



## SOLVENCY AND FIXED ASSETS FINANCING OF AGRICULTURE, FORESTRY AND FISHING SECTOR IN THE REPUBLIC OF SERBIA

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UDC  
336.6  
(497.11)

Review  
paper

Received:  
14.01.2021  
Accepted:  
08.02.2021

**Abstract:** This paper aims to examine solvency and fixed assets financing of Agriculture, Forestry and Fishing sector (Sector A) in the Republic of Serbia. We also examine whether there is a difference between this Sector's enterprises and entrepreneurs regarding these two aspects of their financial position. The research is based on the Financial Statements Annual Bulletins available on the official website of the Serbian Business Registers Agency. The period of six consecutive years is covered (2013 - 2018). Solvency and fixed assets financing were analyzed separately for Sector A enterprises and entrepreneurs. Standard ratio indicators were used to determine these relevant aspects of financial position. The conducted analysis showed differences between this Sector's enterprises and entrepreneurs regarding the solvency. The research results revealed that, despite a slight improvement in certain solvency indicators, entrepreneurs were insolvent during the observed period. The fixed assets financing indicators showed that the lack of equity for new investments financing was compensated mainly by long-term borrowing at enterprises' level and by short-term borrowed sources at entrepreneurs' level.

**Keywords:** agriculture, forestry and fishing sector, solvency, fixed assets financing, enterprises, entrepreneurs.

**JEL classification:** M41, O13, Q12, Q22, Q23.

## 1. Introduction

Sector A consists of a large number of enterprises and entrepreneurs engaged in agriculture, forestry and fishing. It comprises Agriculture crop industry, Agriculture livestock industry, Agriculture service industry, Fishing, hunting and trapping industry, as well as Forestry industry. Like other countries, it plays many vital roles in the social and economic development in the Republic of Serbia (Bogićević, Domanović and Obradović, 2020). It also contributes to rural areas development and poverty reduction (Olubode-Awosola, Chilonda, Mind and Bhatt (2008). This Sector is the cornerstone of industries that produce and market food, fiber and fuel.

According to the Financial Statements Annual Bulletin available on the official website of the Serbian Business Registers Agency (SBRA), Agriculture, Forestry and Fishing Sector was composed of more than 4,000 entities in the Republic of Serbia in 2018. Its structure was bifurcated: 3,875 enterprises and 136 entrepreneurs (SBRA, 2019). More than 32,000 workers were employed in this sector that year. The value of its total assets ranged from RSD 572,824 million to RSD 869,731 million during the observed period (2013-2018). Unlike enterprises in which the structure of assets was dominated by fixed assets, whose share increased, the structure of entrepreneurs' assets was dominated by current assets. Both enterprises and entrepreneurs had a problem with liquidity in all observed years. Analysis of Sector A liquidity showed non-compliance with standard values for current ratio.

Quick ratio did not correspond to the recommended values for the entire period, too. Both groups of entities had a negative amount of net working capital (NVC) throughout the observed period. Although the enterprises in this sector realized operating income in the amount of 348,864 million RSD, they reported a net loss of 1,027 million RSD in 2018. The main reason for this was the loss from financing due to high interest expense (3,627 million RSD) and negative exchange rate differences. Compared to 2017, positive exchange rate differences decreased by more than 80%. Profitability ratio return on assets (ROA) ranged from 1.04% to 2.83% (enterprises) and from 4.70% to 8.30% (entrepreneurs) in the observed period. Return on equity (ROE) parameter also had no stable trend. Its values were in the range from 0.2% to 2.5% (enterprises) and from 16.8% to 31.6% (entrepreneurs) (Bogicevic, Domanovic, Obradovic, 2020). Due to the negative net result of this Sector's enterprises, their ratio indicator ROE was negative in 2018.

Therefore, it is very important to monitor the dynamics of its financial position and performances. As it is not possible to simultaneously analyze all aspects of financial position and profitability of this sector within a single paper, this paper focuses on this Sector's solvency and fixed assets financing. Profitability and liquidity of Sector A in the RS were considered in separate papers (Bogićević, Domanović, Obradović, 2020). The analysis of solvency and financing of fixed

assets is based on the balance sheet. Like other financial statements, the balance sheet can be both a map and a maze faced by the analyst (Fraser, Ormiston, 2013). As the official balance sheet scheme used in the RS in the observed period does not meet all the requirements for a valid financial analysis, the data from this basic financial statement (contained in the Financial Statements Annual Bulletins) were adjusted for the purpose of this research.

