.4	140.7	154.7	567.4
Non-tax revenue	159.2	36.9	37.9	34.9	170.9	224.0	60.1	53.8	67.1	66.5	*247.5*	61.7	57.5	57.7	70.1	247.0
II TOTAL EXPENDITURE	**-1,419.5**	**-1,526.1**	**-1,717.3**	**-1,750.2**	**-1,878.9**	**-1,844.0**	**-430.7**	**-462.9**	**-463.1**	**-543.0**	***-1,899.7***	**438.2**	**471.3**	**459.7**	**551.9**	**1,921.1**
1. Current expenditures	-1,224.8	-1,324.8	-1,479.9	-1,549.8	-1,628.0	-1696.6	-403.9	-419.5	-416.4	-478.2	*-1,717.9*	415.7	424.9	420.2	484.5	1745.3
Wages and salaries	-308.1	-342.5	-374.7	-392.7	-388.6	-419.2	-99.8	-104.6	-103.7	-109.5	*-417.7*	102.5	108.2	106.4	109.3	426.3
Expenditure on goods and services	-202.5	-23.3	-235.7	-236.9	-256.8	-257.6	-57.5	-67.2	-68.4	-90.6	*-283.6*	60.5	72.7	72.2	96.3	301.6
Interest payment	-34.2	-44.8	-68.2	-94.5	-115.2	-129.9	-45.9	-32.0	-31.6	-22.0	*-131.6*	47.4	25.4	31.3	17.1	121.2
Subsidies	-77.9	-80.5	-111.5	-101.2	-117.0	-134.7	-18.0	-24.1	-20.4	-50.2	*-112.7*	18.9	26.7	22.0	45.8	113.3
Social transfers	-579.2	-609.0	-652.5	-687.6	-696.8	-710.0	-171.9	-176.3	-178.3	-190.3	*-716.8*	174.5	178.4	173.2	194.0	720.1
o/w: pensions5)	*-394.0*	*-422.8*	-473.7	-498.0	-508.1	-490.2	-122.1	-123.8	-123.2	-125.2	*-494.2*	123.1	124.6	123.9	126.3	497.8
Other current expenditures	-22.9	-31.7	-37.4	-36.9	-53.7	-45.3	-10.7	-15.3	-13.9	-15.7	*-55.6*	11.9	13.6	15.2	22.0	62.7
2. Capital expenditures	-105.1	-111.1	-126.3	-84.0	-96.7	-114.5	-17.4	-31.2	-37.5	-53.1	*-139.3*	12.0	35.5	29.7	56.6	133.9
3. Called guarantees	-2.7	-3.3	-3.7	-7.9	-29.7	-30.1	-8.7	-11.2	-8.2	-11.0	*-39.1*	8.3	5.8	6.6	8.1	28.8
4. Buget lendng	-30.0	-25.0	-38.2	-35.6	-55.4	-2.7	-0.6	-1.0	-1.0	-0.7	*-3.3*	2.2	5.1	3.2	2.6	13.2
CONSOLIDATED BALANCE	**-141.0**	**-163.5**	**-245.2**	**-212.1**	**-258.1**	**-149.1**	**-16.0**	**-2.1**	**13.8**	**-52.8**	***-57.1***	**11.8**	**32.5**	**37.8**	**-29.8**	**52.3**

Source: *QM* calculations based on the MF data

Annex 2. Serbia: Consolidated General Government Fiscal Operations, 2010-2017 (real growth rates, %)

	2010	2011	2012	2013	2014	2015	2016					2017				
							Q1	Q2	Q3	Q4	Q1-Q4	Q1	Q2	Q3	Q4	Q1-Q4
I PUBLIC REVENUES	**-1.5**	**-4.6**	**0.6**	**-2.2**	**3.2**	***3.1***	**7.4**	**7.8**	**9.2**	**5.6**	***7.5***	***5.3***	***5.5***	***0.3***	***3.5***	***4.0***
1. Current revenues	-1.5	-4.4	0.1	-2.6	3.3	*3.3*	7.3	7.9	8.6	5.8	*7.4*	*5.2*	*5.6*	*1.0*	*3.0*	*4.1*
Tax revenue	-2.5	-4.1	1.0	-1.7	3.5	*0.3*	7.1	9.2	7.5	4.8	*7.2*	*6.1*	*6.0*	*4.1*	*3.1*	*5.2*
Personal income taxes	-3.9	-2.9	2.1	-12.2	-8.1	*-1.2*	4.5	5.2	6.8	1.6	*4.5*	*5.6*	*4.1*	*2.9*	*6.2*	*5.1*
Corporate income taxes	-3.6	3.9	35.1	2.9	17.4	*-15.0*	1.2	19.3	55.8	43.4	*26.9*	*37.6*	*51.9*	*14.7*	*21.3*	*35.0*
VAT and retail sales tax	-0.7	-4.0	0.0	-3.8	5.4	*0.2*	6.4	14.1	3.2	7.7	*7.8*	*2.4*	*0.3*	*8.3*	*-1.9*	*2.6*
Excises	4.2	0.6	-1.2	5.1	1.6	*9.4*	22.2	13.8	16.6	-2.9	*11.4*	*9.6*	*-4.0*	*0.2*	*3.1*	*2.3*
Custom duties	-14.9	-21.5	-14.0	-15.6	-6.5	*5.9*	7.4	9.6	10.2	5.4	*8.1*	*5.2*	*6.6*	*3.2*	*6.8*	*5.8*
Social contributions	-6.5	-3.9	1.9	2.6	3.1	*-2.1*	2.7	3.2	3.7	2.9	*3.2*	*7.0*	*9.5*	*1.1*	*-2.7*	*3.8*
Other taxes	14.5	-15.2	-8.8	-5.2	29.2	*8.9*	10.9	0.7	-2.8	12.7	*5.1*	*4.4*	*5.1*	*2.0*	*4.8*	*4.4*
Non-tax revenue	5.8	-6.1	-6.2	-8.7	1.5	*27.9*	8.5	-1.1	15.9	12.8	*9.3*	*-0.4*	*3.1*	*-17.3*	*2.5*	*-3.1*
II TOTAL EXPENDITURE	**-1.7**	**3.3**	**4.3**	**-0.3**	**5.2**	***-3.2***	**5.7**	**4.9**	**2.3**	**-3.7**	***1.9***	***-1.3***	***-1.8***	***-4.5***	***-0.6***	***-1.7***
1. Current expenditures	-2.2	3.1	4.1	-2.7	2.9	*-1.4*	3.7	2.7	0.4	-5.1	*0.2*	*-0.1*	*-2.3*	*-3.0*	*-0.9*	*-1.2*
Wages and salaries	-5.9	0.4	2.0	-2.6	-3.1	*-9.7*	-0.4	-0.4	-0.4	-4.5	*-1.4*	*-0.4*	*-0.2*	*-1.4*	*-3.0*	*-0.9*
Expenditure on goods and services	-0.3	4.3	1.5	-6.6	6.2	*-1.1*	11.3	13.5	4.2	7.7	*8.9*	*2.1*	*4.4*	*1.5*	*3.4*	*3.3*
Interest payment	-0.3	17.4	41.9	28.8	19.3	*11.2*	11.6	-2.6	-3.4	-10.4	*0.2*	*0.2*	*-23.5*	*-5.0*	*-24.3*	*-10.6*
Subsidies	40.6	7.4	29.1	-15.6	13.2	*13.6*	-5.3	0.5	-20.0	-26.2	*-17.3*	*1.8*	*6.9*	*3.6*	*-11.3*	*-2.3*
Social transfers	13.9	5.8	-0.1	-2.1	-0.7	*0.5*	1.6	0.8	1.0	-3.7	*-0.1*	*-1.5*	*-2.4*	*-6.6*	*0.7*	*-2.1*
o/w: pensions5)	-3.9	3.9	*4.4*	*-2.3*	*-0.1*	*-4.8*	-0.5	0.2	-0.2	-0.8	*-0.3*	*-2.2*	*-2.9*	*-3.2*	*-1.9*	*-2.2*
Other current expenditures	-6.1	23.9	9.9	-8.4	42.6	*-16.7*	30.0	21.8	39.9	4.0	*21.4*	*7.7*	*-14.5*	*4.7*	*37.9*	*9.6*
2. Capital expenditures	-11.8	5.3	6.0	-38.2	12.7	*16.8*	64.1	30.7	25.3	3.6	*20.3*	*-33.2*	*9.7*	*-23.9*	*3.6*	*-6.7*
3. Called guarantees	-2.7	-3.3	-3.7	248.7	267.8	*0.1*	25.3	36.0	8.2	43.4	*28.5*	*-7.9*	*-50.2*	*-22.5*	*-28.1*	*-28.5*
4. Buget lendng	-30.0	-25.0	-38.2	44.2	52.2	*-95.1*	27.7	19.9	43.7	-3.3	*20.8*	*243.9*	*372.7*	*219.7*	*267.5*	*283.9*

Source: *QM* calculations based on the MF data

7. Monetary Trends and Policy

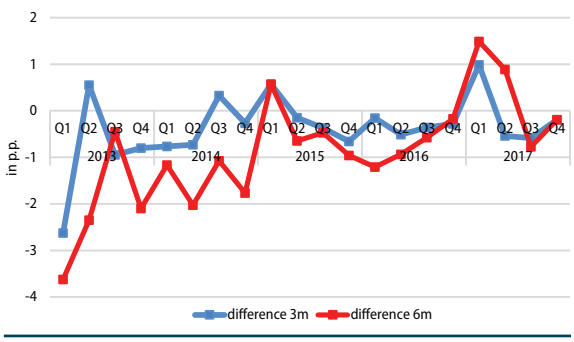
Inflationary pressure continued to weaken in Q4 causing the y.o.y. inflation rate to drop to 3% which is also in the centre of the target framework set by the National Bank of Serbia (NBS). In October the NBS lowered its key policy rate to 3.5% when it became certain that inflation would stand around the target level and there were no new corrections to the end of the year and in the first two months of 2018. In order to prevent excessive oscillations in the exchange rate, the NBS intervened on the Inter-bank foreign exchange (FX) Market in Q4 this time with both the sale and purchase of hard currency. At quarterly level, the NBS was a net seller of foreign currency totalling 85 million Euro but despite that, a nominal appreciation of the Dinar exchange rate happened. Interventions on the FX market and the sale of hard currency to the state affected the level of net own reserves NBS which dropped by 370 million Euro in Q4 which had an effect on the reduction of Dinar liquidity while the rise in state spending and the withdrawal of banks from REPO placements completely neutralized the drop. On the money market, the y-o-y. growth of the M2 slowed down and Q4 saw the lowest value in the past few years in both nominal and real terms while at the same time the y-o-y. growth of credit to the non-state sector showed signs of recovery in credit activity. The growth of net bank placements in Q4 was lower than in the previous quarter due mainly to the withdrawal of funds which banks place in REPO earlier and because of the lower growth of net placements to the enterprises and the households which are the consequence of a writing off of a significant part of non-performing loans (NPLs). If we exclude the effects of the writing off, a net placement to the enterprises registered the significant growth while the existing good growth of placements to the households grew even more. In parallel with the increase in placements, there was also a growth in the credit potentials of banks because of the rise in domestic deposits and because of the increased bank debts abroad. The participation of bad loans in the overall placement at the end of December dropped to 11.3% as a consequence of the growth of credit activities but mainly thanks to a faster writing off of NPLs in Q4. On the credit market, a majority of interest rates is at a similar or slightly higher level compared to the previous quarter while interest rates on loans (indexed in Dinars) for current assets continued to drop. The drop in the key policy rate to 3.25% in mid-March is an adequate reaction by monetary policy on macroeconomic trends in Serbia.

