Literature

Institut za javno zdravlje „Dr Milan Jovanovi Batut" (2017). *Rezultati istraživanja o efektima i stavovima u vezi sa Zakonom o zaštiti stanovništva o izloženosti duvanskom dimu – VIII istraživanje, 2016.*

Krstić, G., & Schneider, F. (eds.). (2015). *Formalizing the Shadow Economy in Serbia: Policy Measures and Growth Effects*. Springer.

NALED (2018). *Siva ekonomija u Srbiji – procena obima, karakteristike učesnika i determinante,* Beograd.

Petrović, P., Brčerević, D., Minić, S. (2018). *Snažan rast zaposlenosti uz spor rast proizvodnje nije se desio: O pouzdanosti Ankete o radnoj snazi u Srbiji.* Fiskalni savet Radni Dokument 18/02

Ranđelović, S. (2017). How to boost tax compliance and tax morale in Serbia?. *Ekonomika preduzeća*, *65* (1-2), 113-127.

Highlight 2. Financial Performance Analysis of the Serbian Economy

Milutin Živanović[1]

Financial performance of the Serbian economy has improved in 2017. Part of the improvement was the result of more efficient performance of the core business, while the rest was due to changes in external factors, such as the strengthening of the dinar, the reduction of interest rates, the change in prices on global markets, the rise in real estate prices in Serbia. Some of the external changes, such as interest rate reductions, were the result of improving macroeconomic stability and the business environment, and will benefit the economy in the longer term. Other exogenous changes that have affected the improvement of the economy (fluctuations of the exchange rate, changes in prices on global markets) are cyclical in nature and their impact on the operations of the economy in the future is uncertain. If we observe three basic dimensions of financial performance, the most successful sectors in 2017 were the information and communications sector and the mining sector. The least successful sector in 2017 was the agriculture sector, primarily due to the large drought that hit Serbia in the observed year. If we compare the financial performance of companies according to their size, the most successful group of companies in 2017 were small enterprises, while the least successful were micro-enterprises.

Financial Performance Analysis of the Entire Economy

Dynamics of financial performance of the economy is analysed on the basis of indicators of liquidity, solvency and profitability. The paper analyses only the performance of the real sector of the economy, using the Business Registers Agency data.

Liquidity Analysis

If we assess the liquidity of the economy on the basis of a current ratio[2], we can conclude that we can conclude that the short-term financial security of the economy slightly improved in the observed period. However, it remains at a relatively low level, since the value of the indicator in all observed periods was less than 1. This means that enterprises on average were unable to cover their short-term liabilities with working assets. In the period 2013-2016, the value of this indicator did not significantly change considering that it was moving in a relatively narrow interval of 0.89 - 0.91. A more significant leap was recorded only in 2017 compared to 2016, when its value rose from 0.91 to 0.95. This somewhat more significant general liquidity jump was the result of a faster growth of working capital than the growth of short-term liabilities of the company. If we use a quick ratio[3] for liquidity analysis, then the numerator, instead of the total working capital[4], contains only one part of it, monetary assets. This is a more rigorous and more realistic liquidity indicator compared to the one previously used, since it removes inventories from the nominator as the least liquid form of working capital. Analysing the movement of this indicator, we conclude that the level of liquidity of the economy in 2017 (0.65) was at the almost identical level in which it was in 2013 (0.64). It should be pointed out that, although the value of this indicator remained unchanged in the analysed period, the structure of monetary capital in its nominator did not remain the same. Particular attention should be paid to the constant decrease in the share of short-term financial placements in the structure of monetary capi-

1 Faculty of Economics, University of Belgrade.

2 Current ratio represents the ratio between the working capital and short-term liabilities, and it shows how many dinars of working capital cover each dinar of shor-term liabilities.

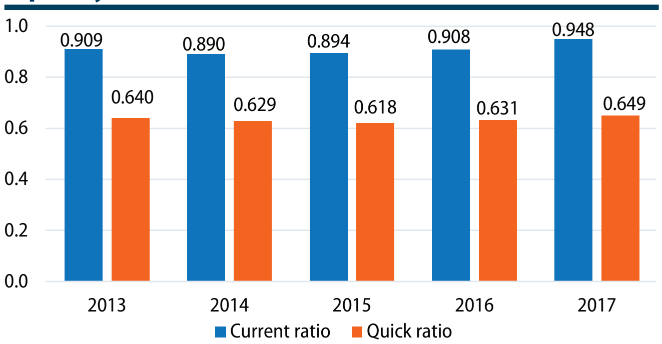
3 Quick ratio is the ratio between the monetary capital and short-term liability and it shows how many dinars of monetary capital cover each dinar of short term liability.

4 Working capital, in addition to monetary capital includes inventory as well. We need to stress here that in addition to receivables, short-term financial placements and cash and cash equivalents, we also included in the monetary capital prepayments and deferred expenses.

tal with the simultaneous increase in the share of cash and cash equivalents. In 2017, the value of short-term financial placements was by 3.34% lower than in 2013, while the value of cash and cash equivalents in the same period increased by as much as 49.75%. Such a change in the structure of monetary capital could be related to the trend of continuous interest rate cuts. While this change positively reflects on the current liquidity of the economy, it can negatively affect profitability in the long run, since it is obvious that enterprises are accumulating an increasing amount of cash that is not placed and which does not yield any returns.

By comparing the previous two indicators, we can conclude that the increase in the liquidity of the economy in the analysed period, as indicated by the current ratio, was primarily the result of an increase in the share of inventories in the structure of working capital. Therefore, the quality of the liquidity growth indicated by this indicator is questionable. If in the future there is no significant increase in efficiency in terms of inventory management and the management of receivables (a higher level of collection of receivables with a shortening of the collection period), a significant improvement in the position of the liquidity of the economy cannot be expected. In addition, it is necessary to continue with the trend of shortening the period of payment of obligations to suppliers and to develop a scenario for the impact of possible weakening of the domestic currency on the growth of short-term financial liabilities that, with all other circumstances unchanged, would adversely affect the liquidity of the economy.