The research subject in this paper is the solvency and fixed assets financing of Agriculture, Forestry and Fishing sector in the RS. The aim of this paper is to assess its solvency and fixed assets financing of this Sector's enterprises and entrepreneurs in the six years period (2013-2018). The research question is: Were there any differences related to the solvency and fixed assets financing between this Sector's enterprises and entrepreneurs in the RS in the observed period?

In addition to introduction and conclusion, this empirically oriented research paper includes four parts. The second part of the paper deals with the usability of data for financial position analysis. The solvency and fixed assets financing analysis of Sector A enterprises is discussed in the third part. The findings of dynamic solvency and fixed assets financing analysis of the Sector A entrepreneurs are shown in the fourth part.

## **2. Data usability for solvency and fixed assets financing analysis**

In order to harmonize the financial reporting system in the RS with this segment of accounting in the European Union, The Law on Accounting was adopted in 2013. The Financial Statements Annual Bulletins have been available on the Serbian Business Registers Agency (hereinafter SBRA) website since 2014. These Bulletins contain aggregate data on the financial position and performance of enterprises and entrepreneurs for the real sector, financial institutions and non-profit institutions in the RS. The Financial Statements Annual Bulletin also contains data on the number of legal entities and the number of their employees. It includes the balance sheet and income statement for two successive years and presents data in thousands of Serbian dinars (hereinafter RSD). It should be noted that the data for the two successful reporting periods in the Bulletin come from different sources. Namely, data for the last year were presented on the basis of data processed for statistical purposes, and for the penultimate year the data were directly taken and added up from the regular prepared individual balance sheet and income statement. Due to significant differences in the form and content of these basic financial statements, balance sheet and income statement prepared in 2013 were substantially modified and adjusted for their including in the Financial Statements Annual Bulletin for 2014. As these financial statements were not consistent over observed period, they were not completely comparable. In this way, the inter-periodic comparability of financial position and profitability has been enabled by certain adjustments.

Since the research is focused on the analysis of key financial position indicators, it is necessary to ensure the usefulness of data from aggregate balance sheets for both enterprises and entrepreneurs. The usefulness of the balance sheet information contents for the purpose of solvency and fixed assets financing analysis and evaluation depends on the simultaneous fulfillment of certain assumptions. In other words, this analytical procedure expediency depends on the material and formal assumptions of financial analysis. The material assumptions of this analysis relate to the correct and objective balance sheet data providing, and the formal assumptions relate to the correct grouping, *i.e.* the classification of this financial statement items. As aggregate balance sheet of any sector is prepared by summarizing the individual balance sheet of its all entities, the correct classification of its items has not been done. In addition to fixed assets and current assets, a special item such as Deferred tax assets is separately presented in the official balance sheet scheme used in the RS. In addition to Equity, Long-term liabilities and Short-term liabilities, a special item Deferred tax liabilities is separately presented on the other side of the balance sheet. Accordingly, these separately shown items should be repositioned and included in other ones for the purpose of the valid financial position analysis. As paragraph 56 of IAS 1 - Presentation of Financial Statements (IFRS Foundations, 2012) does not permit Deferred tax assets treatment as current assets, this item is considered the part of Fixed Assets for the purpose of this financial position analysis. Since deferred tax liabilities should not be treated as short-term liabilities, they are included in long-term liabilities for analysis purposes (Obradović, Karapavlović, 2014). In addition to these, other adjustments were made in the following analysis. Assets should contain two main components: fixed assets and current assets. In order for assets to contain only these components, Subscribed unpaid capital, as its separate item (component), was excluded from it. As a counterpart, equity is reduced by the same amount. The amount of equity is also reduced by the loss above equity. The balance sheet adjusted in this way is a reliable basis for the solvency and fixed assets financing analysis.

Solvency refers to the entity's ability to meet its obligations in the long term (Aziz, A. Rahman, A, 2017). Liquidity and solvency analysis differ in terms of the time horizon covered. While liquidity refers to the ability to meet short-term liabilities, solvency represents the capacity to settle long-term liabilities. Therefore, liquidity is called short-run solvency (Fraser, Ormiston, 2013). Like liquidity ratios, solvency ratios are determined on the basis of the balance sheet. There are many solvency indicators among which the most popular are Equity to total debts ratio (Capital structure ratio), Equity to long-term (permanent) capital and Total debt to total assets ratio. Unlike the first two solvency indicators, the assets data is also used to calculate the third one. This solvency ratio is calculated by dividing total debts (liabilities) by total assets and it indicates which part of all assets is financed by liabilities. It is known as Debt ratio. The higher the percentage of this ratio, the greater is the financial risk (Robinson, Henry, Pirie, Broihahn, 2015). An entity is considered to be more solvent if the Equity to total debts ratio (Capital structure ratio), Equity to long-term (permanent) capital are larger and the Total debts to total

assets ratio indicator is smaller. As with liquidity ratios, it is necessary to assess the trend of solvency over a longer period. It is very important to dynamically monitor the amount and proportion of liabilities in the entity's capital structure due to the trade-off between risk and return (Fraser, Ormiston 2013).

