

## 2. Economic Activity

The real y-o-y GDP growth in Q3 was 2.6%, which is at the average level of 2016. In the first three quarters, GDP grew by 2.7% compared to the same period of the last year, and it is now quite certain that the total GDP growth in 2016 will be about the same. The growth of economic activity of around 2.7% in 2016 is a good result, taking into account that there has been an acceleration compared to 2015, and that within the achieved GDP growth the increase in investment of about 6% is in the lead. However, international benchmarks show that Serbia still lags behind its neighbouring countries - average economic growth in the region in 2016 is about 3.5%, and also the structure of GDP in Serbia is still not satisfactory, because with low share of investment in GDP Serbia is the last in the entire Central and Eastern Europe. For 2017, the Government has predicted a further acceleration of GDP growth to 3%, and accordingly planned the budget. QM analysis shows that such trends in 2017 are likely and desirable, but that there are certain risks, such as possible global recovery in energy prices, which would not benefit the local economy. We recall, however, that the domestic economy is still in the process of rebalancing and the changes in the structure of GDP in the direction of further increasing of investment and net exports and the decrease in the share of personal and government consumption are more important than the rate of growth in one year. For a long-term sustainable high economic growth of over 4% it is necessary that the share of investment in GDP is about 25%, and in Serbia, after two years of somewhat faster investment growth, this share in 2016 is only about 18.5%. A few more years of relatively strong increase in investment (growth of 5-10%) is therefore needed in order to create conditions for long-term high economic growth. The Government could contribute significantly to this trend by improving its investment environment and ensuring macroeconomic stability.

### Gross Domestic Product

**Y-o-y growth of GDP in Q3 2.6%, and in 2017 approximately 2.7%**

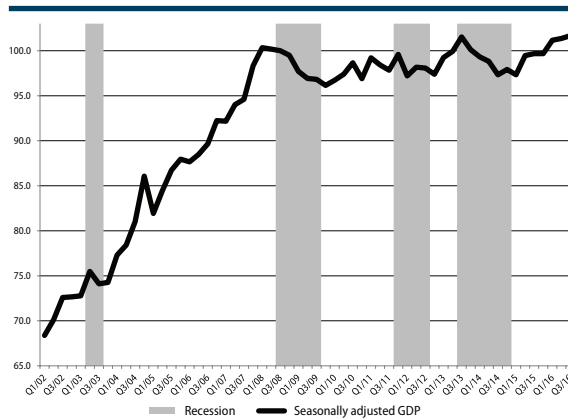
According to the SORS estimates, annual GDP growth in Q3 was 2.6%, which is at the average growth level recorded in the first half of the year. Also, the structure of economic growth in Q3, observed by both expenditure and production components of GDP, does not deviate significantly from the average of the first two quarters, so we can conclude that in Q3 main trends of economic activities established in the first half of 2016 were stabilized. As there were no major surprises in Q3, it confirms our outlook set forth in prior editions of QM that GDP growth in 2016 will amount to 2.5-3%. Namely, after the first three quarters of 2016 recorded GDP growth, when compared to the same period of the previous year, amounted to 2.7%. This growth could change in the last quarter only if some unusually big changes of GDP occur or in the case of more significant revisions of previously published data. Since none of that is expected for now we can, with greater certainty than before, forecast that GDP growth in 2016 will be around 2.7%.

**Seasonally adjusted GDP higher by 0.3% compared to Q2**

Seasonally adjusted GDP indices show current trends of economic activity on a quarterly basis somewhat more reliably than the y-o-y indices. Seasonally adjusted GDP growth in Q3 compared to Q2 amounted to 0.3%, which is somewhat less than the usual seasonally adjusted growth in the previous year, but is still within the expected values. So this indicator, in principle, suggests that there were no excessive deviations from the previously established trends in Q3 (and confirms our assessment based on the y-o-y index). This is shown even better in Graph T2-1 which presents a longer series of seasonally adjusted GDP growth (shaded periods are recession-rated based on the Bry-Boschan procedure). Observing the chart trend of seasonally adjusted GDP, it can be seen that the economic activity in Q3 rose slightly milder compared to the trend of economic recovery, which was established in mid-2015, but these were most probably normal fluctuations in the upward trend of seasonally adjusted GDP.