Central Bank: Balance and Monetary Policy

The reduction of the key policy rate in October and March is an adequate response to macroeconomic trends

The end of the year was marked by an additional weakening of inflationary pressure which brought monthly inflation rates in November and December to zero. The y.o.y. inflation rate at the end of Q4 was right in the middle of the target framework of 3%±1,5% which the NBS kept as the goal for 2018. The maintaining of this level of inflation which was higher than the average inflation in the EU by 1-1.5 percentage points in the past few years with a nominal appreciation of the Dinar had a negative effect on the price competitiveness of Serbian exports. Given those circumstances, the NBS lowered its key policy rate in October by 0.25 percentage points and kept it at the level of 3.5% up to mid-March. One of the important elements which caused extremely low monthly inflation rates in most of 2017 included the state's restrictive fiscal policy which, in conditions of limited economic growth generated a consolidated surplus of 1.2% of the GDP. In this period business banks withdrew a significant portion of

Graph T7-1. Oscillations in planned inflation for 3 and 6 months in advance of the real state 2013-2017



Source: NBS

their funds from REPO which had a positive effect on Dinar liquidity but not on the exchange rate which, despite interventions, continued to appreciate nominally (Table T7-2).

Monetary policy in 2017 can be said to have been relatively successful because the target inflation level was achieved with great progress in terms of lowering the participation of bad loans. It seems that attention should be paid to the exchange rate level which does not reflect the actual situation when we take into account the trends in general price levels and productivity in Serbia and the European Union. We feel that the lowering of the key policy rate to 3.25% in mid -March is an adequate monetary policy reaction to macroeconomic trends in Serbia. The lower key policy rate will lower pressure on the financial market towards a strengthening of the Dinar and it could stimulate its slight weakening. The slight weakening of the Dinar would contribute to raising the profitability of exports and higher cost of imports and would stop the growth of the foreign trade deficit. That policy contributes to strengthening the competitiveness of the Serbian economy, the opening of new jobs and speeding up long-term growth.

Table T7-2. NBS interventions and foreign currency reserves 2015-2017

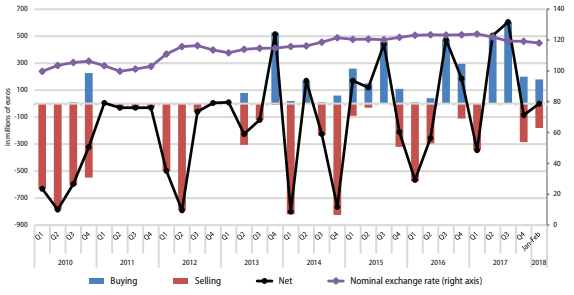
	2015				2016				2017			
	Mar	Jun	Sep	Dec	Mar	Jun	Sep	Dec	Mar	Jun	Sep	Dec
Repo stock (in milions of euros)	2.85	168.72	508.19	253.24	246.50	239.12	325.82	279.23	480.53	572.42	634.74	384.53
NBS interest rate	7.50	6.00	5.00	4.50	4.25	4.25	4.00	4.00	4.00	4.00	3.75	3.50
NBS interest rate	-1.13	3.08	5.00	6.66	2.60	1.78	3.17	1.94	-5.11	1.94	4.17	2.68
NBS interest rate	11.33	5.70	6.29	-0.76	-0.34	3.35	4.57	3.37	4.48	15.71	7.77	3.50
NBS interventions on FX market (in milions of euros)	170.00	290.00	730.00	520.00	-555.00	-820.00	-345.00	-160.00	-345.00	160.00	765.00	680.00
INCREASE	in millions of euros, cumulative from the beginning of the year											
NBS own resreves[2]	607.7	638.6	1022.9	1163.0	-469.43	-785.86	-346.46	-163.03	-269.73	-265.22	364.16	-4.87
NDA	-515.6	-460.4	-956.2	-783.4	45.62	395.60	-99.67	94.92	-171.42	-248.75	-704.00	137.47
Government, dinar deposits[3]	-151.9	-13.7	-308.7	-217.4	41.52	275.36	35.00	195.73	-41.59	-358.48	-755.64	-247.10
Repo transactions[4]	68.0	-97.4	-413.3	-166.4	5.09	19.53	-279.20	-25.66	-207.38	-285.41	-346.27	-95.49
Other items , net[5]	-431.8	-349.3	-234.1	-399.5	-0.99	100.71	144.53	-75.15	77.56	395.14	397.91	480.06
H	92.1	178.3	66.7	379.6	-423.81	-390.27	-446.13	-68.11	-441.15	-513.96	-339.84	132.60
o/w: currency in circulation	-133.7	-95.5	-39.9	76.8	-68.06	-20.21	40.74	157.26	-104.02	-114.39	-103.93	39.59
o/w: excess liquidity	210.3	229.5	104.1	408.0	-284.91	-319.01	-465.39	-241.74	-351.17	-422.08	-269.15	22.35
	in millions of euros, cumulative from the beginning of the year											
NBS, net	676.36	561.44	762.45	667.97	-865.84	-1061.63	-784.51	-137.62	-464.59	-618.87	452.21	-280.73
Gross foreign reserves	638.67	440.86	613.29	508.46	-880.04	-1080.32	-807.49	-153.76	-469.25	-632.21	431.51	-302.83
Foreign liabilities	37.69	120.58	149.16	159.52	14.21	18.69	22.97	16.14	4.66	13.34	20.70	22.10
IMF	39.37	106.55	129.87	141.97	8.10	15.09	16.00	14.12	-0.04	5.81	7.68	8.67
Other liabilities	-1.67	14.04	19.29	17.54	6.10	3.59	6.98	2.02	4.69	7.53	13.02	13.43
NBS, NET RESERVES-STRUCTURE												
1. NBS, net	676.36	561.44	762.45	667.97	-865.84	-1061.63	-784.51	-137.62	-464.59	-618.87	452.21	-280.73
1.1 Commercial banks deposits	-20.68	-29.93	65.59	100.98	331.11	302.75	339.40	90.80	144.67	156.34	123.17	159.61
1.2 Government deposits	-47.99	107.13	194.81	393.89	65.30	-26.98	98.65	-116.22	50.18	197.32	-211.22	116.25
1.3 **NBS own reserves**	607.70	638.64	1022.85	1162.84	-469.43	-785.86	-346.46	-163.03	-269.73	-265.22	364.16	-4.87

Source: NBS.
1) Initial M2 designates the state of primary money at the start of the current and end of previous year.
2) The definition of net own reserves NBS is given in section 8 Monetary Trends and Policy frame 4, *QM* no. 5.
3) State includes all levels of government: republic and local.
4) This category includes Treasury Bonds NBS and repo operations.
5) Other domestic net assets include: domestic loans (net debts of banks, not including Treasury Bonds and repo transactions; net debts of the economy) along with other assets (capital and reserves; and items in the balance: other assets) and is corrected by exchange rate changes.

The Dinar appreciated slightly in Q4, contrary to seasonal dynamics...

...despite net sale of hard currency by NBS in Q4 on the inter-bank FX market

Graph T7-3. NBS interventions on inter-bank foreign currency market 2010-2017



Source: NBS

Following appreciation pressure which dominated the previous two quarters, that pressure in Q4 acted in both directions with the depreciation prevailing which is typical for the end of the year. In the last three months of 2017, the NBS tried to stabilize excessive oscillations on the inter-bank FX market reacting in October and December by buying 200 million Euro and in November and December by selling foreign currency totalling 285 million Euro (Graph T7-3). The net effect for Q4 was the sale of 85 million Euro on the inter-bank foreign currency market which affected Dinar liquidity on the money market. Although the Dinar usually grows weaker at the end of the year because of a higher demand for foreign currency to pay debts to foreign partners and creditors and a higher offer of the Dinar because of the fiscal deficit in Q4. In Q4 the Dinar grew stronger compared to the previous quarter. A similar situation continued in January and February which is not in accord

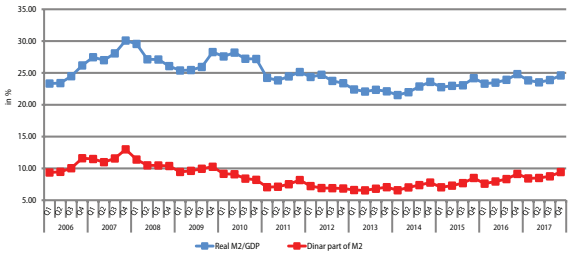
with the basic results of the economy bearing in mind the higher domestic inflation and weaker growth of productivity compared to the EU average, as well as Serbia's negative trade balance. The strengthening of the Dinar in 2017 was partly the consequence of the sterilization of Dinar liquidity in the system due to a surplus in the state budget. The insufficient realization of infrastructure projects and a higher level of collection of tax income caused the state to withdraw Dinars from the system to the value of some 440 million Euro. The effect of this was a parallel weakening of inflationary pressure and strengthening of the Dinar exchange rate. The net own reserves dropped in Q4 by 370 million Euro compared to the level at the end of September but the drop was completely compensated with the growth of net domestic assets. The withdrawal of business banks from REPO placements by 251 million Euro had a positive effect on the growth of net domestic assets which in Q4 were increased by 841 million Euro. This neutralized the effects of the drop in NBS net own reserves and affected the primary money in Q4 with an increase of 471 million Euro.

Monetary system: structure and trends of the money mass

The y-o-y. growth of the M2 slowed down nominally in Q4 …

…while the growth rate in real terms recorded its lowest level in the past few years

Graph T7-4. Money mass trends as a percentage of GDP, 2005-2017



Source: *QM* calculation

The slowing down of the nominal growth of the M2[1] which is evident from the first half of the year continued in Q4 at the end of which the rate dropped to 3.6% y-o-y. (in Q3 that growth stood at 5.6% y-o-y., Table T7-5). The money mass, compared to the value at the end of September, increased by 3.2% mainly thanks to an increase in the NSA which contributed to the growth with 2.9 percentage points while the remaining 0.3 percentage points are due to a rise in the NDA. The y-o-y. growth rate of the M2 in real terms, not including price rises, shows that this growth was almost stopped in Q4. The growth in real terms stands at just 0.6% compared to the level at the end of 2016 which is the lowest growth over the past few years (in 2016 the M2 growth in real terms stood at 8% while in 2015 it stood at 5.5%).