The fixed assets financing analysis is a useful instrument for financial position evaluation. This analysis should reveal the extent to which fixed assets are financed by both equity and total long-term capital. The relevant indicators of fixed assets financing are Equity to fixed assets and Long-term (Permanent) capital to fixed assets. Hence, balance sheet data are used for this analysis.

### 3. Dynamics of Sector A enterprises' solvency and fixed assets financing

The number of enterprises in Sector A increased from 3,507 to 3,875 in the observed period. In contrast, the number of their employees has been steadily declining. Compared to the initial year of observation sales increased by 10.4% in 2018. At the same time, operating profit decreased by RSD 2,492 million (22.1%). In all years, except 2014 and 2018, this Sector's enterprises reported a profit. Moreover, this Sector was the only non-profitable sector in RS in 2018.

The analysis of the Sector A enterprises' solvency and fixed assets financing is based on data from their aggregate balance sheet. Relevant data for these two aspects of their financial position assessment are shown in Table 1. While the amounts in the Financial Statements Annual Bulletin are expressed in RSD thousands, the amounts of items are presented in RSD millions in the following tables.

**Table 1. Relevant items in Section A enterprises' aggregated Balance sheet in RSD (in millions)**

Section A (enterprises)	2013	2014	2015	2016	2017	2018
Total assets	569,629	611,996	686,660	706,650	814,446	867,907
Fixed assets	352,791	376,480	459,997	467,855	569,380	616,046
Equity	263,932	270,973	347,328	357,080	461,979	470,610
Total liabilities	305,696	341,022	339,331	349,569	352,467	397,297
Long – term liabilities	66,475	83,171	87,372	96,889	102,364	145,278
Long-term capital	330,407	354,145	434,701	453,969	564,343	615,888

Source: SBRA, Financial Statements Annual Bulletins 2013-2018

The value of all balance sheet items increased significantly during the observed period. Compared to the initial year of observation, total assets, equity, and liabilities increased by 52.4%, 78.3%, and 30%, respectively in 2018. With the exception of 2015, the amount of total liabilities increased during the entire observed period. The structure of liabilities is dominated by short-term ones in all observed years. The share of fixed assets is predominant in all observed years and tended to increase from 62% in 2013 to 71% in 2018.

An evidence useful to solvency analysis is provided by a six-year trend of the conventional mix of ratios: Equity to total debts ratio (Capital structure ratio), Equity to permanent (long-term) capital and Total debt to total assets ratio (Debt ratio).

The relevant elements for identification of Sector A enterprises' Equity to total debts ratio and its dynamics in the period 2013-2018 are shown in Table 2.

**Table 2. Sector A enterprises' Equity to total debts ratio dynamics in the period 2013-2018**

	2013	2014	2015	2016	2017	2018
Equity (RSD in millions)	263,932	270,974	347,328	357,080	461,979	470,610
Total liabilities (RSD in millions)	305,696	341,022	339,331	349,569	352,467	397,297
Equity to total debt ratio	0.86	0.79	1.02	1.02	1.31	1.18

*Source:* Authors, based on SBRA Financial Statements Annual Bulletins data, 2013-2018

This solvency ratio, which shows the ratio between equity and total debts, has been continuously increasing from 2015 to 2017. The reason for that was a significantly larger increase in equity compared to the increase in total liabilities. This ratio decreased in 2018, due to a significantly higher increase (12.7%) in total liabilities compared to the increase in equity (1.9%).

This solvency analysis should be accompanied by an analysis of the equity share in total permanent capital. The permanent capital consists of equity and long-term liabilities. This ratio shows the share of equity in total permanent capital. Table 3 shows the dynamics of the elements relevant for its determination and analysis.

**Table 3. Sector A enterprises' Equity to permanent capital ratio dynamics in the period 2013-2018**

	2013	2014	2015	2016	2017	2018
Equity (RSD in millions)	263,932	270,974	347,328	357,080	461,979	470,610
Permanent capital (RSD in millions)	330,407	354,145	434,701	453,969	564,343	615,888
Equity to permanent capital ratio	0.80	0.77	0.80	0.78	0.82	0.76

Source: Authors, based on SBRA Financial Statements Annual Bulletins data, 2013-2018

Although the share of equity in permanent capital fluctuated slightly in the analyzed period, it can be stated that it was satisfactory. It recorded the lowest value in 2018, due to the increase in long-term liabilities.