*Finally, pre-crisis level of production is permanently surpassed*

**Graph T2-1. Serbia: Seasonally adjusted GDP growth, 2002-2016 (2008 = 100)**



Source: QM estimates based on SORS

Graph 1 shows that, after the first wave of the crisis from the second half of 2008, the economy was not able to establish a lasting recovery path, and exit its long stagnation. Episodes of GDP growth were interrupted by recessions, and after 2008/2009 there were two of them. Consequently, the level of economic activity from 2008 could not be sustainably surpassed even seven years after the outbreak of the crisis. However, the mid-2015 saw a start of the recovery of economic activity that we, unlike previous episodes, rated as sustainable. The GDP growth in 2015 was widespread by economic activity, and the main drivers of the growth were investments and exports, which was not the

case in other, temporary episodes of the recovery. This, with relatively favourable regional trends, suggested that this time growth will be permanent in nature. Data on GDP trends since mid-2015, until the last available data for Q3 2016 favour this conclusion. It's been a year and a half since the beginning of the recovery, but economic growth is still looking quite stable. Therefore, we estimate that the level of production from 2008 was, in mid-2016, finally permanently surpassed, and a direct consequence of these trends is the fact that Q3 achieved the highest (seasonally adjusted) level of production since we have monitored GDP data in QM.

*GDP growth trend in 2016, with which we enters 2017 is still lower than 2.7%, and amounts to about 2%*

When seasonally adjusted data from the previous two years are "cleansed" from one-off factors (drainage of flooded coal mines, agriculture), the lasting trends of economic activity are revealed. Thus, the "clean" data suggest that the pace of GDP growth in 2016 is actually lower than 2.7%, and that it is little over 2%. This conclusion can be reached from two angles. Average quarterly seasonally adjusted GDP growth (practically since the second half of 2015) amounted to just over 0.5%, or about 2.1% per year, which means that this is approximately the trend of GDP growth with which we will enter 2017. We could conclude a similar thing in an easier way, if we exclude agriculture from the results of economic activity in 2016, which in 2016 recovered from the drought from 2015, causing temporary high growth of around 8%. The conclusion which we made, that we enter 2017 with GDP growth trend of around 2%, indicates that to achieve the GDP growth rate in 2017 of 3%, which Government forecasts, it would, however, be necessary to have greater acceleration of economic growth than it might seem at first sight - when the 3% growth expected in 2017 is compared with growth of 2.7%, which is likely to be realized in 2016.

*Investment and net exports leading the achieved GDP growth*

The structure of the achieved GDP growth in Q3, as well as in the whole 2016, according to use (Table T2-2), is in the principle favourable - investment and net exports are growing faster than GDP growth, while government and consumer spending are growing slower. The most positive trend in Q3 is certainly a relatively high annual investment growth of 6.2%, which occurred after a minor slowdown in Q2. Another very good indicator in Q3 is that a double-digit growth in exports continues, which is the case for nearly two years. Unlike Q2, when the real import growth of over 11% was slightly faster than the growth of exports, and net exports was negative, imports in Q3 slowed down to about 6%, causing net exports in Q3 to make a positive contribution to y-o-y GDP growth. Finally, in Q3 private and government spending, although they have a positive y-o-y real growth, they are mildly slowing their growth compared to Q2. This, however, suggests that the results of Q2 were uncommon (real growth in government spending of 4%, for example), rather than there were some significant changes in Q3.

**Table T2-2. Serbia: GDP by expenditure method, 2009-2016**

|                     | Y-o-y indices |       |       |       |       |       |       |       |       |       |       |       |       |       |               |
|---------------------|---------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|---------------|
|                     | 2009          | 2010  | 2011  | 2012  | 2013  | 2014  | 2015  | 2015  |       |       |       | 2016  |       |       | Share<br>2015 |
|                     |               |       |       |       |       |       |       | Q1    | Q2    | Q3    | Q4    | Q1    | Q2    | Q3    |               |
| GDP                 | 96.9          | 100.6 | 101.4 | 99.0  | 102.6 | 98.2  | 100.8 | 98.3  | 101.2 | 102.3 | 101.1 | 103.8 | 101.9 | 102.6 | 100.0         |
| Private consumption | 99.4          | 99.4  | 100.9 | 98.2  | 99.4  | 98.7  | 100.5 | 100.9 | 99.9  | 100.5 | 100.5 | 100.9 | 101.0 | 100.5 | 74.7          |
| State consumption   | 100.6         | 100.8 | 101.1 | 102.4 | 98.9  | 99.4  | 98.5  | 95.8  | 96.8  | 100.4 | 100.7 | 102.6 | 104.0 | 101.2 | 16.2          |
| Investment          | 77.5          | 93.5  | 104.6 | 113.2 | 88.0  | 96.4  | 105.6 | 102.8 | 106.0 | 108.2 | 104.9 | 106.9 | 104.4 | 106.2 | 18.9          |
| Export              | 93.1          | 115.0 | 105.0 | 100.8 | 121.3 | 105.7 | 110.2 | 112.9 | 110.8 | 110.2 | 107.4 | 112.2 | 111.0 | 110.5 | 46.7          |
| Import              | 80.4          | 104.4 | 107.9 | 101.4 | 105.0 | 105.6 | 109.3 | 114.2 | 107.0 | 108.8 | 108.0 | 105.0 | 111.3 | 105.9 | 56.4          |