Table T7-5. Growth of money and contributing aggregates, 2015–2017

	2015				2016				2017			
	Mar	Jun	Sep	Dec	Mar	Jun	Sep	Dec	Mar	Jun	Sep	Dec
						y-o-y, in %						
M2[1)]	8.5	7.8	4.1	7.2	7.9	7.8	10.2	9.9	10.3	7.4	5.6	3.6
Credit to the non-government sector[2)]	5.8	4.2	2.2	2.8	2.2	4.7	5.9	2.6	4.1	2.0	0.7	1.8
Credit to the non-government sector[2)], adjusted[3)]	2.8	1.2	1.7	2.5	0.6	3.1	3.9	1.5	3.5	3.5	2.9	4.7
Households	5.5	4.9	3.8	4.3	3.8	5.8	8.4	9.4	11.0	11.8	10.8	10.9
Enterprises	1.2	-1.0	0.3	1.3	-1.4	1.4	1.0	-3.3	-1.3	-2.1	-2.4	0.4
						real y-o-y, in %						
M2[1)]	6.4	5.8	2.6	5.5	7.2	7.3	9.4	8.0	6.4	3.8	2.3	0.6
Credit to the non-government sector[2)], adjusted[3)]	1.6	0.3	1.1	1.8	0.2	2.3	2.8	0.9	2.1	2.7	2.4	4.0
Households	3.9	3.4	2.9	3.4	2.9	4.6	6.6	7.5	8.6	9.7	9.0	9.2
Enterprises	0.3	-1.5	0.0	0.8	-1.5	0.9	0.4	-3.2	-1.7	-2.0	-2.1	0.4
						in bilions of dinars, end of period						
M2[1)]	1,835.4	1,876.1	1,893.8	1,999.7	1,979.6	2,023.2	2,087.0	2,196.8	2,182.7	2,173.3	2,204.5	2275.5
M2[1)] dinars	567.8	595.3	632.4	702.6	645.5	685.0	727.1	808.0	772.7	785.2	808.3	872.1
Fx deposits (enterprise and housholds)	1,267.7	1,280.8	1,261.4	1,297.0	1,334.1	1,338.2	1,359.9	1,388.7	1,410.0	1,388.1	1,396.2	1403.4
						quarterly growth M2[4)] and shares						
M2[1)]	-1.6	2.2	0.9	5.6	-1.0	2.2	3.2	5.3	-0.6	-0.4	1.4	3.2
NFA, dinar increase	-2.5	1.5	2.0	3.7	-2.9	2.0	2.1	3.9	-1.6	0.6	1.1	2.9
NDA	0.9	0.7	-1.0	1.9	1.9	0.2	1.1	1.4	1.0	-1.0	0.4	0.3

Source: NBS

1) Money mass: components – see Analytical and Notation Conventions *QM*.

2) Loans to the non-state sector – loans to enterprises (including local government) and households.

3) Trends are corrected by changes to exchange rate. Corrections are done under the assumption that 70% of loans to the non-state sector (households and the enterprises) are indexed in Euro.

4) Trends are corrected by changes to exchange rate and inflation. Corrections are done under the assumption that 70% of loans to the non-state sector (households and the enterprises) are indexed in Euro.

1 M2 monetary aggregate in the section Monetary Trends and Policy includes the lesser aggregate M1, savings and timed deposits as well as foreign currency deposits in business banks. That means that the aggregate M2 which we follow is equal to the monetary aggregate M3 in NBS reports.

One positive change of note is the speeding up of the rise in real terms of loans to the enterprises and the households to 4% y-o-y. which made the greatest contribution to the maintaining of the growth rate in real terms of loans to households at a high rate of 9.2% y.o.y.

Separating the y-o-y. nominal growth of the M2 into lesser monetary aggregates show that the greatest contribution comes from the smallest monetary aggregate M1. It's contribution to the y-o-y. growth stands at 2.82 percentage points which is somewhat higher than the contribution in Q3. Since the nominal growth of the M2 stands at 3.58% y-o-y. the remaining two components have evidently recorded a significantly lower growth than in the previous quarter and have achieved a smaller contribution to the overall growth.

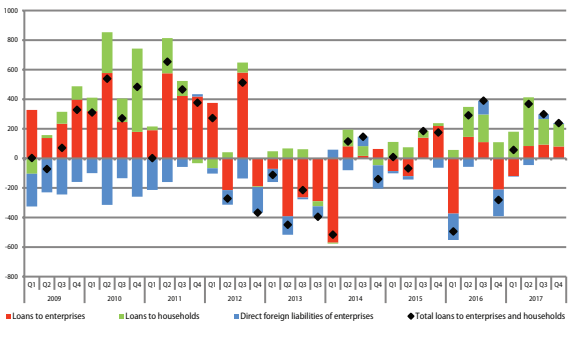
Banking sector: placements and sources of financing

The withdrawal of banks from REPO placements in Q4 brought down overall growth …

… while new net loans to the state, enterprises and the households affected growth

The slowing down of the growth of net placements from the previous quarter continued in Q4 despite the great increase in credit potential among business banks. The net placements in Q4 increased by only 75 million Euro which brought the overall growth of net placements in 2017 to a stop at 1.2 billion Euro (Table T7-7). The greatest influence on the slowing down of growth in Q4 came from the withdrawal of business banks from REPO placements totalling 250 million Euro. That almost completely neutralizes the effects of the growth of net loans to the state and non-state sector. The growth of net loans to the enterprises and the households of 232 million Euro is at a similar level as in the previous quarter with the households once again contributing the most to the increase. Net loans to the households increased in Q4 by 151 million Euro while the enterprises increased its debts by 80 million Euro (net placements to the households in Q3 increased by 173 million Euro and to the enterprises by 93 million Euro). Bearing in mind that banks wrote off debts in this period, the growth of net placements was undervalued, especially in the case of the enterprises, since the total bank loans were decreased by the value of debts written off. The amount of written off debts for the enterprise sector in Q4 stood at around 235 million Euro which is more than a third of the value of debts written in all of 2017 (during 2017 the amount of debts written off for the enterprises stood at 625 million Euro). Business banks wrote off 197 million Euro of bad loans to the households during 2017 and that also caused the overall rise in credit activity to be partly lower. At the end of the year, the state also contributed to the rise in net placements by business banks by withdrawing funds from accounts in Q4 to finance the deficit which appeared seasonally in the last quarter. The net loans to the state increased by 94 million Euro which had a positive effect on the growth of overall net placements.

Graph T7-6. Growth of new loans to the enterprises and households, 2009-2017



Source: *QM* calculation
See footnote 1 in Table T7-5

Data on the enterprise net debts to foreign banks shows that there is no significant recovery in that segment. Local companies increased their net debts to foreign banks in Q4 by just 7 million Euro (in Q3 the growth of net cross-border loans stood at 33 million Euro (Table T7-7). Viewed at the level of the entire year, the enterprises paid off debts to foreign banks totalling 15 million Euro since net debt repayments in Q1 were higher than the growth in the remaining two quarters. The overall growth of net placements to the enterprises and the households from domestic and foreign sources in Q4 stood at 239 million Euro which, along with previous quarters, brought the overall annual rise of net placements to 957 million Euro in 2017. Although the growth is due in great part to the rise in activity in the households segment, credit activity was raised significantly compared to the previous years when we saw more net debt repayments than the net growth of placement. We should also bear in mind that some 824 million Euro in bad loans placed to the households and enterprises were written off which caused the more evident

growth of credit to be significantly lower especially with the enterprises. Once this effect is taken into consideration, the overall growth of net loans to the enterprises and households in 2017 was significantly higher at the level of some 1.7 billion Euro which is a significant rise compared to 2016 when it stood at some 280 million Euro including written off debts.

Minimum debt repayment abroad registered in Q4…

…but corrected data on debts from domestic banks shows recovery of credit activity

Table T7-7. Bank operations – sources and structure of placements, corrected[1] trends, 2015-2017

	2015				2016				2017			
	Mar	Jun	Sep	Dec	Mar	Jun	Sep	Dec	Mar	Jun	Sep	Dec
	in millions of euros, cumulative from the beginning of the year											
Funding(-, increase in liabilities)	241	33	-368	-513	377	168	-363	-1,130	354	-252	-1,138	-2,185
Domestic deposits	47	-118	-324	-918	223	-235	-708	-1,425	107	-104	-426	-1,032
Households deposits	-11	-104	-114	-282	-16	-235	-362	-625	-69	-164	-258	-517
dinar deposits	96	19	-57	-196	3	-75	-154	-290	27	-7	25	-121
fx deposits	-107	-123	-57	-86	-19	-161	-208	-334	-96	-157	-283	-395
Enterprise deposits	58	-14	-211	-635	239	0	-346	-800	175	60	-167	-515
dinar deposits	168	112	-75	-455	385	222	5	-352	207	142	-30	-307
fx deposits	-110	-126	-136	-181	-146	-222	-351	-448	-31	-82	-137	-208
Foreign liabilities	36	150	58	225	181	397	427	335	218	49	-317	-546
Capital and reserves	158	1	-101	179	-27	6	-82	-40	29	-198	-395	-607
Gross foreign reserves(-,decline in assets)	-150	-115	-262	-497	214	337	284	244	-35	-153	-286	-261
Credits and Investment[1]	-20	149	928	1,252	128	426	1,129	997	255	856	1,162	1,237
Credit to the non-government sector, total	24	-21	165	407	-316	32	329	186	61	474	740	972
Enterprises	-86	-207	-67	158	-374	-228	-118	-372	-119	-36	58	138
Households	111	186	231	248	57	260	447	559	180	510	682	833
Placements with NBS (Repo transactions and treasury bills)	-66	100	439	192	-7	-14	276	27	202	289	341	90
Government, net[2]	22	69	324	653	452	408	525	784	-8	93	82	176
MEMORANDUM ITEMS												
Required reserves and deposits	444	605	288	311	-598	-864	-859	-565	-161	-94	-83	-30
Other net claims on NBS[3]	-182	-309	-209	-100	-107	160	6	201	-324	-401	-220	62
o/w: Excess reserves	-204	-317	-225	-134	-102	160	3	187	-326	-415	-223	42
Other items[4]	-352	-379	-404	-343	0	-204	-175	253	-79	18	545	1,176
Effective required reserves (in %)[5]	22	23	20	20	17	16	15	16	16	15	15	15

Source: NBS

1) Calculating growth is done under the assumption that 70% of overall placements are indexed against the Euro. Growth for original Dinar value of deposits is calculated based on the average exchange rate for the period. For foreign currency deposits – as the difference between the states calculated using the exchange rate at the ends of the period. Capital and reserves are calculated using the Euro exchange rate at the ends of the period and do not include the effects of changes to the exchange rate from the calculation of the remaining balance.

2) NBS bonds include state bonds and NBS treasury bonds which are sold at repo rates and rates set on the market for permanent auction sales with a due date greater than 14 days.

3) Net crediting of the state: loans approved for the state decreased by the state deposits in business banks; the negative prefix designates a higher growth of deposits than of loans. State includes all levels of government: republic and local.

4) Other NBS debts (net): the difference between what the NBS owes banks in terms of cash and free reserves and debts to the NBS.

5) Items on bank balance: other assets, deposits by companies in receivership, inter-bank relations (net) and other assets not including capital and reserves.