Graph 1. Dynamics of the economy's real sector liquidity in Serbia, 2013 – 2017



Source: Author's calculations using BRA data

Solvency Analysis

Net Working Capital (NWC)[5] shows which part of the working capital is financed from long-term sources of financing. NWC can be used as one of the indicators of long-term financial security of the economy. Although there are different factors that determine the amount of NWC, it starts from the fact that the higher the value of this indicator, the better the position of the economy's solvency. If we analyse the movement of the NWC in the real sector of the domestic economy for the period 2013-2017, we can conclude that in all observed years the value of this indicator was negative, which would mean that part of the fixed assets[6] were continually financed from short-term sources. As of 2016, its value began to increase and became less negative. If such a tendency continues in the future, we can expect an improvement in the long-term financial security of the economy. However, in order to be able to speak of the sustainability of such a trend, we need to look at what are the main sources of the NWC increase in 2016 and 2017.

The increase in NWC in 2016 and 2017 was the result of the faster growth of long-term sources of financing in relation to the growth of investments into fixed assets. If we look at the growth leverage of long-term sources of financing, we see that they primarily lie in the growth of own capital, since its share in long-term funding has increased from 65.3% in 2015 to 66% in 2016, and finally to 67.1% in 2017.

In 2016, the increase in own capital was mostly due to the increase in core capital. Assuming that this was a fresh inflow of capital, due to the establishment of new or recapitalisation of the existing economic entities, this represents an extremely positive tendency. Considering that in 2016, 3% more companies in Serbia operated compared to 2015[7], we can conclude that the increase in the share capital was primarily due to the establishment of new economic entities[8]. Also, we should keep in mind that, according to the data of the Business Registers Agency (BRA), the increase in the number of companies in 2017 was by 4,114 units lower than in 2016, as indicated by twice as small increase in the share capital in 2017 compared to 2016. Consequently, this source of increasing own capital and solvency of the economy cannot be counted on permanently. This is an obvious consequence of insufficient improvement of general business conditions such as legal security, administrative efficiency, level of corruption, etc.

Unlike in 2016, in 2017, the growth of own capital was primarily the result of the increase in undistributed profits and the reduction in losses from previous years, which was the result of the higher profitability of the

5 Net Working Capital is calculated as a difference between long-term sources of finance and fixed assets.

6 Fixed assets include: Intangible assets, Property, plant and equipment, Biological assets, Long-term financial placements and Long-term receivables.

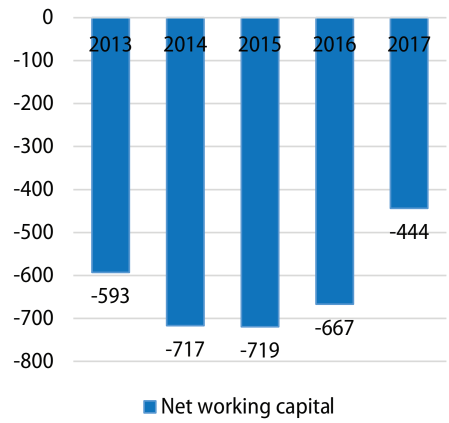
7 In 2016, 8,429 new companies were established, while in the same year 5,442 enterprises ceased to operate.

8 This was, among other things, the result of a simplified and accelerated procedure for the establishment and registration of legal entities.

economy in 2017. However, we should take into account the growth sources of the profit that is retained in the enterprise and used to cover the losses incurred. Namely, the growth of the net profit realised at the level of the real sector of the economy in 2017 was the result of: (1) a sharp increase in gains from financing, that is, the growth of positive exchange rate differences that arose due to the strengthening of the domestic currency and (2) further decline of the interest rates. Thus, the growth of business results contributed to the growth of the net profit and solvency of the entire economy to a much lesser extent. This further means that the solvency in 2017 was influenced by factors that are largely independent of enterprises and which companies operating in the Serbian economy can hardly influence. Some of the external changes, such as interest rate reductions, are the result of improving macroeconomic stability, and it is expected that the economy will benefit from them in the long run. Other exogenous changes that have influenced the improvement of solvency, such as volatility of the exchange rate, are cyclical in nature and their impact on the economy's operations in the future is uncertain.

As noted earlier, fixed assets investment grew at a lower rate than long-term sources of financing, which led to the value of NWC being less negative. If we look at changes in the structure of fixed assets from 2013 to 2017, we can notice that the biggest changes occurred in the positions of property, plant and equipment and long-term financial placements. While the share of real estate in total assets has steadily increased from 45.89% in 2013 to 48.51% in 2017, the share of long-term financial placements in total assets has declined steadily from 10.12% in 2013 to 7.32% in 2017. Based on the changes in the structure of fixed assets, we can conclude that the investments of companies were partially diverted from financial to real assets [9]. Potential reasons should be sought in higher rates of return that companies can expect from this type of investment, as well as in the consequences of administrative reforms of 2015, which have led to simplification of procedures regarding the issuance of construction permits. The chronic underdevelopment of the domestic financial market, which offers companies very limited opportunities for investing in financial assets, with a constant decline in interest rates, has obviously led to reduced allocation of free cash flows to financial assets.