Source: SORS

Note: The investment includes changes in inventories. Without this, the share of investment in GDP in 2015 would be 17.7%

**Agriculture and construction are the fastest growing activities in 2016.**

Significant changes in Q3 compared to previous quarters are not evident even when GDP is observed by activity (Table T2-3). The key growth drivers are still agriculture (which is compared to the dry year of 2015) and construction, and these are the only two sectors of the economy, which in Q3 have high annual growth of about 10%. The growth of the remaining activities is relatively stable at between 1 and 4%. Although in Q3 there are no major changes in the structure of growth by sectors compared to Q2, perhaps a slight recovery of industry which in Q2 recorded y-o-y decline is noteworthy. However, in this case the cause for such trends should be sought in Q2, rather than in Q3. The reason for the slowdown of industry in Q2 mainly lies in the temporary y-o-y decline in electricity production which is compared to the unusually high production from Q2 2015 (immediately after drying coal mines, a very high production of electricity for the summer period was established). When we take this factor into account as well, we see that in Q3 there was not a significant improvement in the trends of the industry, in fact, achieved growth in GVA of 1.2% (Table T2-3) was somewhat lower than expected, which will be closely explained in the section related to industrial production.

**Table T2-3. Serbia: Gross Domestic Product by Activity, 2009-2016<sup>1</sup>**

|                                 | 2009  | 2010  | 2011  | 2012  | 2013  | 2014  | 2015  | 2015  |       |       |       | 2016  |       |       | Share<br>2015      |
|---------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------------------|
|                                 |       |       |       |       |       |       |       | Q1    | Q2    | Q3    | Q4    | Q1    | Q2    | Q3    |                    |
| Total                           | 96.9  | 100.6 | 101.4 | 99.0  | 102.6 | 98.2  | 100.8 | 98.3  | 101.2 | 102.3 | 101.1 | 103.8 | 101.9 | 102.6 | 100.0              |
| Taxes minus subsidies           | 98.6  | 99.5  | 101.1 | 97.8  | 98.9  | 99.2  | 100.9 | 102.0 | 99.8  | 101.0 | 100.8 | 101.1 | 101.8 | 100.3 | 16.0               |
| Value Added at basic prices     | 96.6  | 100.8 | 101.5 | 99.2  | 103.3 | 98.0  | 100.7 | 97.5  | 101.5 | 102.5 | 101.2 | 104.3 | 101.9 | 103.0 | 84.0               |
| Non agricultural Value Added    | 96.7  | 100.2 | 101.5 | 101.1 | 101.6 | 97.5  | 101.7 | 98.1  | 102.7 | 103.7 | 102.2 | 104.1 | 101.7 | 102.1 | 90.5 <sup>2)</sup> |
| Agriculture                     | 95.2  | 106.4 | 100.9 | 82.7  | 120.9 | 102.0 | 92.3  | 91.4  | 90.1  | 93.9  | 93.2  | 107.1 | 104.0 | 110.9 | 9.5 <sup>2)</sup>  |
| Industry                        | 96.8  | 100.8 | 103.2 | 105.6 | 106.0 | 92.4  | 103.2 | 94.2  | 107.3 | 106.5 | 105.3 | 106.2 | 99.6  | 101.2 | 24.4 <sup>2)</sup> |
| Construction                    | 87.1  | 97.6  | 105.9 | 90.2  | 96.1  | 98.5  | 102.7 | 89.4  | 108.8 | 109.2 | 101.2 | 112.9 | 107.8 | 108.5 | 5.2 <sup>2)</sup>  |
| Trade, transport and tourism    | 92.9  | 100.0 | 99.5  | 99.3  | 102.3 | 101.1 | 102.2 | 101.6 | 101.3 | 103.6 | 102.4 | 105.6 | 103.0 | 103.7 | 18.4 <sup>2)</sup> |
| Informations and communications | 97.0  | 103.2 | 102.6 | 102.8 | 99.9  | 96.1  | 101.7 | 99.3  | 102.7 | 104.0 | 100.7 | 102.4 | 102.3 | 101.9 | 5.1 <sup>2)</sup>  |
| Financial sector and insurance  | 102.6 | 101.9 | 98.4  | 92.0  | 90.5  | 97.2  | 102.3 | 101.8 | 99.1  | 105.2 | 103.9 | 102.7 | 103.5 | 104.2 | 3.2 <sup>2)</sup>  |
| Other                           | 99.7  | 99.8  | 100.9 | 101.8 | 100.2 | 99.9  | 99.8  | 99.2  | 99.0  | 100.8 | 100.0 | 101.4 | 101.4 | 100.9 | 34.3 <sup>2)</sup> |