The Debt ratio indicator shows the ratio of total debts to total assets. Table 4 shows the relevant data for its determination.

**Table 4. Sector A enterprises' Debt ratio dynamics in the period 2013-2018**

	2013	2014	2015	2016	2017	2018
Total liabilities (RSD in millions)	305,696	341,022	339,331	349,569	352,467	397,297
Total assets (RSD in millions)	569,629	611,996	686,660	706,650	814,446	867,907
Debt ratio	0.54	0.56	0.49	0.49	0.43	0.46

Source: Authors, based on SBRA Financial Statements Annual Bulletins data, 2013-2018

In the period from 2015 to 2017, the share of liabilities in asset financing continuously decreased slightly. However, the share of assets financed by debts increased due to a significant increase in long-term liabilities in 2018.

The Ratio of fixed assets financing by equity and the Ratio of fixed assets financing by permanent capital are two relevant financial position's indicators. The analysis of the fixed assets financing should reveal the extent to which it is financed with both equity and permanent capital. Their dynamics are presented in Table 5 and Table 6, respectively.

**Table 5. Sector A enterprises' Equity to fixed assets ratio dynamics in the period 2013-2018**

	2013	2014	2015	2016	2017	2018
Equity (RSD in millions)	263,932	270,974	347,328	357,080	461,979	470,610
Fixed assets (RSD in millions)	352,791	376,480	459,998	467,855	569,380	616,046
Equity to fixed assets ratio	0.75	0.71	0,5	0.76	0.81	0.76

*Source:* Authors, based on SBRA Financial Statements Annual Bulletins data, 2013-2018

It is evident that fixed assets have been continuously increasing, which indicates significant investment activities during the observed period. It is evident that 24% of fixed assets are not financed by the equity in 2018.

**Table 6. Sector A enterprises' Permanent capital to fixed assets ratio dynamics in the period 2013-2018**

	2013.	2014.	2015.	2016.	2017.	2018.
Permanent capital (RSD in millions)	330,407	354,145	434,701	453,969	564,343	615,888
Fixed assets (RSD in millions)	352,791	376,480	459,998	467,855	569,380	616,046
Permanent capital to fixed assets ratio	0.94	0.94	0.94	0.97	0.99	0.99

*Source:* Authors, based on SBRA Financial Statements Annual Bulletins data, 2013-2018

Table 6 shows that the lack of equity to finance new investments was almost completely compensated by long-term borrowing.

#### **4. Dynamics of sector A entrepreneurs' solvency and fixed assets financing**

According to data from the Financial Statements Annual Bulletins, the number of entrepreneurs fluctuated and ranged from 115 (2015) to 136 (2018) in the observed period. At the same time, the number of employees increased from year to year. Compared to the initial year of observation, the number of employees in the last



observed year increased by 73.5%. Unlike the enterprises from Sector A, the entrepreneurs operated profitably. In all observed years, they achieved operating profit and net profit (Bogićević, Domanović, Obradović, 2020). However, they faced the problem of illiquidity throughout the observed period.

The analysis of the Sector A entrepreneurs' solvency and fixed assets financing is based on the data from the aggregate balance sheets of this group of entities. The relevant aggregate items of assets, liabilities and equity for these aspects of financial position analysis are shown in Table 7.

**Table 7. Relevant items in the Section A entrepreneurs' aggregated Balance sheet in RSD (in millions)**

Section A (entrepreneurs)	2013	2014	2015	2016	2017	2018
Total assets	2,471	1,204	1,206	1,410	1,585	1,824
Fixed assets	610	446	447	493	606	697
Current assets	1,861	758	759	917	979	1,127
Inventory	619	239	243	289	348	390
Current assets less inventories	1,243	519	516	628	631	738
Equity	265	255	304	389	369	487
Total liabilities	2,206	949	902	1,021	1,216	1,337
Long-term capital	440	328	350	452	459	598
Long – term liabilities	174.	73	48	63	90	111
Short term liabilities	2,032	876	856	958	1,126	1,226

*Source:* SBRA, Financial Statements Annual Bulletins 2013-2018

The amount of equity oscillated and recorded its highest value in 2018. The amount of total liabilities, long-term liabilities and short-term liabilities decreased in the period from 2013 to 2015, and in the last three observed years these amounts have been continuously increasing. It is evident that the structure of total liabilities is dominated by short-term ones whose share varied in the range from 91.7% (2018) to 95% (2015).