Graph 2. Net Working Capital in billions of RSD, 2013 – 2017



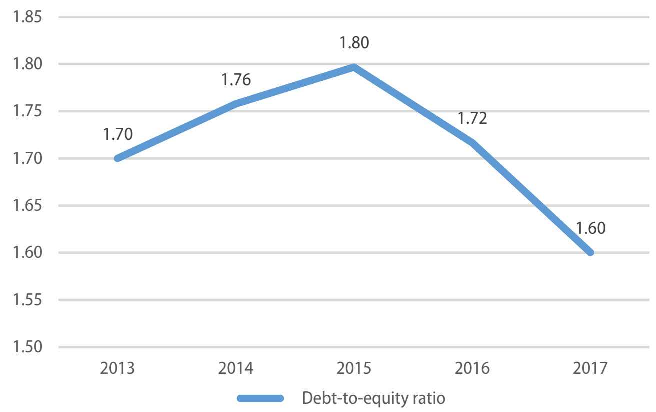
Source: Author's calculations using BRA data

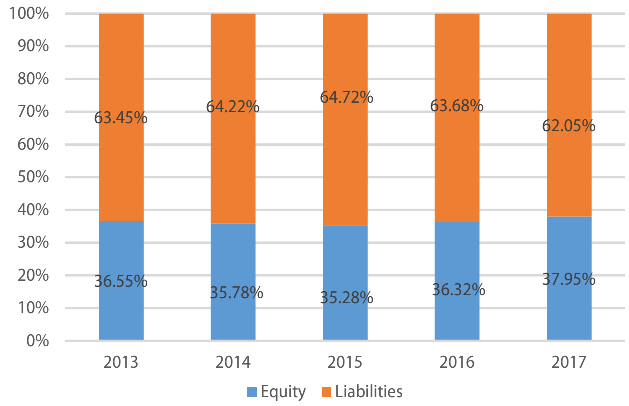
In addition to NWC, one of the basic solvency indicators is the debt-to-equity ratio that indicates the relationship between debt and equity. The value of this indicator in the period 2013-2015 increased from 1.7 to 1.8, which means that in the observed period the indebtedness of the economy grew. In 2014, compared to 2013, total liabilities increased by 211.9 billion dinars. In the same period, the value of own capital decreased by 27.9 billion dinars due to the large increase in losses at the level of the entire economy, which, among other things, should be attributed to the consequences of the floods that affected some areas of Serbia in 2014. In addition, the cause of simultaneous growth in total liabilities and losses should be sought in the weakening of the domestic currency, which caused the occurrence of increased negative exchange rate differences and cost of interest for loans taken in foreign currencies. In 2015, compared to 2014, total liabilities increased by 239.3 billion dinars, with the structure of liabilities growth being slightly different from that recorded in 2014 in favour of the growth of short-term liabilities. Unlike in 2014, when the value of own capital declined, in 2015, a slight increase of 35.7 billion dinars was recorded. This growth was primarily due to the increase in profits as a result of the stalled weakening of the domestic currency and the growth of revaluation reserves (growth in the market value of real property, plant and equipment), which presents a signal of the real estate market recovery. However, since in 2015, the increase in liabilities continued to be higher than the increase in own capital, the indebtedness of the economy continued to grow.

In 2016 and 2017, the relative indebtedness of the economy began to decline primarily because the increase in own capital in these two years was greater than the increase in liabilities. In 2016, the value of indebtedness ratio amounted to 1.72. In the mentioned year, the value of own capital increased by 420.4 billion dinars, while

9 We should keep in mind that the growth in the share of property, plant and equipment in fixed assets, among other things, is due to the growth of their market value.

Graph 3. Indebtedness Ratio and Own Capital to Liabilities Ratio, 2013 – 2017





Source: Author's calculations using BRA data

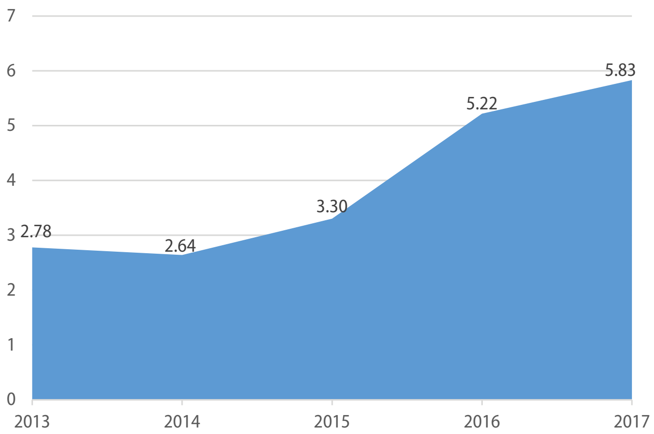
the value of total liabilities increased by slightly less - 359 billion dinars. In 2017, the value of the indebtedness indicator was additionally reduced to 1.6. This year, the value of own capital increased by 440.9 billion dinars, while the value of total liabilities increased by a much lower amount of 130.1 billion dinars, which contributed to the accelerated decrease in the level of indebtedness. We wrote about the factors that contributed to the increase of own capital in 2016 and 2017 and their long-term sustainability in the section referring to the analysis of the NWC. On the other hand, if we observe the increase in total liabilities in these two years, we can notice that the growth of total liabilities in 2017 was far lower than the growth recorded in 2016. This was largely due to the strengthening of the domestic currency against the euro and the dollar, which has led to the value of foreign currency liabilities denominated in dinars becoming smaller.

One of the solvency indicators used in the financial analysis of companies is coverage ratio[10] that should reveal the company's ability to cover the incurred cost of interest from the achieved business result. This indicator speaks much more of an economy's solvency than the one previously analysed, since it is under much less influence of branch characteristics. In the period 2013-2014, the value of this indicator declined. In 2013, its value was 2.78, only to reach its lowest value of 2.64 in 2014 for the entire analysed period. Such a low value of interest coverage ratio in 2014 was to a large extent the result of the rapid growth of the cost of interest due to the growth of indebtedness. As previously noted, growth in indebtedness has contributed to the rapid weakening of the domestic currency in relation to the currencies in which most domestic companies have their long-term and short-term liabilities (primarily the euro, the dollar and the Swiss franc). In the observed year, financial expenses amounted to 504.1 billion dinars, which was 50% more than in 2013. Although in 2014, the companies achieved a positive business result in the amount of 370.8 billion dinars (which was 4.9% more than in 2013), it was not sufficient to cover the increased financial expenditures.