Source: SORS

1) In the previous year's prices

2) Share in GVA

**GDP growth in Serbia is still below the regional average**

GDP growth in Serbia and its structure is undoubtedly favourable, because they sustainably pulled out the economy from years of stagnation. However, in order to have a complete picture of economic developments in Serbia, it is necessary to analyse them also in the regional context. We looked at all the neighbouring countries (Bulgaria, Romania, Hungary, Croatia, Bosnia and Herzegovina, Montenegro, Albania and Macedonia) and Table T2-4 shows the movement of their GDP in 2016. Based on the results achieved in the first three quarters of 2016 we can see that average (weighted) GDP growth of countries in the region in 2016 is 3.6%, and that all of the observed countries had growth rates of more than 2%. This indicates that the results of Serbia in 2016, although good, are not spectacular, as the region's economy is growing slightly faster. It is particularly interesting to compare the growth of GDP in Serbia and in Croatia because the growth rates of these two countries in the first three quarters of 2016 were identical (2.7% compared to the same period of the last year). Also for both countries at the beginning of the year, a similar GDP growth in 2016 of 1.8% (Serbia) and 1.9% (Croatia) was predicted. These data, along with the fact that other countries in the region during 2016 have recorded generally higher rates of growth than was originally predicted (Table T2-4), clearly indicate that the improving economic trends in 2016, is largely regional, not local, trend as it is related not only to Serbia.

**Table T2-4. The predicted and actual GDP growth in neighbouring countries and the share of investment in GDP**

|                                      | Q1-Q3_2016/<br>Q1-Q3_2015 | Forecasted growth rates<br>(beginning of the 2016) | Share of investment in<br>GDP (2015) |
|--------------------------------------|---------------------------|--|--------------------------------------|
| Albania                              | 3.2                       | 3.4  | 24.6                                 |
| Bulgaria                             | 3.4                       | 2.3  | 21.0                                 |
| Bosnia and Herzegovina <sup>1)</sup> | 2.0                       | 3.0  | 18.3                                 |
| Montenegro <sup>1)</sup>             | 3.0                       | 4.7  | 19.0                                 |
| Croatia                              | 2.7                       | 1.9  | 19.5                                 |
| Hungary                              | 2.1                       | 2.3  | 21.7                                 |
| Macedonia                            | 2.7                       | 3.6  | 23.1                                 |
| Romania                              | 4.9                       | 4.2  | 24.7                                 |
| <b>Weighted average</b>              | <b>3.6</b>                | <b>3.1</b>   | <b>21.5</b>                          |
| Serbia                               | 2.7                       | 1.8  | 17.7                                 |

Sources: Eurostat and IMF

1) For Bosnia Herzegovina and Montenegro there are no data to Eurostat on current developments in economic activity and the share of investments in GDP, and for them we used the last assessment of the IMF (October), and available information of their national statistics

***Improvement in economic trends in Serbia is partly a consequence of regional trends***

In the previous analysis we have shown that an important part of reasons for somewhat better movement of economic activity in Serbia than expected probably came exogenously, as a consequence of regional trends. The reasons for this should be sought in: 1) low energy prices, which improved trade in the region and increased real spending; 2) low interest rates that are a result of the monetary policy of the ECB, which resulted in an increase in credit activity; and 3) the solid growth of imports of the countries of the Eurozone, which in the first three quarters of 2016 amounted to 3.5% (in real terms). It is good that dramatic changes in these factors are not foreseen in the coming period, which leaves a good perspective for regional growth. However, it should be borne in mind that part of the growth of GDP in Serbia which, by all accounts, came from the outside, can easily be reversed and start to slow down economic growth. It is therefore crucial that Serbia uses this favourable moment in the international environment for lasting healing of public finances (deficit reduction and debt restructuring or privatization of state and public companies), as well as for improving the investment environment, because investment in Serbia is insufficient. Only in this way the Serbian economy will be ready for the change of international situation, which will eventually have to happen in the future.