6) Effective mandatory reserve is the participation of the mandatory reserve and deposits in the overall deposits (by the enterprises and households) and bank debts abroad. The basis for calculation of the mandatory reserve does not include subordinate debts because that data is not available

Bank credit potential records faster growth in Q4 …

…mainly because of the growth of domestic deposits and other sources

The rise in sources for new placements by business banks which was present in 2017 since May continued in Q4 at a visibly faster pace. Following the increase of 886 million Euro in Q3, the credit potential of banks rose by more than a billion Euro by the end of the year (Table T7-7). That amount is almost at the level of the overall growth achieved in 2016. Viewed from the start of the year, the banking sector increased its sources for new placements by 2.2 billion Euro. The greatest contribution to the growth of the sources for new placements came from domestic deposits which rose by 606 million Euro in Q4. The greatest part of that amount is the consequence of the growth of deposits by the enterprises by 348 million Euro while the households increased the amount of its funds in bank accounts by 259 million Euro. The structure the deposits is mainly foreign currency for the enterprises (of the total increase 277 million is in foreign currency deposits) while the households gave a small advantage to foreign currency over Dinar deposits (146 million of the total rise in deposits was in foreign currency). Business banks increased their credit potential in Q4 on the basis of net debts abroad by 229 million Euro. The continued monetary expansion of the European Central Bank through direct and portfolio investments on the European market led to an increased offer of cheap capital. Domestic banks used the situation and withdrew 607 million Euro more than their debts which fell due on earlier loans from outside the country in 2017. The rise in the credit potential of business banks was also caused by an increase in capital and reserves of 212 million Euro in Q4 which meant that the trend in the previous two quarters continued. The rise in the credit potential of banks, especially their debts abroad indirectly confirms the fact that the rise in credit activity is higher than official data shows because of the large-scale writing off of debts. The foreign debts of banks show that banks are expecting a rise in credit activity and indirectly a faster economic recovery.

Table T7-8. Participation of NPLs according to debtor type, 2008-2017

	2009	2010	2011	2012	2013	2014	2015				2016				2017				2018
	Dec	Dec	Dec	Dec	Dec	Dec	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Feb
	balance at the end of period																		
Corporate	12.14	14.02	17.07	19.06	27.76	25.5	25.85	28.63	25.52	24.40	26.89	26.26	23.56	19.48	19.92	19.24	16.86	13.83	14.16
Entrepreneurs	11.21	15.8	17.07	15.92	20.82	43.29	45.19	34.91	32.03	29.92	33.03	30.12	28.44	27.42	26.49	25.02	23.90	16.96	14.59
Individuals	6.69	6.71	7.24	8.32	8.59	9.97	10.16	11.60	10.68	10.53	10.95	10.63	10.36	9.66	9.21	8.35	7.56	6.43	6.24
Ammount of dept by NPL (in bilions of euros)	1.58	1.94	2.63	3.19	4.09	3.70	3.72	3.96	3.61	3.52	3.76	3.75	3.45	2.83	2.83	2.77	2.63	2.16	2.17

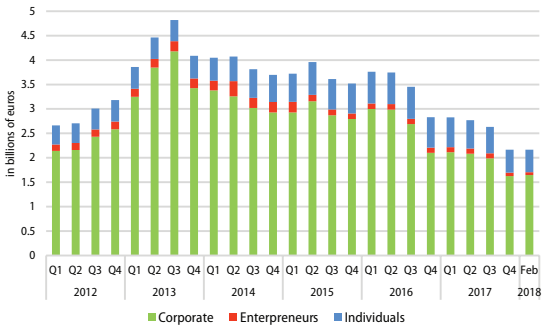
Source: *QM* calculation

The drop in the participation of NPLs speeded up significantly in the second half of the year…

…mainly thanks to the writing off of debts by banks and the rise in credit activity

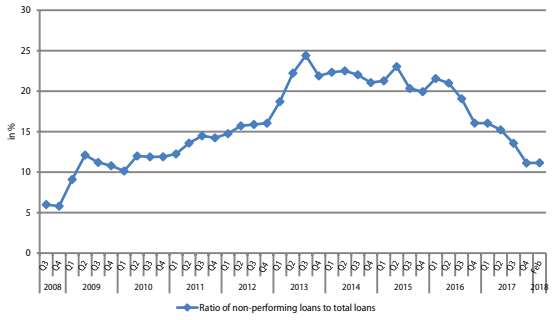
Following several quarters with no great changes in the segment of bad loans, the positive trend of an evident drop in Q3 continued to the end of the year. The overall participation of bad loans which have fallen late by more than 90 days has dropped to 11.12% at the end of Q4 according to the manner of calculation by QM[2] (Graph T7-10). If we observe the trends in the participation of bad loans in the overall from the start of the financial crisis, the level achieved at the end of Q4 was close to the amount at the end of 2009. In the last three months of 2017, the drop in the participation of bad loans by 3 percentage points which was recorded in the companies' segment mainly caused the in overall participation (Table T7-8). Although the greatest drop of 7 percentage points was in the participation of bad loans placed with entrepreneurs, their relatively small mass (around 5% of the total bad loans) could not make a significant contribution to the drop in overall participation. A similar effect on the drop in overall participation of bad loans was caused by the drop of 1.13 percentage points in the segment of bad loans placed with private individuals because of their higher amounts in the overall mass of bad loans than in the case of entrepreneurs. The rise in credit activity had a positive effect on the drop in the participation in all three segments but the greater effect was achieved because of the activities of business banks in writing off and selling bad loans to persons outside the banking system. That is confirmed by the data on the mass of bad loans (Graph T7-9) which shows a significant drop in Q4 by some 470 million Euro, the largest part of which was the writing off and sales to firms of some 360 million Euro.

Graph T7-9. Amount of remaining debt in loans falling late, 2012-2017



Source: *QM* calculation

Graph T7-10. Participation of bad loans in overall placements, 2008-2017



Source: *QM* calculation

Interest rates: state and trends

Interest rates stagnating for most number of loans …

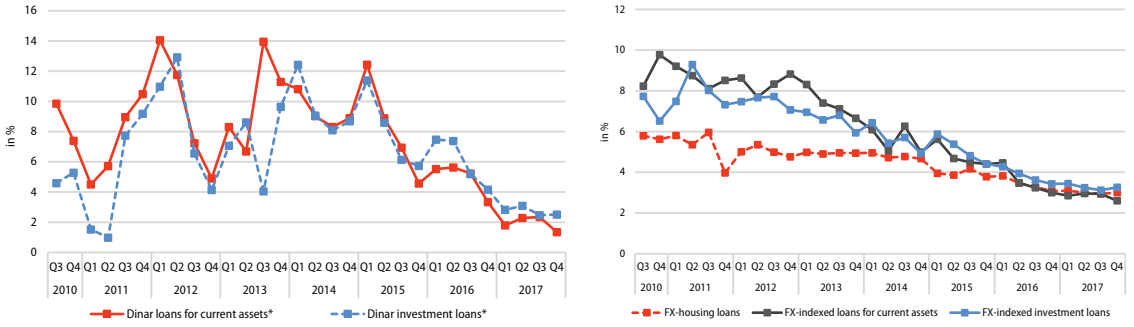
… except in turnover fund loans which continue to drop

The lowering of interest rates in the previous quarters stopped in the last three months of 2017 for a number of loans. Weighted interest rates on indexed housing loans were raised in Q4 by 0.05 percentage points and at the end of December, they were returned to the level at the end of Q2 (Graph T7-11a). The situation was similar with interest rates on indexed investment loans which saw a slightly higher rise of 0.14 percentage points bringing them back to a level similar to that of the first half of 2017. Following the rise and almost unchanged situation in the previous quarter, interest rates on indexed loans for current assets were lowered again at the end of the year by 0.34 percentage points bringing them to the lowest level ever since we have been monitoring this data. In the segment of interest rates on Dinar loans, the situation is similar with a diametric movement of the observed interest rates. On one hand, the weighted interest rates in

2 For details on the manner of calculating the participation of bad loans see *QM* 6 – Under the Magnifying Glass 1: NPLs in Serbia – What is the true measure?

real terms on Dinar investment loans recorded a minimal growth to 2.51% which is still below the level at the start of the year while, on the other hand, interest rates for current assets at the end of Q4 were lower by 1 percentage point and saw their lowest recorded value just like the indexed rates (Graph T7-11b). The fact some courts have disputed the right of banks to charge the cost of calculating loans could lead to a certain rise in interest rates so that banks could cover those costs through interest.

Graph T7-11. Interest rates on Dinar and indexed loans, 2010–2017



Source: *QM* calculation
* interest rates in real terms

HIGHLIGHTS

Highlight 1. Measuring the Quality of Economic Growth

Mirjana Gligorić [1], *Biljana Jovanović Gavrilović* [1]

Abstract: *Quality of economic growth is not a new idea, even though it only recently got into the spotlight. It is a complex, multidimensional concept that valorises the process of economic growth from different aspects and offers an insight into its sustainability. Measuring the quality of growth is a complex and delicate task. This article is a step in that direction. Two variants of the Quality of Growth Index have been constructed for 16 European countries – 11 EU member states and five Western Balkan countries. Bearing in mind the importance of economic fundamentals of growth, as well as its social effects, calculated Quality of Growth Indices are comprised of key economic and social indicators - components. Based on the value of the two Indices, as well as the individual components, the progress for the selected European countries in the previous period was evaluated and a comparison was made. The conducted empirical research indicates the extent to which the economic growth so far is based on sound economic basics and how it has influenced the increase of social well-being in the observed countries. Since the achievement of dynamic and high-quality economic growth is an imperative for the coming period, this research is particularly important as it represents a "pioneering" undertaking to quantify the quality of growth in individual European countries. The results of the research can provide information to economic policy makers of the analysed countries on what has been achieved so far and point to the desirable directions of action in the future in order to ensure faster and better growth of their economies.*

Introduction

The unsustainability of pre-crisis models of economic growth came to light with the emergence of the global economic crisis a decade ago. The crisis has highlighted the weaknesses that are present in many economies, as well as the fact that it is important not only to recover from recession, but also to establish new models of economic growth. The Quality of Economic Growth, in addition to dynamics, defines economic development in the long term, so the speed and ways of increasing production are equally important in the long run.

This paper shows the key characteristics of the Quality of Economic Growth, as well as important indicators that represent the basic components in establishing the quality of growth indicators. Two variants of the Quality of Growth Index have been created, which include economic and social indicators. Empirical analysis deals with the measurement of the Quality of Economic Growth in the countries of the new EU member states and the Western Balkan countries, which represents a "pioneering" venture to quantify the quality of growth in these European countries. The aim is to gain insight into the achievements of the observed countries so far, and to provide guidelines to economic policy makers on healthy ways of achieving economic growth in the future. Additionally, measuring the quality of economic growth in Serbia, as well as the comparison with other countries in the sample, sets the foundation for formulating appropriate messages for managing development policy in the coming period.

Defining the Quality of Economic Growth

Quality economic growth is multidimensional - in addition to economic, it includes social and environmental aspects of growth in production activity. According to the Quality of Economic Growth concept, the ways in which growth is achieved are also important, but also the results from the aspect of human well-being. The special significance of this concept lies in a comprehensive approach to increasing production, simultaneously taking into account the economic, social and environmental dimensions of this process. Its essence is to ensure fast and stable economic growth, and a long-term increase in the standard of living of the population[2].