In the period 2015-2017, the value of the indicators was in constant growth, which indicates improvement in the economy's solvency position. In 2015, its value was 3.3, in 2016, 5.22, reaching its maximum value in 2017 in the amount of 5.83. Although the value of the mentioned indicator in the observed period was constantly increasing, it should be emphasised that the sources of its growth by years were not identical. The growth in value recorded in 2015 compared to 2014, was largely owed to the reduction of cost of interest (a decrease of 12.9%) due to the stabilisation of the domestic currency and a further decline in interest rates, rather than the increase in operating income (a 9% increase). On the other hand, if we look at the growth in the value coverage ratio in 2016 compared to 2015, we see that it was largely due to an increase in business profits (a 25.3% increase), rather than the decrease in the cost of interest (a 20.7% decrease). While both increases indicate an improvement in the economy's solvency, higher quality of growth lies behind the increase that is more likely to contribute to the growth of business profit than the reduction in the cost of interest. Especially if we know that what primarily impacts the interest are interest rates and exchange rates for loans taken in foreign currency. If we look at 2017, we can notice further increase in the coverage of interest ratio by business profits, which contributed to a simultaneous increase in business profits (4.8%) and a decrease in the cost of interest (6.2%).

10 The interest coverage ratio represents the relationship between the business result and the cost of interest, and shows the extent to which the cost of interest, arising as a result of the use of borrowed funds, is covered by the business result (profit) of the enterprise.

Graph 4. Coverage of interest by business profit ratio, 2013 – 2017



Source: Author's calculations using BRA data

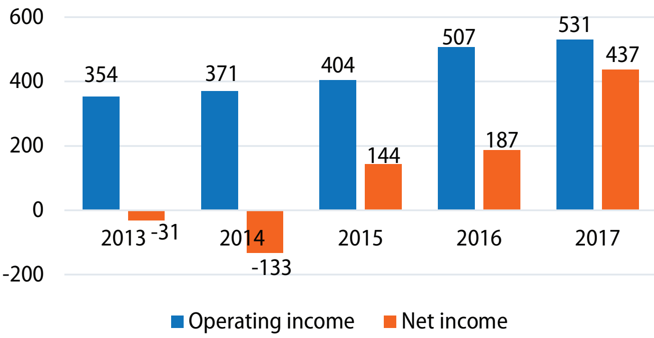
Profitability Analysis

At the very beginning, we analyse the profitability of the economy using operating income margin[11] that should point to the trend in the profitability of company's core business and, at the same time, the ability of the company to create value by performing its core business. In the period 2013-2016, this rate recorded a constant increase. Looking at the graph, we can notice that the operating income margin increased from 4.37% in 2013 to 5.56% in 2016, primarily due to the fact that operating revenues in the observed period grew at a higher average rate (4.1%) compared to operating expenses (3.6%). However, in 2017, there was a slight decline in the profitability of the core business, bearing in mind that the profit margin was slightly lower than in 2016, amounting to 5.43%. In the observed year, operating income grew at a lower rate (7.18%) compared to operating expenses (7.32%). What should be noted when the operating income is concerned is that, unlike all the previous years covered by the analysis, in 2017, revenues from sales of products and services grew at a higher rate (9.05%) compared to sales revenues of goods (5.43%). Such movements are a signal of refocusing from the growth based on trade in goods, on the production of industrial goods and the development of service activities such as information communication technologies, tourism and catering, professional activities, etc.

Although the reasons for the mild decline in business profitability will be clearer once we go down to the level of analysis by sector, since each sector of the economy has its own specificities that determine core business characteristics and, therefore, the sources of business results, we will present some general conclusions here. A slight decline in operating income of 0.2 percentage points in 2017 resulted from a fall in the volume of agricultural production that arose as a result of the drought that hit Serbia in 2017. This led to a decrease in agricultural business income and a simultaneous increase in agricultural product prices. The increase in agricultural product prices has affected the increase in operating expenses of those enterprises from the manufacturing industry that use agricultural products as inputs in their production process. In 2017, there was a rise in the price of oil and oil derivatives, which, for the part of the manufacturing industry that used these raw materials as primary inputs, had a very negative impact on the business result. The growth in the price of oil and oil derivatives also had a negative impact on the business result in the transportation and storage sector. The drought that hit Serbia in 2017 affected not only the agricultural sector, but also the electricity supply sector, since the production of electricity at hydropower plants was lower and was compensated for from more expensive energy sources. Drought and high temperatures did not favour the water supply sector, as there was an increase in excessive water consumption and a rise in water losses in the water supply process.

For the analysis of the overall profitability of the economy, we use net income magin which should actually show how much the net gain are realised for each realised dinar of operating revenues. Although there are other indicators that can measure total profitability, this indicator has been chosen to analyse its disparity in terms of the direction and intensity of changes that exist between the business and the net result and which is characteristic of the domestic economy by comparing it with the rate of business profit[12]. In fact, for real sector companies in Serbia, it is characteristic that segments of a non-business result have a much greater impact on

Graph 5. Business and net result in billions of RSD, 2013 – 2017



Source: Author's calculations using BRA data

11 The rate of business gain is the ratio between business profit and operating income.

12 The net result, in addition to the business result, is also affected by other components, such as positive and negative exchange rate differences, interest income and expense, asset value change, gains and losses from the sale of assets…

overall profitability. This means that the overall profitability of the economy has a greater influence on the factors, which the enterprises themselves cannot influence and which can often obscure the (non)ability of the company to create value by performing the core business. For this reason, the net result represents a considerably more volatile value than the business result.