***Serbia holds a record in the low share of investments in GDP***

In addition, we presented one of the biggest structural problems of the domestic economy in Table T2-4 and that is inadequate investments. Observed by low share of investments in GDP, Serbia is the negative recorder among neighbouring countries. Even when we expand the observed pattern to all countries of Central and Eastern Europe, we will not find any country that has so low a share of investment in GDP as Serbia. For long-term sustainable economic growth higher than 4%, Serbia would have to have investments of around 25% of GDP, which means a third above the current level. The increase in investments will largely depend on the economic policy of the Government aimed at reforming the public sector, but also to increase the efficiency of the judiciary, simplifying and speeding up administrative procedures and licensing, control of corruption, reduction of gray economy and more. These reforms would help to increase the share of investments in GDP and ensure long-term sustainable and dynamic economic growth in Serbia regardless the movement of international factors.

***In 2017 we expect GDP growth rate of around 3%***

Current trends and expected movements of individual components of GDP (personal and government consumption, investments, imports and exports) indicate that the GDP growth in 2017 could amount to around 2.8%, which is close enough to the estimates which Government used while adopting the budget for 2017 (3%). We believe that the official forecast of GDP growth is generally good, although this growth is not yet guaranteed. The key assumption for GDP growth in 2017, but also for sustained acceleration in economic activity, is already mentioned increase in investments. Namely, for the forecast for GDP growth trends we used the assumption that investments will continue with the real growth in 2017 as in 2016, of about 6%, and similar growth is planned also by the Government in their forecasts (5.7%). On the one hand, if investment growth is faster, it is possible that the rate of GDP growth will be somewhat higher than

3%, which could happen, especially bearing in mind the announcement of the Chinese company Hest to launch a new investment cycle in the Smederevo steelworks factory. Investments are also a component of GDP which the government can positively influence through its reform policies, which is why economic decision makers have a great responsibility, not only in 2017 but also in the coming years to use good policies to affect permanent increase in GDP. Any attempt of the Government to accelerate GDP growth rate in 2017 by increasing private and government spending would give only temporary results, because effective limit to the growth of the Serbian economy is the low level of capital and the low level of international competitive capacity, rather than the low level of domestic demand. With this, some negative surprises are still possible which could reduce the anticipated growth of GDP in 2017. The biggest risk for economic growth in Serbia in 2017 is seen in a possible change of international factors (oil prices, global instability), and there are some specific local risks related, for example, to a significant decrease in car production of the company FAS (contract obligation of Fiat expires in 2018) and more.

## Industrial production

*Industrial production slightly accelerated y-o-y growth in Q3, but the overall trend is not entirely satisfactory*

In Q3, industrial production recorded an annual increase of 3.7% (Table T2-5), which represents a certain acceleration compared to the previous quarter, when growth was only 2.4%. However, this increase of the y-o-y growth rate hides some unfavourable trends. In fact, this acceleration was caused by the growth of mining and, in particular, the production of electricity. Mining in Q2 had a slight decline of about 1%, which was in Q3 transferred to a growth of 3.4%, and electricity production in Q2 had y-o-y decline of about 10%, and in Q3 had a growth of 2.1%. These changes are consequences of the fact that these two sectors were in Q2 temporarily compared with an unusually high production in Q2 2015, and not due to the real improvements in the trends of production. In fact, in the summer months it is common to overhaul power plants and to reduce production, which in Q2 2016 has happened. However, in Q2 2015, electricity production was unusually high for this time of year, because the capacities have already been rehabilitated during the floods when production was stopped. Therefore y-o-y indices in Q2 temporarily showed a significant decline, which is now lost. On the other hand, a more relevant assessment of the essential trends in industrial production is provided by a manufacturing industry, which in Q3 significantly reduced its annual growth from 5.9% in Q2 to 4.4% (Table T2-5).