Quality economic growth is long-lasting because it is self-sustaining - i.e. current growth creates favourable bases for future production growth. In addition, quality growth takes care of vulnerable groups in society, as well as the natural environment. Quality economic growth is dynamic, stable and resistant to external shocks, accompanied by high investments (primarily in human capital). Some authors define quality growth as a growth that reduces extreme poverty, narrows structural inequalities, protects the natural environment and, as such, maintains the process of growth itself (López, Thomas and Wang, 2008). Other authors consider that good economic growth is strong, stable and sustainable, i.e. one that increases labour productivity and leads to socially desirable outcomes - e.g. improving living standards, in particular through the reduction of poverty (Martinez and Mlachil, 2013).

Some periods in the development of the economy and society are declared successful only because they have

1 Faculty of Economics of the University of Belgrade

2 Jovanović Gavrilović (1997), p.32

achieved a high growth rate. However, rapid growth in the present can be achieved at the expense of future prosperity. The experiences of countries have shown that high growth rates do not necessarily lead to better social outcomes, i.e. a significant reduction in poverty, inequality and unemployment, and as such are not a guarantor of its quality. Therefore, it is important to take into account many aspects of growth, in order to realistically perceive relevant implications for human well-being and assess its importance for long-term economic expansion.

Constructing the Quality of Growth Index

To measure the quality of growth, we calculated two Quality Growth Indices: QGI and QGIm. Indices were calculated on a sample of 16 European countries - 11 new EU member states[3] and five Western Balkan countries[4]. We started from the work of Mlachila, Tapsoba and Tapsoba (2014) and based on their method, created related indices[5]. Based on the available data for the observed group of countries, the index values for the period 2001-2015 are calculated[6].

The Quality of Growth Index is an aggregate indicator that reflects the multidimensional nature of growth, since its composition includes economic and social indicators. Therefore, the Quality of Growth Index consists of several indicators that represent its components/subcomponents.

In creating the Index, we used a min-max approach, since the indicators that represent its components/subcomponents are displayed in different units of measure.

We used the following formula for the conversion of values for each individual indicator:

$$(X - X_{min}) / (X_{max} - X_{min})$$

In the given formula, X is the indicator value for a given country and year, while X_{max} and X_{min} are the maximum and minimum value of that indicator in the observed countries in a given year. In this way, the obtained indicator values are reduced to a number in the range (including) 0 and 1. Thus, for each indicator, value 0 is assigned to a country with a minimum value of the indicator, and a value of 1 to the country with its highest value. Therefore, the initial values of the indicators are reduced to the index numbers by this procedure, which, with a certain weighting, are an integral part of the Quality of Growth Index.

The Quality of Growth Index has two key dimensions: *Growth Fundamentals* and *Social Outcomes* (see Figure 1). Components that can be used to calculate the *Growth Fundamentals* are *Strength*, *Volatility*, *Sectoral Composition* and *Demand Composition* (Figure 1).

Growth Strength represents the annual change in the real GDP *per capita*. Growth volatility is calculated as the reciprocal value of the coefficient of variation for a three-year span[7]. *Sectoral Composition* reflects the extent to which economic growth is generated by diversified sources. Considering the availability of data, the indicator is one minus the Herfindahl-Hirschman index (HHI) of export flows, which indicates the diversification of export products and represents a *proxy* for diversification of production. External orientation of growth (*Demand Composition)* is approximated by the percentage share of net external demand in GDP, i.e. net exports and GDP ratio.

Within the Social Outcomes, the *Health* component consists of two sub-components: life expectancy and the reciprocal value of the infant mortality rate. The average number of years of schooling was used as an indicator of *Education*[8].

The index can be calculated using different weights. In this analysis (as with Mlachila et al., 2014), equal weights for each dimension, component, and sub-component were used, where in the first variant of calculating the Quality of Growth Index, the *Growth Fundamentals* included the four components listed (*Strength*, *Volatility*, *Sectoral Composition* and *Demand Composition*). In the second variant, we took into account only two components (*Sectoral Composition* and *Demand Composition*). The Dimension *Social Outcomes* is the same in both variants of the Index.

The Quality of Growth Index is calculated in two variants, because the strength and volatility can be treated as components of the quality of growth, but also as indicators of its quantity, whereby the qualitative side of growth is assessed on the basis of other indicators.

3 The Czech Republic, Poland, Hungary, Slovakia, Slovenia, Bulgaria, Romania, Latvia, Lithuania, Estonia and Croatia.

4 Serbia, Macedonia, BiH, Montenegro, and Albania.

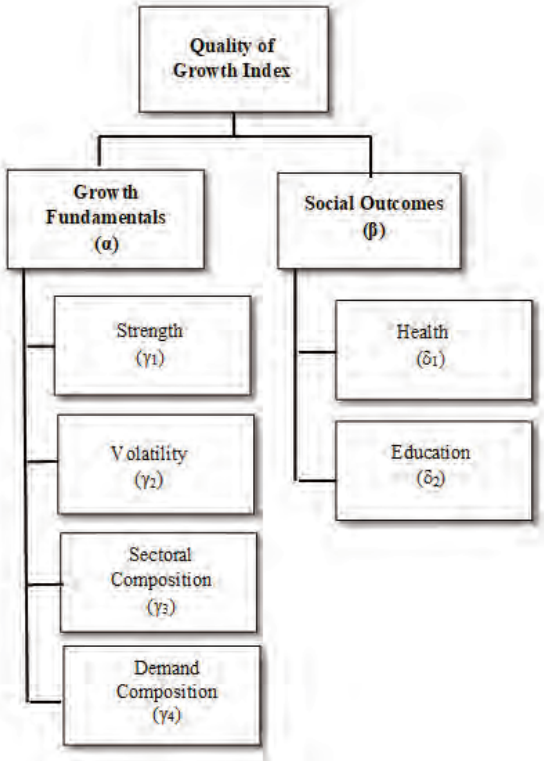
5 Mlachila, Tapsoba and Tapsoba (2014) described the process and calculated the Quality of Growth Index for more than 90 countries in the world. Considering the countries that are the subject of our analysis, the authors calculated the Index for only three countries: Poland, Bulgaria and Albania.

6 The data we have are for the period 2000-2016, but since one indicator (volatility of growth) is calculated as a three-year moving average (for a certain year, it is calculated as a quotient of average and standard deviation of the growth rate for that year, previous and the following year), the value of the Growth Index can be acquired for the time period 2001-2015.

7 See the previous footnote.

8 Mlachila, Tapsoba and Tapsoba (2014) used primary school graduation rate, considering the availability of data in the selected countries, with a note that a series of other relevant education indicators can be used as well – among others, average number of years of schooling (see pages 7 in the authors' paper), which we consider more adequate for the countries included in our research.

Figure 1. Quality of Growth Index Components



Source: Mlachila et al. (2014), p.6
Note: $\alpha, \beta, \gamma_1, \gamma_2, \gamma_3, \gamma_4, \delta_1$ and δ_2 are the weights attributed to each dimension/component of the Quality of Growth Index.

In the first variant of the Quality of Growth Index, which we have labelled QGI:

- *Growth Fundamentals*, as shown in Figure 1, comprise of four components. The value of each component/indicator, reduced to scale 0-1 and weighted with 0.25, i.e. data is equal to each weight, γ_1, γ_2, γ_3, γ_4, from 25% with variable *Strength, Volatility, Sectoral Composition* and *Demand Composition*.
- *Social Outcomes* are composed of two components: *Health* and *Education*, whose values are calculated from the previous min-max form after calculation, ranging from 0 to 1. Equal weights are assigned to them (see Figure 1): $\delta_1 = \delta_2 = 50\%$. Since *Health* consists of two sub-components, their values (also in the range 0-1) are also weighted at 50%.

The formula for calculating QGI is the following:

$QGI = 0{,}5 \cdot (0{,}25 \cdot \text{Strength} + 0{,}25 \cdot \text{Volatility} + 0{,}25 \cdot \text{Sectoral Composition} + 0{,}25 \cdot \text{Demand Composition}) + + 0{,}5 \cdot (0{,}5 \cdot \text{Health} + 0{,}5 \cdot \text{Education})$

In addition, we have calculated a somewhat changed (modified) Quality of Growth Index, QGIm:

- *Growth Fundamentals* comprise of two components: *Sectoral Composition* and *Demand Composition*. The value of each stated indicator reduced to the scale 0-1, by which we assign ponders 0.5 (i.e. in Figure 1 $\gamma_1 = \gamma_2 = 0$, while $\gamma_3 = \gamma_4 = 0{,}5$).
- Social Outcomes remain unchanged compared to QGI, i.e. they are comprised of two components, *Health and Education*, reduced to values between 0 and 1, with ponders $\delta_1 = \delta_2 = 50$, as well as equal ponders (50%) of the sub-components within *Health* component.

Therefore, after excluding the impact of the growth rate and growth volatility on the value of the Index, we calculate the modified QGI (QGIm) as follows:

$QGI = 0{,}5 \cdot (0{,}5 \cdot \text{Sectoral Composition} + 0{,}5 \cdot \text{Demand Composition}) + 0{,}5 \cdot (0{,}5 \cdot \text{Health} + 0{,}5 \cdot \text{Education})$

The Main Results

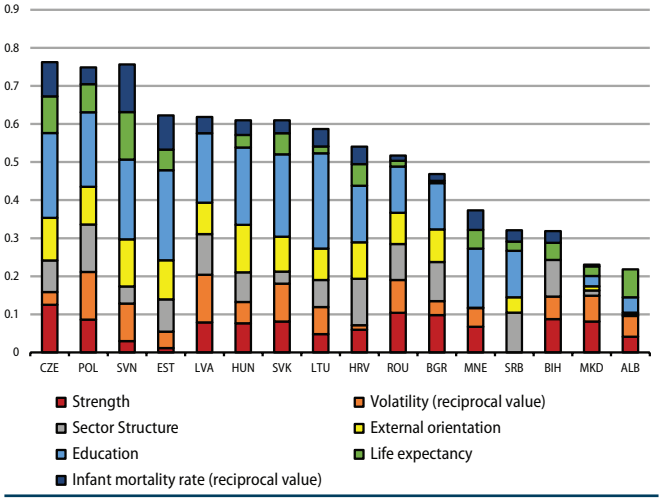
The QGI values for the observed European countries are shown in Chart 1, in descending order in 2015. The observed rank of countries according to QGI is similar to that based on per capita income, which suggests that this index is significantly correlated with the level of income of countries in the sample.

In addition to the height of the columns - QGI values - Chart 1 also shows the contribution of each component to the formed value of the Index. Czech R. occupies the first position in the sample, with an index of 0.76. The second and third positions are occupied by Poland and Slovenia, with QGI values of 0.75 and 0.63, respectively. According to QGI, Serbia is ranked 13th out of 16 countries surveyed. The value of QGI in Serbia is 0.32 in 2015, and is better ranked than Bosnia and Herzegovina, Macedonia and Albania. The lowest value of QGI of 0.22 in the observed year was recorded in Albania.