In 2013 and 2014, net income margin was negative, with the value of -1.62% in 2014 and lower than in 2013, when this rate was -0.38%. Thus, although in these two years there was a growth in operating income margin, which implies strengthening the core of the business, the net result rate was not only negative, but further reduced. The increase in losses at the level of the entire economy in the period 2013-2014 was the result of the weakening of the dinar. The depreciation of the dinar against the currencies in which the largest number of our companies borrowed resulted in a sharp increase in negative exchange rate differences, as well as cost of interest on loans taken in foreign currency. In addition, a significant amount of write-offs of impaired receivables also affected the decline in overall profitability. In 2015 and 2016, the profitability of the company's core business and overall profitability moved in the same direction as a result of simultaneous strengthening of the conjuncture, greater operational efficiency of the company, stabilisation of the domestic currency and lower write-off of receivables. The rates of net profit in 2015 and 2016 were 1.69% and 2.06%, respectively. Although in 2017 there was a slight decline in operating income margin relative to 2016, net income margin recorded a significant jump from 2.06% to 4.47%. Growth in total profitability came first as a result of an increase in financing gains owing to the strengthening of the domestic currency and the consequent emergence of positive exchange rate differentials on foreign currency liabilities. The increase in the overall profitability of the economy in 2017 was further influenced by the reduction of expenditures based on the write-off of impaired receivables, but also the increase in other results, which is by definition of a once-off character.

Financial Performance Analysis by Individual Sectors

In the second section, the focus is on the analysis of financial performance by activity. The analysis covered the last two years, 2016 and 2017, taking into account only those activities that had a significant impact on total economic trends (all activities that in 2017 achieved a minimum of 100 billion of total revenues with the exception of the accommodation and food sector). A special emphasis will be placed on the analysis of movements in the manufacturing industry, bearing in mind that it represents the core of the industry and the overall economy.

Liquidity Analysis

The sectors that recorded the most visible progress in terms of short-term financial security include: mining, information and communication and construction. In the observed sectors there was a noticeable increase in the current and quick ratios. Such a growth in liquidity can be regarded as high quality since it was the result of simultaneous growth of both of these indicators. This guarantees that the improvement of short-term financial security is not the sole consequence of stockpiling inventories as the least liquid form of working capital. The most noticeable worsening of the liquidity position in 2017 compared to 2016 was in the electricity supply sector and the transportation and storage sector.

If instead of changing the liquidity position, we compare the individual sectors according to the achieved level of liquidity, as a criterion for comparison, we use a quick ratio. This is why it represents a more rigorous test than the current ratio, and in addition it is affected less by branch characteristics. The best position of short-term financial security in 2017 was achieved by information and communication sectors (0.91) and mining (0.79). The lowest values of the used indicators are present in the sector of hospitality industry (0.49) and the electricity supply sector (0.52). However, it should be emphasised that the structure of the monetary capital of these two sectors differs, and in this sense, the low values of a rigorous liquidity indicator need to be interpreted differently. In contrast to the electricity supply sector where 60% of monetary capital are receivables, the housing and food sector accounts for 44% of monetary capital, while the rest relates to short-term financial placements and cash as liquid assets. In addition, the collection time for housing and food sector services is 2.5 times shorter than the electricity supply sector, which additionally speaks in favour of a better liquidity position in which this sector is located.

If we focus on the manufacturing industry as the core of the economy, we can notice that the current ratio recorded a significant increase in 2017 compared to 2016 and is exactly at the level of the economy's average, while the quick ratio remained at almost the same level, below the economic average. This again leads us to conclude that the growth of liquidity was primarily the result of the accumulation of inventories as the least liquid form of working capital, so the change in liquidity in this sector should be interpreted in this light. What is worrying is stagnation in terms of inventory turnover speed, as well as in terms of the period of collecting receivables and settlement of liabilities to suppliers.

Solvency Analysis

When analysing the change in the position of solvency of individual sectors, changes in the debt-to-equity ratio and ratios of interest coverage by business gains are unified. The sectors that have achieved the most significant improvement in long-term financial security are: mining, information and communication, and wholesale and retail trade. If we exclude wholesale and retail trade, we can notice that the remaining two sectors were also leading in improving the liquidity position and in terms of the absolute liquidity level in 2017, which places them in the sectors with the best perspective in terms of short-term and long-term financial security. The decrease in indebtedness was positively influenced by a significant increase in own capital as a result of the increase in undistributed profits. However, what should be kept in mind are the different sources of unallocated profit growth identified in the above sectors. In the mining sector this growth was primarily caused by the growth of business profits [13], while in the information and communication sector and wholesale and retail sector it was the result of an increase in financing gains. In support of strengthening the position of solvency, the increase in interest coverage by business gains is identified in all three sectors.

The most noticeable decline in solvency in 2017 compared to 2016 was identified in the sectors of agriculture and electricity supply. Although in both sectors the debt-to-equity ratio remained at approximately the same level with the tendency of a slight decline, coverage ratio, which shows the ability of enterprises to cover interest expenses from the business gains, was in a sharp decline due to a sudden decrease in the business gains.

Bearing in mind that the level of indebtedness of the sector, observed in isolation, does not reveal much about its solvency, and that its level is largely determined by the branches, for the ranking of the sector in terms of long-term financial security, the primacy was given to the interest coverage ratio. Starting from this point of view, with all other conditions unchanged, the most solvent sectors in 2017 were the information and communication sector (16.77) and the mining sector (8.55). High level of solvency was also shown by the wholesale and retail sector (7.92) as well as the water supply sector (7.50), although we should keep in mind that the wholesale and retail sectors are far more indebted than the water supply sector. The least solvent sectors in 2017, with all other conditions unchanged, were construction sector (2.07) and hospitality industry (2.18), although in the observed year they recorded growth in coverage of interest by operating profits. The low solvent sectors for 2017 include agriculture (2.82), although it should be kept in mind that the low value of interest coverage ratio in the agricultural sector was the result of a drastic decline in the business profits of a reduced volume of activities due to drought.

If we take a special look at the manufacturing industry, given its previously mentioned importance, we note that the indebtedness in 2017 compared to 2016 has decreased, which is a positive tendency in terms of long-term financial security. However, in spite of this, this sector belongs to the most indebted sectors, immediately behind wholesale and retail trade. Coverage of interest by operating profits remained virtually unchanged (5.99) and was above the economy's average (5.83), which is good considering the high level of indebtedness previously indicated.