**Table T2-5. Serbia: Industrial Production Indices, 2009-2016**

|                                    | Y-o-y indices |       |       |      |       |      |       |       |       |       |       |       |       | Share |       |    |
|------------------------------------|---------------|-------|-------|------|-------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|----|
|                                    | 2009          | 2010  | 2011  | 2012 | 2013  | 2014 | 2015  | 2015  |       |       |       | 2016  |       |       | 2015  |    |
|                                    |               |       |       |      |       |      |       | Q1    | Q2    | Q3    | Q4    | Q1    | Q2    |       |       | Q3 |
| Total                              | 87.4          | 102.5 | 102.2 | 97.1 | 105.5 | 93.5 | 108.2 | 98.0  | 111.1 | 113.2 | 110.2 | 110.5 | 102.4 | 103.7 | 100.0 |    |
| Mining and quarrying               | 96.2          | 105.8 | 110.4 | 97.8 | 105.3 | 83.3 | 110.5 | 84.0  | 115.8 | 130.9 | 123.7 | 114.3 | 99.2  | 103.4 | 7.0   |    |
| Manufacturing                      | 83.9          | 103.9 | 99.6  | 98.2 | 104.8 | 98.6 | 105.3 | 104.2 | 107.3 | 106.4 | 103.2 | 106.5 | 105.9 | 104.4 | 80.1  |    |
| Electricity, gas, and water supply | 100.8         | 95.6  | 109.7 | 92.9 | 108.1 | 79.9 | 118.8 | 87.0  | 129.0 | 141.0 | 134.9 | 120.9 | 90.2  | 102.1 | 12.9  |    |

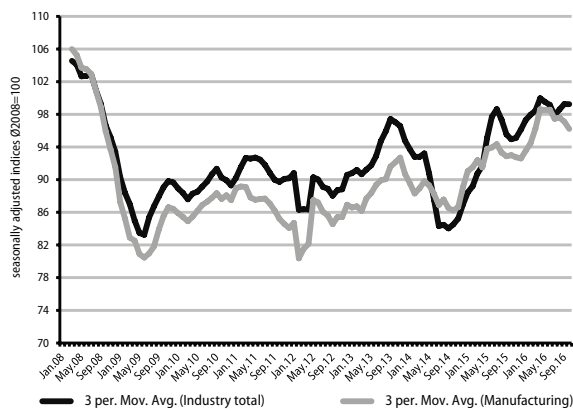
Source: SORS

*Seasonally adjusted indices confirm the reduction in the manufacturing industry in Q3*

Short-term changes in the movement of industrial production and manufacturing industry (which is especially important, because it is not so much influenced by sector and temporary factors), can best be seen in the seasonally adjusted data. Graph T2-6 shows seasonally adjusted production indices of the total industry and particularly manufacturing industry, with the last available data for October 2016. In the graph we can observe two divergent trends which are suggested also by the annual indices. Mining and electricity production with their growth hold seasonally adjusted index of industrial production approximately unchanged compared to Q2, but manufacturing industry recorded solid seasonally adjusted decline (lighter line on the chart). Part of this worsening trend of manufacturing industry came as a result of some temporary factors (for example, production of petroleum products had a big decline due to the rehabilitation of facilities in NIS), but when we exclude these one-off factors there is no doubt that the trend of manufacturing industry is in decline. It remains to wait for the results of the remaining two months of 2016 in order to see whether a growing trend in the manufacturing industry will be

**Graph T2-6. Serbia: Seasonally Adjusted Industrial Production Indices, 2008-2016**

*Growth of industrial production in 2016 will amount to about 5%*



Source: SORS

re-established, similar to the one that lasted from mid-2015 to mid-2016, or the observed slowdown is of lasting nature. Developments in the remaining two months will not change the picture of industrial production from 2016, but are very important, because we enter the next year with them.

In the previous issue of QM we evaluated (divergent) trends in industrial production in the first two quarters and concluded that the actual pace of its growth in 2016 is about 5%, which was also our forecast of growth of industrial production for the year. The results achieved in the third quarter and October confirm this estimate, since in the first ten months of 2016 industrial production increased by 5.2% compared to the same period of the last year. It is interesting that the annual growth of manufacturing industry in the first ten months is identical to total industrial production growth (5.2%), although, viewed individually by months, total growth in industrial production and manufacturing industry were uncommonly very different. We entered last few months with slightly lower annual growth, but this will not significantly affect the results for the whole year. Annual industrial production growth of about 5% could be called satisfactory, but it would be very good if, as we have already pointed out, short-term trends with which we enter 2017 are upward.