If we look at the value of the components that constitute the QGI - or to be more precise, the weighted values of each indicator previously reduced to a scale of 0 to 1 - one can see the relative advantage / backlog of each country in relation to others according to each indicator in 2015. In the case of the Czech Republic, the importance of all components in the formation of the QGI value is quite visible (with the biggest contribution of education), except that, compared to other countries, a somewhat more pronounced growth volatility was recorded. According to the presented QGI components, Serbia, in relative terms, has a satisfactory level in the case of diversification of exports, followed by education. The lowest values were recorded in two components: growth rates in 2015 and growth volatility in the period 2014-2016. With these two indicators, Serbia had the worst result (it had reached the lowest values) compared to other countries and they amounted to 0 and gave zero contribution to QGI. The value of Albania's QGI com-

ponents is low - with more pronounced contribution of growth stability and life expectancy (Chart 1).

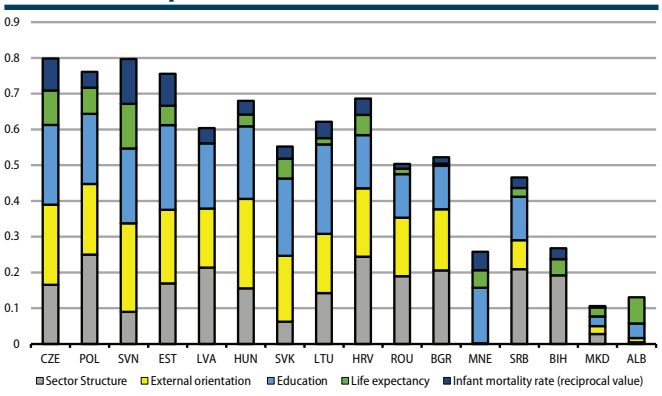
Chart 1. Values of QGI and Its Components in Selected European Countries



Source: Authors' own calculation and presentation using the data of the World Bank, UNDP and UNCTAD
Note: CZE – The Czech Republic, POL - Poland, SVN - Slovenia, EST - Estonia, LVA - Latvia, HUN - Hungary, SVK - Slovakia, LTU - Lithuania, HRV - Croatia, ROU - Romania, BGR - Bulgaria, MNE - Montenegro, SRB - Serbia, BiH - Bosnia and Herzegovina, MKD – Macedonia, and ALB - Albania.

The results of QGIm for 2015 - its values, as well as the contribution of each individual component, are shown in Chart 2. It can be noted that the ranking of countries is to a certain extent altered. In the first place, the Czech Republic, whose QGIm value is 0.798, is followed by Slovenia, which occupies the second position with QGIm 0.797. The third place is Poland, whose QGIm is 0.761. With QGIm of 0.466 Serbia is ranked as 12 out of 16 countries surveyed. Therefore, according to this calculated index, Serbia is ranked better than according to the QGI and is located in front of all the other countries of the Western Balkans. In the last position among the countries observed, now is Macedonia, with QGIm 0.106. The contribution of each individual indicator that enters the calculation of QGIm is also seen in Chart 2.

Chart 2. Values of Modified QGI and it components in selected European Countries



Source: Authors' own calculation and presentation using the data of the World Bank and UNCTAD
Note: CZE – The Czech Republic, POL - Poland, SVN - Slovenia, EST - Estonia, LVA - Latvia, HUN - Hungary, SVK - Slovakia, LTU - Lithuania, HRV - Croatia, ROU - Romania, BGR - Bulgaria, MNE - Montenegro, SRB - Serbia, BiH - Bosnia and Herzegovina, MKD – Macedonia, and ALB - Albania.

Chart 3 and Chart 4 show the levels of QGI and QGIm, respectively from 2001 to 2015. We reiterate that these are relative levels, since the value of the Index is weighted by the sum of the values of the components expressed in relation to the values of those components of other countries in the sample for each year. For both indices, data for QGI and QGIm for Serbia in each observed year are given, as well as the average values of these indices for 11 EU countries and 3 WB countries[9].

The data on both charts indicate that the average value, whether QGI or QGIm, for 11 EU countries is relatively the highest throughout the time interval. Serbia has a relatively lower value of the quality index in each year in comparison with the average value of 11 EU countries. On the other hand, the value of the Serbian index is above the average level of the index for the three WB countries.

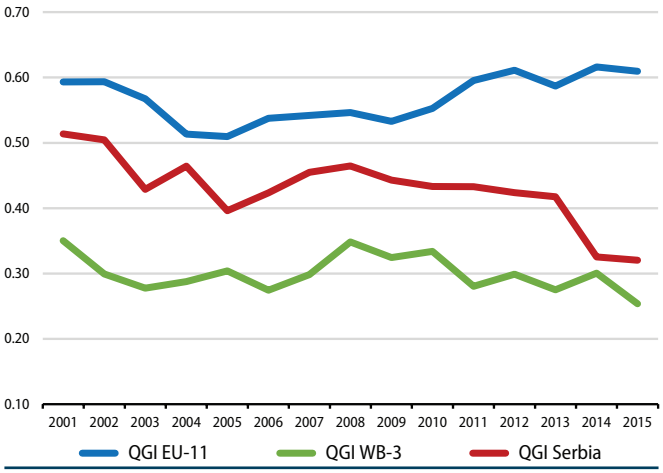
Growth rate and growth volatility are important components of QGI. They together determine one-fourth of QGI values. This leads to an obvious difference in the relative level of the index, as well as the level changes shown in Chart 3 and Chart 4, depending on whether the index contains these two components or not.

Chart 3 shows that the very low growth rate in Serbia (the lowest among the observed countries) and the very high (relatively most pronounced) growth volatility had a dominant contribution to the relative decrease in the QGI level in Serbia compared to the QGI of the two groups of countries in 2014 and 2015. In fact, in Serbia in 2014 and 2015, adverse weather conditions - floods in 2014 and drought in 2015 - reflected on economic growth. Therefore, in the past two years, the relative decrease in the level of QGI of Serbia can be estimated as a result of extreme factors and can therefore be considered as temporary. However, one should bear in mind that one can expect the same relative position of Serbia towards the QGI in 2016 and 2017, keeping in mind also the adverse weather conditions in these two years and the relatively low growth rate in comparison with the countries of Central and Eastern Europe. The poor performance of Serbia in relation to other countries in the sample can be partly attributed to the fundamental weaknesses of the domestic economy, removal of which

9 Values for QGI and QGIm are calculated without Montenegro, as there is no data for each year of the displayed time interval: 2001-2015.

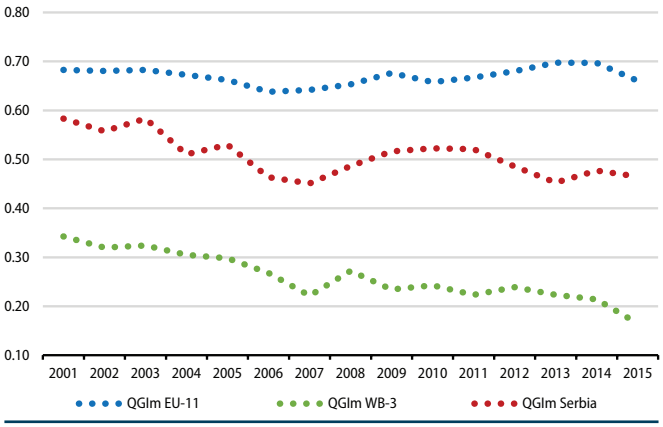
would lead to an improvement in the quality of Serbia's growth in the future period.

Chart 3. Level of Serbia's QGI compared to EU and WB averages, 2001-2015



Source: Authors' own calculation and presentation using the data of the World Bank, UNDP and UNCTAD
Note: EU-11 – average value of QGI of 11 observed EU member states, WB-3 – average value of QGI of B&H, Albania and Macedonia.

Chart 4. Level of Serbia's QGIm compared to EU and WB averages, 2001-2015



Source: Authors' own calculation and presentation using the data of the World Bank, UNDP and UNCTAD
Note: EU-11 – average value of QGIm of 11 observed EU member states, WB-3 – average value of QGI of B&H, Albania and Macedonia

Conclusion

Empirical research in this paper was carried out with the idea of creating indicators for measuring the Quality of Economic Growth, monitoring changes in the quality of growth and its components, as well as the comparison of countries with the quality of growth and its dynamics. The paper evaluates two variants of the Quality of Growth Index (QGI and QGIm) for European transitional countries during the period 2001-2015. Their values indicate that the transition countries that are members of the EU have a relatively higher level of quality of economic growth than the countries of the Western Balkans. In addition, both indicators indicate that the quality of growth in Serbia is below the level of quality of EU member states' growth, and above the level of non-EU member countries.

In the past few years, Serbia's economy has achieved relatively lower economic growth compared to other transition countries in Europe, primarily due to unfavourable weather conditions. However, in the domestic economy there are certain fundamental weaknesses, removal of which would lead to higher and more stable growth rates, as well as to better development performances. This would mean improving the quality of Serbia's growth, i.e. permanent improvement of prosperity both from the economic and from the social point of view.

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Highlight 2. What determines wage levels and dynamics in Serbia?

Nemanja Vuksanović [1], *Milojko Arsić* [2]

Introduction

Over the past few years there has been a growing interest of various economic actors in terms of the need to monitor wage trends and, accordingly, to implement sustainable wage policies that would prevent economy stagnation or its running hot and to ensure fair distribution of labour income. The International Labour Organisation in its latest *Global Wage Report* (ILO, 2017) identified several reasons for explaining this fact. First, they represent the major source of income for most households, and consequently have a huge influence on people's living standards. Thus, for example, in developed economies wages usually represent about 70 to 80 per cent of total income for households with at least one member of working age. In developing countries, the contribution of wages to household total income is smaller ranging from 50 to 60 per cent, where self-employment income, including income from agriculture, comprises a larger share of household income in these countries than in developed countries (ILO, 2015). Second, wages, with exchange rates and interest rates, represent the most important price in an economy that affects medium- and long-term economic growth. In the medium-term, wages have a key influence on balancing between supply and demand, and consequently affect macroeconomic stability, that is external deficit and inflation. In the long-term, wages of employees, which represent a cost of enterprise, strongly affect the international competitiveness of an economy, and thus its growth. In the modern world, most markets are globalized, so input prices which are used in production are more or less uniform. Labour markets, however, with the exception of the European Union, are still deeply divided by state borders[3], making wages to significantly vary among countries. In this regard, the international competitiveness of a given economy depends critically on wages. In political terms, the share of wages in the gross domestic product (GDP), and wage inequality, are important topics which economic growth depends on, but also social stability of the society. Excessive inequality in income from labour and capital, as well as wage inequality, can lead to weaker social cohesion, increased political polarization, aggravating conflicts in society, thus threatening economic growth.

During most of the post-crisis period, wage growth at the global level could be mainly explained by relatively strong wage growth in developing countries in Asia (notably in China where wages grew at 10.5 per cent annually over the last decade). Looking at the regional level, in 2016 compared to 2015, real average wages grow in Central and Western Asia (3.4 per cent) and Africa (2 per cent), while they declined in Latin America (1.3 per cent) and East Europe (5.2 per cent). After a long period of stagnation, wages saw growth in developed countries as well over the last few years. For example, at the regional level, real wage growth rose in Northern America (to 2.2 per cent), Northern, Eastern and Western Europe (to 1.5 per cent) (ILO, 2017). Large difference in real wage growth rates in the post-crisis period reflect the difference in the pace of economic recovery, different alignment between wages and productivity in the pre-crisis period, as well as difference between supply and demand in the labour market.