Profitability Analysis

The three sectors that achieved the highest growth of business profitability in 2017 compared to 2016 were: mining, hospitality industry, and professional and scientific activities. The increase in the operating profit margin in the mining sector was largely due to the growth in operating revenues resulting from the increase in the price of oil, petroleum products and industrial metals (aluminium, copper, iron, etc.), as well as greater operational efficiency that allowed business expenses to grow at a lower rate compared to operating income. The rise in core business profitability in the housing and food sector contributed to a higher growth of operating revenues in relation to operating expenses. It is assumed that the increase in business revenues of 22.5% was mostly due to the increase in the number of tourists, having in mind that, according to the Statistical Office of the Republic of Serbia, the number of tourist arrivals and tourist nights increased by 10.5% in 2017 compared to 2016. Sector of scientific and professional activities registered growth of operating income margin from 6.15% in 2016 to 7.06% in 2017, which makes this activity one of the more profitable in the real sector of the Serbian economy.

The growth of the profitability of the core business, although to a lesser extent, has been identified in the sectors of construction and wholesale and retail trade. It is assumed that the administrative reforms of 2015 that led to the simplification of procedures regarding the issuing of building permits along with the continuation of the downward trend in interest rates and rising real estate prices, enabled further improvement of the profitability of the basic business of the construction sector. However, we assume that the delay in significant infra-

13 This is particularly positive considering that R&D investments, which are crucial in this sector for improving long-term financial performance, are mainly financed from internal sources.

Table 1. Selected indicators of liquidity, solvency and profitability for individual sectors, 2016-2017

	Liquidity analysis				Solvency analysis				Profitability analysis			
	Current ratio		Quick ratio		Debt/Equity ratio		Coverage ratio		Oerating ratio margin		Net income margin	
	2016	2017	2016	2017	2016	2017	2016	2017	2016	2017	2016	2017
Agriculture	0.95	0.98	0.57	0.57	0.79	0.74	4.27	2.82	5.80%	3.50%	2.60%	3.00%
Mining	0.95	1.1	0.72	0.79	1.84	1.56	3.3	8.55	7.50%	12.50%	5.40%	10.90%
Manufacturing	0.87	0.95	0.56	0.58	3.2	2.4	5.96	5.99	6.30%	6.00%	2.90%	5.60%
Electric power industry	0.68	0.63	0.57	0.52	0.69	0.67	6.36	5.19	11.90%	6.60%	3.30%	5.80%
Water industry	0.73	0.73	0.57	0.56	0.57	0.63	7.28	7.5	8.20%	6.30%	3.30%	3.80%
Building and Construction	0.88	0.94	0.54	0.59	1.75	1.82	1.55	2.07	3.60%	3.80%	2.30%	1.50%
Retail, Wholesale and Distribution	1.02	1.07	0.62	0.65	3.36	2.91	6.63	7.92	3.10%	3.60%	1.10%	2.40%
Transportation	0.84	0.79	0.74	0.7	0.83	0.83	5.69	5.4	5.70%	5.10%	3.20%	3.70%
Hospitality industry	0.65	0.63	0.51	0.49	1.81	1.91	1.76	2.18	2.60%	3.60%	4.50%	2.80%
IT and Telecommunications	0.95	1.03	0.83	0.91	2.04	1.87	13.55	16.77	12.20%	11.80%	8.40%	11.40%
Profesional and Scientific Services	0.91	0.94	0.75	0.76	1.66	1.69	5.36	6.61	6.10%	7.10%	5.80%	6.20%

Source: Author's calculations using BRA data

structure projects has led to the growth of this sector being lower than planned. If the wholesale and retail sector is analysed, we can conclude that profitability growth was not the result of a larger sales volume, since the turnover of goods in 2017 decreased. Therefore, sources of profitability growth should be sought in some other factors, such as: (1) contraction of assortments and redirection of sales on goods with higher profit margins, and (2) strengthening of dinar which has led to imported products being cheaper, where the decline in prices of imported products has not been transferred to consumers, given that the consumer price index in 2017 was 3%, which is 1.4 percentage points more than in 2016.

The largest decline in business profitability was identified in the electricity supply sector. The main causes of a sharp decline in business profits in the electricity supply sector should be sought in the growth of operating expenses that were not accompanied by a corresponding increase in operating revenues. The increase in operating expenses in this sector, according to the IMF report, was the result of a decline in electricity generation, which appeared in early 2017, which was compensated by the import of electricity that is more expensive in the winter months. This situation is a result of unfavourable weather conditions and long-term weaknesses in EPS planning and management. In addition, in order to ensure regular and secure supply of customers, the lack of production in hydroelectric power plants resulting from drought was compensated by more expensive energy sources and purchasing electricity on the stock exchange where prices showed a significant increase in 2017.

The decline in profitability of core business has also been identified in the following sectors: agriculture; water supply; transportation and storage; information and communication; and manufacturing, ranked from the highest to the lowest profitability recorded. In the agricultural sector, this situation was the result of a drastic fall in the volume of agricultural production due to extremely unfavourable agro-weather conditions. In the water supply sector, the decline in the profitability of the core business was caused by the fact that water consumption decreases from year to year in both households and the economy, and the processing of water decreases accordingly. On the other hand, only 65% of the water consumed is revenue-generating water, while the rest is water that is not invoiced and thus does not generate income, even though it increases business expenses. The faster growth of operating expenses in relation to operating revenues in the transportation and storage sector was due to the 14.5% increase in fuel and energy costs due to the increase in the price of oil and oil derivatives on the global market. In the information and communication sector, there was a very slight decrease in operating income margin. According to the RATEL report, in the Serbian market, unlike the EU market, revenues continued to grow, but it is possible that lower growth rates of revenues can be explained by trends that are present in the markets of the EU countries. As of 2013, for the vast majority of EU countries, there has been a downward trend in revenues in this sector due to the decline in revenues from voice and fixed telephony services.