Observed by use of industrial products, the only group that recorded a decline compared to Q2 of the last year is the energy production, and other groups had fairly balanced growth of 5-8% (Table T2-7). Energy production in Q3 reduced its decline compared to Q2, but is still in the zone of negative y-o-y growth. A more detailed analysis of trends in energy production indicates that the reason for the decline in Q3 was temporary (as it was and in Q2). The main reason for the y-o-y decline in Q3 was the rehabilitation of facilities at NIS. As a result production of petroleum products in September was temporarily almost completely stopped, i.e. production fell by over 80% compared to the same period of the last year. The positive trend in Q3 is the acceleration of growth in production of capital goods to 4.7% (y-o-y), which is primarily the result of growth of production of equipment. This special purpose group includes the production of cars, thus it is heavily influenced by the production of the company's FAS, which is why it had a predominantly negative growth rates in the previous year, although investment activity is growing in Serbia. In Q3 production in FAS only slightly reduced its y-o-y decline compared to Q2, and so that's not the main reason for the acceleration of the production of capital goods, which is why we indirectly conclude that the production of equipment accelerated. Finally, production of intermediate and consumer products recorded a growth approximately in line with the trends from the previous quarters (Table T2-7).

**Table T2-7. Serbia: Components of Industrial Production by Use, 2009-2016**

|                    | Y-o-y indices |       |       |       |       |       |       |       |       |       |       |       |       |       |
|--------------------|---------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
|                    | 2009          | 2010  | 2011  | 2012  | 2013  | 2014  | 2015  | 2015  |       |       |       | 2016  |       |       |
|                    |               |       |       |       |       |       |       | Q1    | Q2    | Q3    | Q4    | Q1    | Q2    | Q3    |
| Total              | 87.4          | 102.5 | 102.1 | 97.1  | 105.5 | 93.5  | 108.2 | 98.0  | 111.1 | 113.2 | 110.2 | 110.5 | 102.4 | 103.7 |
| Energy             | 98.8          | 97.7  | 106.2 | 93.6  | 113.2 | 82.6  | 116.9 | 88.5  | 124.1 | 141.7 | 129.8 | 118.3 | 94.3  | 96.5  |
| Investment goods   | 79.3          | 93.6  | 103.2 | 103.8 | 127.6 | 95.9  | 103.0 | 112.1 | 109.1 | 94.5  | 99.0  | 97.7  | 100.3 | 104.7 |
| Intermediate goods | 78.4          | 109.2 | 102.2 | 91.2  | 99.0  | 96.8  | 105.3 | 99.3  | 107.8 | 104.8 | 110.2 | 111.2 | 110.6 | 108.0 |
| Consumer goods     | 86.8          | 102.1 | 95.4  | 103.2 | 100.7 | 100.7 | 104.0 | 99.4  | 105.6 | 106.9 | 99.7  | 107.4 | 103.9 | 107.0 |

Source: SORS

## Construction activity

### *Construction in Q3 accelerated growth for almost 10%*

We estimate that the construction sector in Q3 recorded an annual increase of almost 10%. This conclusion is suggested by the movement of several different indicators that QM observes when assessing construction activity. Gross value added of construction sector in Q3 recorded a growth of 8.5% compared with the same period of the last year (Table T2-3). Also, in Q3 index of completed construction works in Serbia recorded a real y-o-y growth by 7%. The movement of cement production is a further confirmation that Q3 truly achieves a growth in the construction sector of almost 10%, as well as independent indicators that QM monitors to form a more reliable estimate. This indicator recorded a y-o-y increase of 9.9% compared to Q3 of the previous year (Table T2-8).

### *The growth of construction activity in 2016 is likely widespread*

**Table T2-8. Serbia: Cement Production, 2001-2016**

|      | 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 | -     | -     |

Source: SORS

in the private and public sector. Namely, non-compliance of the cement production with indices of construction activity is often a good indication of different trends in the investment activity of the state and the private sector. This is because official statistics of construction activity in the current time monitors a lot better activities of large construction companies, which are significantly influenced by public sector investments, and the index of production of cement in principle reflects the entire sector including small private enterprises, individual constructions and other, which are, objectively, difficult to statistically cover. When these two indices are adjusted, as is the case in 2016, this could suggest that the growth in construction activity is widespread i.e. that the activity of large construction companies increases, but also the activity of small and medium companies, both state owned and private. This is an important and positive trend because the construction sector accounts for almost half of the total investments, and they are crucial for sustainable and healthy economic growth of the country.