Given the aforementioned, that is the importance of wage as one of the major sources of income for citizens and as a factor which influence the economic competitiveness, the analysis in this *"Osvrt"* (Highlight) will focus on the wage and its determinants in Serbia. The analysis will provide insight into nominal and real average wage trends of workers in Serbia in the period from 2001 to 2017, and a comparison between wage levels in Serbia to those in Central and Eastern European countries for 2017. This *"Osvrt"* will analyse the correlation between average wages and labour productivity, which will enable us to perceive how much the average Serbian earns and how productive he is. The final section of this *"Osvrt"* is dedicated to analysing problems resulting from significant and long-term deviation of wages from the level determined by productivity.

Wage dynamics in Serbia and comparison with other countries

Various social actors, from leading politicians to trade union representatives, often announce or demand a significant wage increase in Serbia. Over the last few years top government officials have announced that the average wage in Serbia would reach 500 euros next year. At the same time, constant pressures of trade union associations to increase wages by 10 per cent or more per year have not abated. In light of the above, examining wage trends in Serbia becomes important.

If we look at the time period from 2001 to 2017, it is observable that nominal average net wage growth (net

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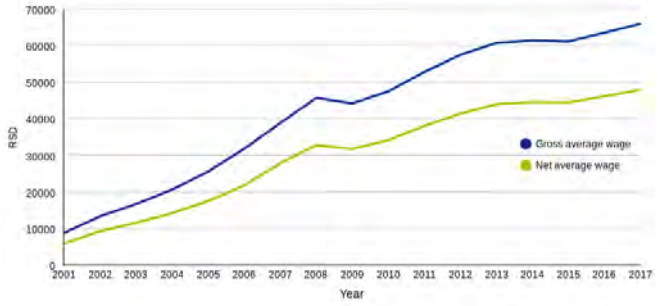
3 Progress in the sectors of telecommunications and information technologies has led to the formation of global market in some segments of the labour market, even without physical migration of workers from one country to another. This is, however, the exception rather than the rule. Hence, there is still an assessment that labour markets are strongly divided by state borders.

wage is the amount after deduction of taxes and contributions from gross wage) was constant according to data from the National Statistical Office. The average monthly net wage ranged from RSD 5,840 in 2001 to RSD 47,888 in 2017. That is, the net wage earned by an average worker in Serbia in 2017 was higher than in 2001 as much as 8 times4. Until 2008, the average net wage in Serbia rose from RSD 6,000 to RSD 33,000 due to real growth and relatively high inflation. After that, from 2008 to 2017, the average net wage increased from about RSD 33,000 to about 48,000.

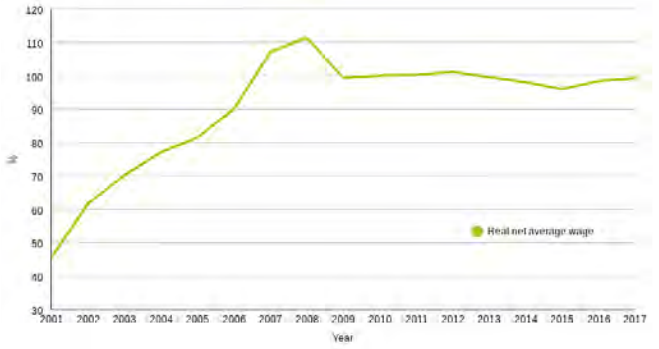
Graph 1. Gross and net average wage trends in Serbia from 2001 to 2017



Source: Based on data from the Statistical Office of the Republic of Serbia

However, changes in real terms of the purchasing power of average wages can only be analysed on the basis of real wages (removing inflation from nominal wages). Although average wages account for just over 50 per cent of the total income of average three-member household in Serbia, their trend is an approximate indicator of the overall living standard trend. The reason is that changes in other sources of income (e.g. pensions, social aid, etc.) are strongly correlated to changes in average wages. After eliminating inflation, real average net wages in the last 17 years grew just over 2 times, which is significantly less than their nominal growth. Graph 2 shows two significantly different periods in real average wage trends in Serbia over the last 17 years. In the pre-crisis period, from 2001 to 2008, net average real wage growth rose cumulatively by 143 per cent, or 11.8 per cent annually on average. In the crisis and post-crisis period[5], from 2009 and 2017, net real average wage growth stagnated, as they rose cumulatively by less than 1 per cent, or 0.07 per cent annually on average.

Graph 2. Index of real average net wage trend in Serbia from 2001 to 2017 (base indices, 2010=100)



Note: see footnote 4.
Source: Based on data from the Statistical Office of the Republic of Serbia

While real wages roughly reflect living standard trends of citizens, wages in euros show both trends, citizens' living standard and international competitiveness of the Serbian economy. In the period from 2001 to 2017, average net wages in euros increased almost 4 times, twice their real growth. Wages in euros reflect not only real wage trends, but also the Dinar real exchange rate trends. In times which record real appreciation of the Dinar, wages in euros grow faster than real wages, while in periods which record real depreciation of the Dinar, wages in euros grow more slowly than real wage growth. Significant real appreciation of the dinar from 2001 to 2002 and from 2005 to 2008 particularly affected the faster growth of wages in euros compared to real wage growth. Changes in average net wages in euros show a similar pattern as changes in real average net wage growth, with the difference that changes in wages in euros are more intensive (as they are also affected by changes in the Dinar real exchange rate). In the pre-crises period, from 2001 to 2008, wages in euros rose by as much as 3.8 times, which is significantly higher than real growth in the same period (slightly more than 2 times). In the crisis and post-crisis period, from 2009 to 2017, average net wages in euros rose by about 20 per cent, while in the same period real wage growth stagnated. These differences are also noticeable in the latest period. For example, in the last year, real wage growth rose by 0.9 per cent, while wages in euros increased by 8.3 per cent.

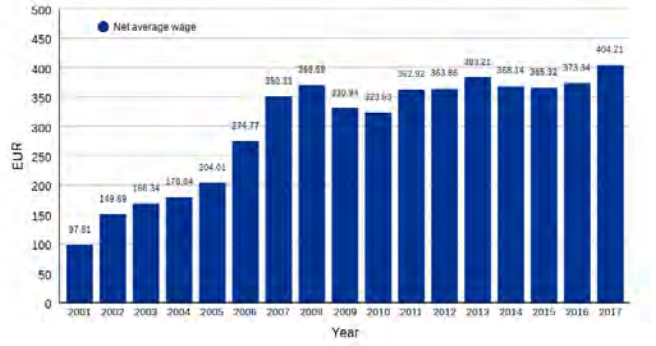
What is the position of the average Serbian compared to an average citizen living in a Central or Eastern European country, based on his wage earned? Among countries in this region in 2017, the highest average monthly net wage was recorded in Germany, in the amount of 2,270 euros, while the lowest average monthly net wage was recorded in Albania. With the exception of Germany, the top 5 countries in this region based on average net wage are Slovenia (1,074 euros), Estonia (945

4 When comparing wages in the pre-crisis period (before 2009) with wages in the post-crisis period (after 2009) it should be kept in mind that from January 2009 wages paid to employees working for sole-traders have been included in calculation of wages and salaries, which reduced average wages by 8-9 per cent.

5 When analyzing real average net wage trends by periods, the change in 2009 compared to 2008 was "skipped", as it is mostly due to the change in the methodology of calculating wages.

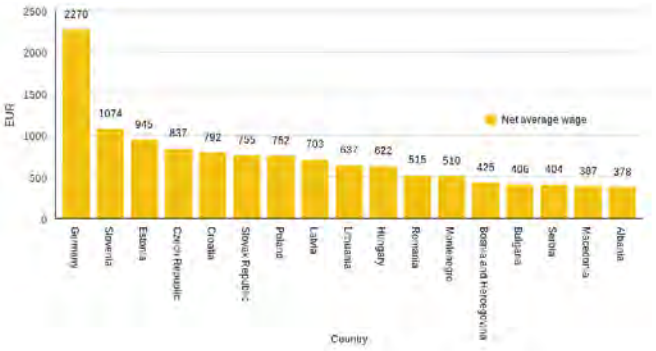
euros), Czech Republic (837 euros), Croatia (792 euros) and Slovakia (755 euros). In the middle of this list are Poland (752 euros), Latvia (703 euros), Lithuania (637 euros), Hungary (622 euros) and Romania (515 euros). With the exception of Albania, the bottom 5 countries are Montenegro (510 euros), Bosnia and Herzegovina (425 euros), Bulgaria (406 euros), Serbia (404 euros) and Macedonia (387 euros). In terms of this indicator, Serbia is at the very bottom of the list among the Central and Eastern European countries for 2017. Compared to Serbia, the only countries in which the average citizen earned a lower wage last year were Macedonia and Albania. It is observable that the Serbian citizen, based on his average wage, falls significantly behind inhabitants of other countries in this region.

Graph 3. Changes in average net wages in euros in Serbia from 2001 to 2017



Source: Data from the Statistical Office of the Republic of Serbia and the National Bank of Serbia

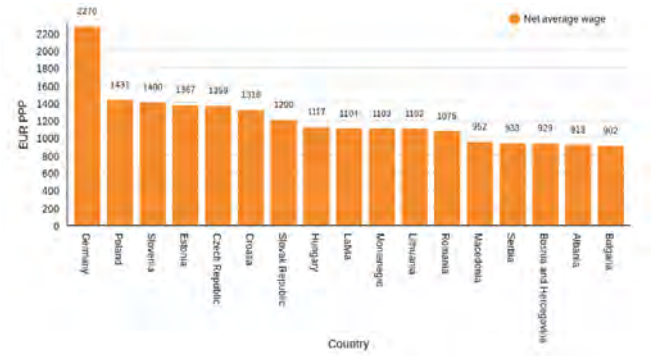
Graph 4. Average net wages in euros in the Central and Eastern European countries in 2017



Source: Based on data of Eurostat and national statistical offices

When comparing wages in different countries, it is important to keep in mind that average prices vary among these countries. There is a particular rule indicating that average prices in developed countries are higher than those in less developed countries – these differences are due primarily to higher prices of non-tradable goods (such as public utilities, health services, educational services, etc.). It is therefore necessary for wages in euro in all countries to be expressed in the purchasing power parity of the euro (PPP/EUR), which essentially means to assume that prices in all countries are the same. Graph 5 shows wages expressed in the purchasing power of the euro, with the assumption that prices in all countries are equal to those in Germany.

Graph 5. Average net wages in PPP/EUR in the Central and Eastern European countries in 2017



Source: Based on data from Eurostat and national statistical offices

As expected, using PPP/EUR reduces differences in average net wage levels among the Central and Eastern Europe countries. However, these differences remain relatively high and reflect differences in the level of development of these countries, i.e., differences in productivity level. Thus, for example, despite the fact that this difference has been halved, the purchasing power of average net wages in Serbia is 2.4 times lower than it is in Germany or 1.5 times lower in Slovenia.