If, instead of a relative change in business profitability in 2017 compared to 2016, we observe the level of business earnings per sector, we can notice that the highest rates of operating profits were recorded in the sectors of Mining (12.46%) and Information and Communication (11.81%), while the lowest profit margins were recorded in the Agriculture sector (3.53%) and the Wholesale and Retail sector (3.56%).

In all sectors, growth in the net profit margin was recorded, primarily due to exogenous factors, with the highest growth being identified in the accommodation and food, mining and construction sectors. The highest net profit margins were recorded in the information and communication sectors (11.42%), and mining (10.92%). Interestingly, these two sectors have swapped first two places in relation to the previous situation when ranking was done according to the rate of business gain. The explanation lies in the greater indebtedness of the information and communication sector in relation to the mining sector and, consequently, the greater impact of positive exchange rate differences on the net income of the information and communication sector in relation to the mining sector. The lowest net profit margins were identified in construction sector (1.48%) and wholesale and retail (2.40%).

Although in the manufacturing industry business profits rose in absolute terms in 2017 compared to 2016, its share in operating income (operating profit) decreased from 6.31% to 5.98%. However, it should be noted that in this sector, the slightest decline in business profitability has been identified in relation to all sectors that recorded a decline in operating income margin. The main reason for the faster growth of operating expenses in relation to operating revenues should be sought in the rise in raw material prices, especially for the part of the manufacturing industry that uses oil and oil derivatives and agricultural products as the main raw material. In contrast to operating income margin that experienced a decline in 2017, the share of net profit in operating revenues rose from 2.93% to 5.56%. As has been pointed out several times in the past, this disparity between business growth and net result has emerged as a result of an increase in financing gains. At the manufacturing process level, positive exchange rate differentials in 2017 were even 200% higher than in 2016. In addition, almost one third of net results were other income that arose as a result of the sale of assets above its book value and which are by definition of one-off character.

Financial Performance Analysis Depending on the Company Size

In the third section, we analyse the performance depending on the company size. This is to determine whether there are significant differences in relation to the mentioned characteristics between enterprises depending on their size.

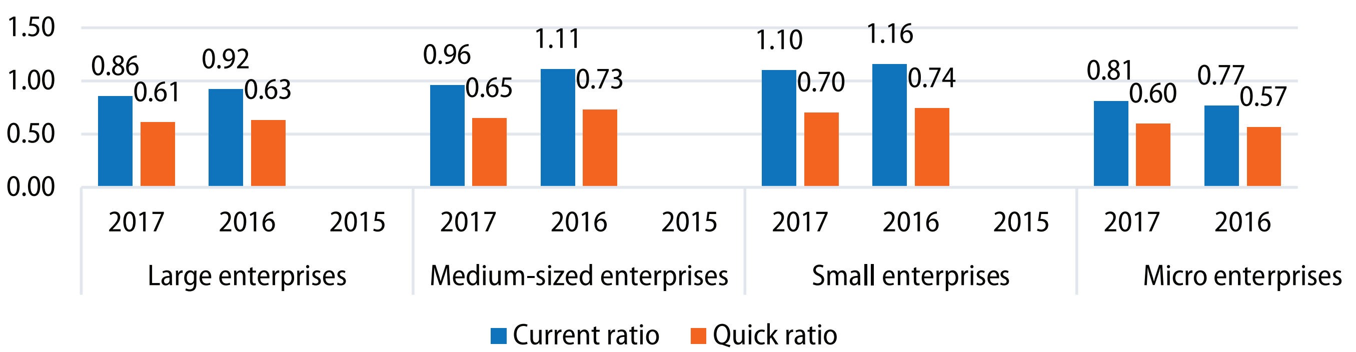
Liquidity Analysis

Except micro enterprises, all other groups of companies classified by size have made improvements in terms of the position of short-term financial security. Although in relative terms medium-sized enterprises recorded the most significant improvement in terms of liquidity position, in absolute terms the highest values of the selected indicators, in both 2016 and 2017, were realised by small enterprises. The liquidity of large companies in 2017 was at a similar level as in 2016 with a slight improvement. The level of liquidity of large enterprises was slightly below the economy's average and below the level of liquidity of small and medium enterprises. What can positively affect the liquidity of large companies in the future is shortening the period of inventory turnover and the collection of customer receivables, which are the biggest issues in this group of companies compared to other groups. Also, what is observed in large enterprises, which can positively affect the liquidity of the entire economy in the future, is a slight improvement in the financial discipline, which is reflected in the shortened period from the moment obligations toward suppliers occur to the moment they are settled (shortened by 19 days).