Unlike 2015, when the quarterly data on the growth of construction sector significantly overestimated the actual growth of this sector (see Box 1), the quarterly data for 2016 are most likely realistic. Namely, in 2015 the movement of cement production was not always in line with other indicators of construction sector, which could suggest that the real growth of construction was lower than the official data showed (which eventually the revised data showed). This is not the case in 2016 - all indicators that QM monitors when assessing the movement of construction activity, including the movement of cement production, consistently point to growth in the construction activity of almost 10%. This however has another important implication - that construction activity is recording a relatively strong growth

### **Box: Revision of the data on construction sector from 2015**

Statistical Office of the Republic of Serbia (SORS) made a major review of the data on the gross value added in the construction sector for the year 2015. The preliminary figures for 2015 showed that GVA in construction grew at double-digit rates in that year, and that the annual growth of GVA of this sector in 2015 amounted to 11.1%. However, with the publication of the revised data for 2015 (in the second half of 2016), it turned out that the real growth of construction activity in that year was only 2.7%. There is, therefore, a huge change in the annual rate of 8.4 p.p. which indicates

that the current data on this sector are very unreliable, as mentioned several times in previous issues of QM.

The most likely reason why there has been a major revision of data is that the sample on the basis of which the SORS follows the construction sector during the year does not include enough small and medium-sized construction companies, entrepreneurs and households compared to large enterprises. Therefore, the current data are biased towards their activities. However, the final SORS data include other indicators, such as the financial statements of all enterprises (including SMEs), so they are far more reliable. The problem is, however, that the final data are published with a considerable delay. Thus it can happen that, if SMEs, entrepreneurs and households have significantly different trend compared to large enterprises, final data are significantly corrected compared to the preliminary data - which was probably the case in 2015. A particular problem is the strong presence of the gray economy in the construction sector, which is concentrated precisely in the sector of small and medium enterprises, with entrepreneurs and in the household sector.

Precisely because of the difficulties in monitoring of current trends in construction, QM regularly monitors the production of cement, which is a good alternative indicator of trends in construction sector, because the cement is used in virtually all construction works. Although the proper methodology is to follow consumption, not production of cement, cement production quite well reflects the consumption, since the longer overland transport of cement is unprofitable, foreign trade is relatively small, and information on the production of cement are available in the statistics of industrial production (consumption is not monitored statistically). Also, indicators of cement production are very reliable because of the small number of cement factories in Serbia, so there is no problem of incomplete coverage. The movement of cement production of course is not ideal indicator of construction activity and cannot replace official statistics of construction activity. Some of the problems with this indicator, for example, are when occasional reconstruction in cement production factories occurs (then the production drops), or with stockpiling (then production grows). In addition, we take in consideration that some of the cement produced is exported (or imported), so production is not completely identical to consumption. Finally, cement is not equally represented in all areas of construction, and so the index of cement production may vary because of the different movements of different types of construction works.

Despite the shortcomings, we estimate that this additional indicator is very good for an indicative assessment of the movement of construction activity. Namely, it was cement production which recorded a growth rate of around 3% in 2015 (Table T2-8) and thus indicated that the real growth of construction activity is significantly lower than 11%, as at that time presented by the SORS. At that time, due to the less precise production of cement indicator, we did not much insisted on perceived difference, but now it turns out that it was significant. With the revision of the data on the GVA of construction sector it was reduced from 11% to 2.7%, which is almost identical to the growth of cement production in 2015.

In the end, we emphasize the fact that we are aware that there are objective difficulties in the current monitoring of the construction activity - a dynamic establishment of new enterprises, closure of the old ones, performing one part of business in the grey area, and so on. However, because of the importance of this sector for policy makers, it is important to increase efforts to advance monitoring where possible (e.g., improving statistical sample). Construction activity makes up a large part of the investments in the country, so the revision of data on construction draws the revision of investment growth. Investments in 2015, according to the revised data, grew at a rate of 5.6%, which is considerably lower than the previously published data of 8.3%. It is the investment component of GDP on which Serbia should base its economic growth, and slower investment growth means poorer prospects of GDP growth in the medium and long term. Therefore, when defining economic policies, timely and accurate assessment of the movement in construction activity should definitely be taken into account, and the official statistics of construction activity, for now, is not able to provide such data.