Why are wages low in Serbia?

Where do these major differences between average wages among different countries originate? Why did the average German have 2.4 times and the average Slovenian 1.5 times more purchasing power[6] than the average Serbian in 2017? What determines average wage levels in a country? To answer these questions: the average productivity level is the basic determinant of average wages in a given country, i.e., differences among countries in terms of their productivity are reflected as differences in terms of average wage levels. It should be noted that the productivity level in the sector of tradable goods and services (such as industry, agriculture, tourism, etc.) is the key factor affecting wages in a country. That is, productivity growth[7] in the tradable goods sector contributes to average wage growth rise in a country. Average wages in the sector of non-tradable goods and services (such as trade, health, education, security,

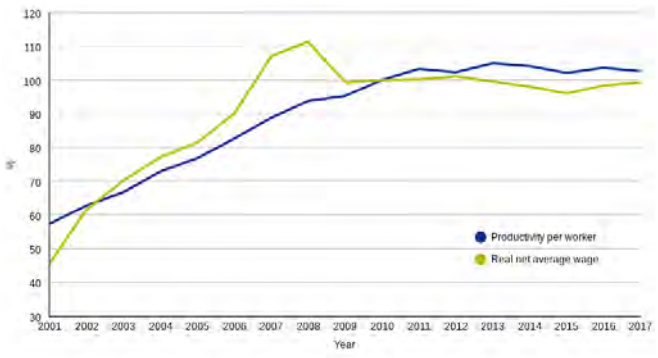
6 Please note that nominal average wage in Germany is 5.6 times higher, and in Slovenia, it is 2.7 times higher.

7 Productivity growth depends mainly on the increase of the value of physical and human capital per worker. The amount of physical capital per worker is determined by investment rate, while the amount of human capital per worker depends on improving coverage and quality of education, introduction of incentives for learning through work, etc.

public administration, etc.) reflect average wage growth trends in the tradable goods sector. Lagging behind other countries in terms of productivity in the sector of tradable goods and services is characteristic of Serbia.

Graph 6 shows trends in average real net wages and labour productivity[8] in the period from 2001 to 2017. For the entire period, average net wage growth was similar to productivity growth. Productivity, like real wages, grew sharply in the pre-crisis period, while its growth in the post-crisis period became considerably slower. However, some differences can be noted – real wage growth was faster than productivity growth until 2008, and real wage growth was slightly slower after that. Real wage growth slower than productivity growth after 2008 can be described as the return of real wages to a sustainable level, determined by productivity.

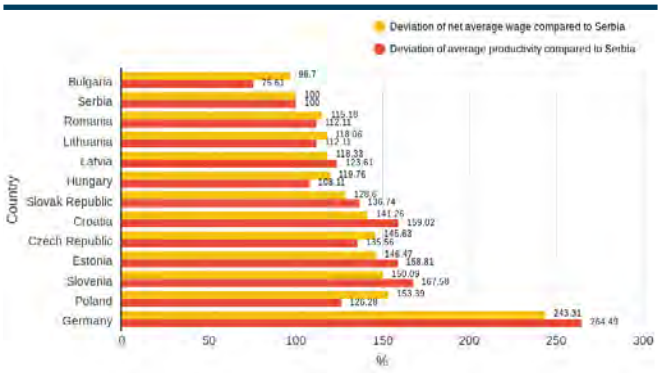
Graph 6. Indices of real average net wages and productivity per worker in Serbia from 2001 to 2017 (base indices, 2010=100)



Source: Based on data from the Statistical Office of the Republic of Serbia

Comparison of labour productivity among Central and Eastern European countries provides valid evidence of a link between average productivity level and average wage level. Ratios were calculated by comparing productivity per worker/wage in a particular country with productivity per worker/wage in Serbia. If the resulting value for given country is greater than 100, this means that average productivity/average net wage in that country is higher than it is in Serbia. These calculations confirm the importance of productivity for average wage. In 2017, in all observed countries where average net wage expressed in euro with equal purchasing power was higher than the wage in Serbia, productivity per worker was also greater than productivity recorded in Serbia. Thus, for example, the average worker in Germany received an average net wage 2.4 times higher than the one received by the average worker in Serbia expressed in PPP/EUR, but the average German was 2.7 times more productive than the average Serbian. Furthermore, the average Slovenian earned (net) 1.5 times more than the average Serbian, but was 1.7 times more productive at the same time. It is notable that for almost all countries in the region, the deviation in relation to the average net wage in Serbia is very similar to the deviation in relation to average productivity in Serbia.

Graph 7. Deviation of average net wage in PPP/EUR and average productivity per worker in the Central and Eastern European countries compared to Serbia in 2017



Note: Data on productivity per work relates to 2016
Source: Based on data from Eurostat and national statistical offices

Consequences of the deviation of wage levels from productivity levels

Real wages positively and strongly correlate to productivity, and consequently the changes in average productivity in a country determine the trend for fluctuation of average real wages. However, what happens when there is a larger and longer-lasting gap between wages and productivity?

In small open economies, if average wage growth is faster than average productivity growth, this is usually firstly reflected in increased foreign trade deficit, followed by increased external debt. An increase in external deficit is the result of the impact of excessive wage growth on aggregate demand growth, which in turn leads to an increase in import, weakening of international competitiveness of the economy, causing slower growth of export. Given that wages make up a large share of the gross domestic product, if they grow faster than productivity, this reduces available investment funds, resulting in stagnation, or even a decline in investment. A low level of investment leads to slow growth of capital per worker, which is why productivity growth in turn is slow, and this reflects back on the slow growth of real wages, and therefore the overall citizens' living standard in the future. Overall, if wages grow faster than pro-

8 Productivity per worker was calculated as the ratio of gross domestic product at constant prices to registered employment. Methodologically, it would be more correct to use total employment according to the *Labor Force Survey,* but we think that data on total employment is extremely unreliable and that such obtained results obtained would not be relevant, as we have already written in several previous issues of the *Quarterly Monitor of Economic Policies and Trends in Serbia.*

ductivity in the present, this will undermine real wage growth in the future.

If average wage growth is slower than productivity growth, deflationary pressures will be present in given country, as aggregate demand in such circumstances will be low, and this will slow down economic growth and increase unemployment rates. Additionally, in this case, economic inequality among the population will be pronounced, and this can cause escalated social conflicts, which can have a negative effect on economic growth.

Therefore, significant and long-term discrepancy between average real wage and labour productivity in a country, irrespective of the direction, will have negative consequences on macroeconomic stability, economic growth and overall social stability.

In the case of Serbia, real wages growth was much faster than productivity growth until 2008, which contributed to the increase in external deficit, the growth of external debt, and maintaining inflation at a relatively high level. Due to relatively high income from privatization and an abundant supply of cheap capital on the global market, investments were high, but consisted mostly of foreign funds. After the beginning of the global financial crisis, due to high inflation and depreciation of the Dinar, wages were reduced to realistic levels, determined by the level of productivity. The return of wages to the real level and the return of wages in euros to sustainable levels, after the economic crisis began, contributed to reduced external deficit, but also to the stabilization of inflation at a low level. The high wage growth in euros in 2017, as a result of the excessive appreciation of the dinar, is one of the factors which contributed to the re-growth of the external deficit after a year-long fall (see Chapter *Balance of Payments and Foreign Trade*). Based on the comparison of wages in Serbia with wages in the region, expressed in PPP/EUR, and on the basis of trends in foreign trade balance, inflation and other indicators, it can be estimated that wages in Serbia between 2016 and 2017 were close to the level which corresponds to the level of productivity. Therefore, in the future, wage growth should be accompanied by productivity growth.

Certainly, productivity is not the only determinant of wages. Wage earned by an average citizen of a country depends on a number of other economic and political factors (from the supply and demand ratio in the labour market to the state wage policy). The state policy on wages must primarily support long-term sustainable economic growth, as only this type of growth is the basis for a continuously sustainable wage growth. This, in turn, means that wages should basically match productivity. When wage growth is slower than productivity growth, states need to support trade unions and accelerate their growth, and when wage growth is faster than productivity growth, governments should thwart this growth.

Conclusion

The average net wage in Serbia in from 2001 to 2017 nominally increased by as much as 8 times. The net wage earned by the average citizen of Serbia during this time period grew annually, on average, at a rate of 13 per cent. Two periods are discernible in the fluctuation of this indicator in Serbia: (1) the period until 2008, when the average net wage grew rapidly due to real growth and relatively high inflation from around RSD 6,000 to about RSD 33,000; (2) the period from 2008 to 2017, when the average net wage slowly grew from around RSD 33,000 to around RSD 48,000.

When inflation is accounted for in the analysis, it can be observed that real average net wages in the last 17 years increased only slightly more than 2 times, which is significantly less than nominal growth. Like nominal net wage trends, for real net wages in Serbia there are two distinct periods: (1) the period from 2001 to 2008, in which real wages grew 11.8 per cent annually, on average; (2) the period from 2009 to 2017, in which real wages stagnated, due to growth being only 0.07 per cent annually, on average.

Expressed in euros, the wage earned by a Serbian citizen, on average in 2017, only slightly exceeded 400 euros. From 2001 to 2017, the average net salary in euros increased almost 4 times, which amounts to double the real growth. Faster wage growth in euros than real wage growth was primarily driven by the real appreciation of the Dinar. The wage trend was such that in 2001 the average net wage was approximately EUR 100 and kept rising nominally until 2008, when it reached the level of about EUR 370. In the period which followed, there were no significant oscillations of the average net wage, expressed in euros, and it ranged between EUR 360 and EUR 400 from 2011 to 2017.

A comparative analysis shows that Serbia was positioned at the very bottom of the list of average net wages among countries of the Central and Eastern European region in 2017. The only countries in which the average citizen earned a lower wage than the one in Serbia last year were Macedonia and Albania. How much Serbia lags behind countries of the Central and Eastern European region in terms of the average net wage is best illustrated by the fact that in 2017 the average German earned 5.5, and the average Slovenian 2.6 times more than the average Serbian. When this analysis incorporates the fact that average prices in different countries vary, i.e. when average net wages are expressed in PPP/

EUR, differences between countries of Central and Eastern Europe get smaller. Nevertheless, despite this reduction in difference, they remain relatively high.

Finally, it has been shown that the average productivity is the main determinant of the average wage in a country. Observing the period from 2001 to 2017, it can be noted that average net wage growth in Serbia was similar to productivity growth. Productivity, similar to real wage, rose sharply in the pre-crisis period, and after the crisis began, its growth was considerably slower. However, certain differences are also noticeable. Thus, real wages growth was faster compared to productivity grow until 2008, and real wages growth was slightly slower after that. Also, it has been demonstrated that differences in average wages earned among Central and Eastern European countries can be explained by differences in average productivity. In other words, it can be concluded that relatively low wages of average Serbian population reflects their relatively low productivity.

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QM is a bulletin of the Faculty of Economics at the University of Belgrade, FREN, which, since 2005, objectively and methodologically, analyses trends and policies using modern methods of economic analysis. The editorial board, as well as the committee, are mostly composed of professors and associates of the Faculty of Economics at the University of Belgrade.

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