Solvency Analysis

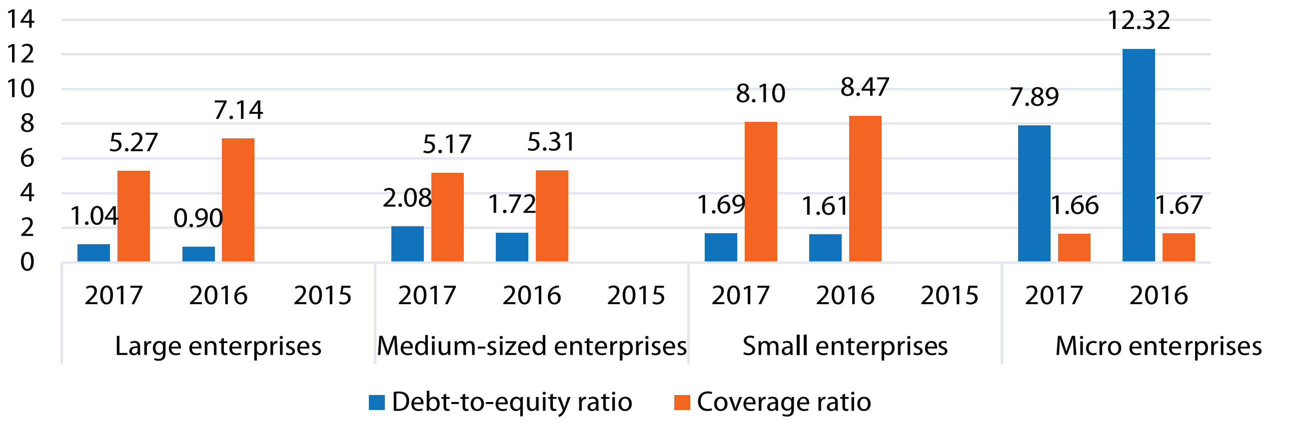
Judging by the movement of the selected solvency indicators, we can conclude that major companies recorded the most significant improvement in terms of long-term financial security in the period 2016-2017. Strengthening the solvency situation was present in medium and small enterprises. The indebtedness of medium-sized enterprises was reduced in 2017, but still remained slightly above the average of the economy. Coverage of cost of interest by business profits increased in 2017, however, despite this, the indicator was below the economic average. The indebtedness of small enterprises decreased in 2017 and was below the economic average. Coverage of the cost of interest by operating profits

Graph 6. Real sector liquidity observed by company size, 2016 – 2017



Source: Author's calculations using BRA data

Graph 7. Real sector solvency observed by company size, 2016-2017



Source: Author's calculations using BRA data

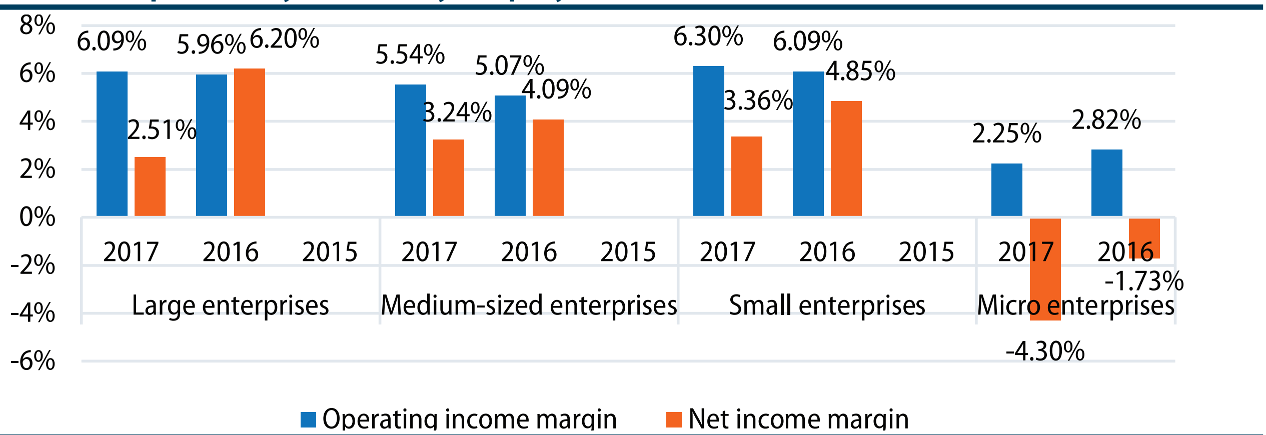
increased from 8.10 in 2016 to 8.47 in 2017. Such high values of this indicator, position small businesses far above the economic average and rank them in the most solvent group of companies. Micro companies were not only the least liquid, they were by far the least solvent as well. The indebtedness indicator increased significantly in 2017 (12.32) compared to 2016 (7.89). This high value of indebtedness indices is extremely worrying and suggests that micro enterprises are largely over-indebted. The fact that the loss higher than the amount of capital shown in 2017 at the level of all micro-enterprises (858 billion dinars) was higher than the sum of losses above the level of capital of all other enterprises (686 billion dinars), speaks enough about the problematic position of this group of companies. Coverage ratio by business profits remained unchanged in the two years observed. With a value of 1.67, this group of companies confirms the poor prospect of long-term financial security.

Profitability Analysis

What is interesting is that micro enterprises were the only ones to achieve growth of core business profitability in 2017. Regardless, in the two years observed, these companies had the lowest business profit and were the only ones to report a negative net result. This in turn resulted in negative net profit margins of -4.3% in 2016 and -1.73% in 2017. All other groups of companies recorded a slight decline in business profitability in the period 2016-2017. The highest rate of business profit in 2017 was recorded in the group of small enterprises (6.09%). So, this group was not only the most liquid and most solvent, but it also achieved the highest level of "healthy" profitability.

All groups of companies recorded growth in the net profit margin. The biggest leap in the net profit margin was realised by large companies. This group of companies made such a significant leap in the net profit margin that it jumped from its third position in 2016 to the first position in 2017 in terms of the value of this indicator. It should also be noted that these groups of companies have an unusual situation that the net profit margin rate in 2017 (6.2%) was higher than operating incomerate (5.96%), which would mean that other components of the results additionally increased the business gains, so the net profit in 2017 was greater than the business gains.

Graph 8. Real sector profitability observed by company size, 2016-2017



Source: Author's calculations using BRA data

Literature

1. Malinić, D., Milićević, V., Stevanović, N., 2012, *Upravljačko računovodstvo*, Beograd: Centar za izdavačku delatnost Ekonomskog fakulteta u Beogradu.
2. Penman S., (2003), *Financial Statement Analysis and Security Valuation*, second edition, McGraw-Hill, 348-381
3. Todorović, M., Ivanišević, M., (2017), Poslovne finansije, Centar za izdavačku delatnost, Ekonomski fakultet u Beogradu
4. http://www.apr.gov.rs/
5. http://ec.europa.eu/eurostat
6. https://www.nbs.rs/internet/cirilica/index.html
7. http://www.ratel.rs
8. http://www.stat.gov.rs/