As with enterprises, the solvency analysis was conducted on the basis of the following indicators: Equity to total debts ratio (Capital structure ratio), Equity to permanent (long-term) capital and Total debt to total assets ratio (Debt ratio).

Table 8 illustrates entrepreneurs' Equity to total debts dynamics in the period 2013-2018.

**Table 8. Elements and dynamics of Sector A entrepreneurs' Equity to total debts ratio in the period 2013-2018**

	2013	2014	2015	2016	2017	2018
Equity (RSD in millions)	265	255	304	389	369	487
Total liabilities (RSD in millions)	2,206	949	902	1,021	1,216	1,337
Equity to total debts ratio	0.12	0.27	0.34	0.38	0.30	0.36

*Source:* Authors, based on SBRA Financial Statements Annual Bulletins data, 2013-2018

Despite the slight increase in Equity to total debts ratio in 2018 compared to 2017, it can be stated that this solvency ratio reflects the poor financial structure of Sector A entrepreneurs in the observed period.

Table 9 illustrates entrepreneurs' equity to permanent capital dynamics in the period 2013-2018.

**Table 9. Elements and dynamics of Sector A entrepreneurs' Equity to permanent (long-term) capital ratio in the period 2013-2018**

	2013	2014	2015	2016	2017	2018
Equity (RSD in millions)	265	255	304	389	369	487
Permanent capital (RSD in millions)	440	328	350	452	459	598
Equity to permanent capital ratio	0.60	0.78	0.67	0.86	0.80	0.81

*Source:* Authors, based on SBRA Financial Statements Annual Bulletins data, 2013-2018

The share of equity in permanent capital fluctuated in the observed period. Compared to the initial year of observation, this ratio increased by 35% in the last observed year. This ratio was higher in 2017 and 2018 than 2013, but it was below the level in 2016.

Although the share of total liabilities in asset financing in 2018 decreased by 16% compared to 2013, it was still very high. This ratio indicates an extremely high level of borrowed funds throughout the observed period. The inappropriate amount of this indicator is confirmed by Alex White (2007-2008) who points out that he likes to see this ratio for an agricultural entity to be less than 60 percent.

Table 10 shows the determinants for calculation and dynamics of Debt ratio.

**Table 10. Elements and dynamics of Sector A entrepreneurs' Debt ratio in the period 2013-2018**

	2013	2014	2015	2016	2017	2018
Total liabilities (RSD in millions)	2,206	949	902	1,021	1,216	1,337
Total assets (RSD in millions)	2,471	1,203	1,206	1,411	1,585	1,824
Debt Ratio	0.89	0.79	0.75	0.72	0.77	0.73

*Source:* Authors, based on SBRA Financial Statements Annual Bulletins data, 2013-2018

It is very important to identify and analyze Ratio of fixed assets financing by equity and Ratio of fixed assets financing by permanent capital. Their dynamics are presented in Table 11 and Table 12, respectively.

**Table 11 Elements and dynamics of Sector A entrepreneurs' Equity to fixed assets ratio in the period 2013-2018**

	2013	2014	2015	2016	2017	2018
Equity (RSD in millions)	265	255	304	389	369	487
Fixed assets (RSD in millions)	610	446	447	493	606	697
Equity to fixed assets ratio	0.43	0.57	0.68	0.79	0.61	0.70

*Source:* Authors, based on SBRA Financial Statements Annual Bulletins data, 2013-2018

Although the amount of fixed assets fluctuated, this category of assets increased by 12% in 2018 compared to 2013. Due to the simultaneous increase in equity by 84%, the ratio of fixed assets financing with equity increased from 43% to 70%. However, this indicator was not adequate because it shows that a high amount of fixed assets was financed with liabilities.

Despite the increase in this ratio in 2018, its values were not satisfactory because they show that the part of fixed assets was financed by the short-term borrowed sources.

**Table 12. Elements and dynamics of Sector A entrepreneurs' Permanent capital to fixed assets ratio in the period 2013-2018**

	2013	2014	2015	2016	2017	2018
Permanent capital (RSD in millions)	440	328	350	452	459	598
Fixed assets (RSD in millions)	610	446	447	493	606	697
Permanent capital to fixed assets ratio	0.72	0.73	0.78	0.92	0.76	0.86

*Source:* Authors, based on SBRA Financial Statements Annual Bulletins data, 2013-2018

## 5. Conclusion

In this paper we examined solvency and fixed assets financing for the entire Sector A over the six years (2013 - 2018) period. In order to determine whether there is a difference in solvency and fixed assets financing between enterprises and entrepreneurs in this Sector, a separate analysis of these entities was conducted. Traditional solvency and fixed assets financing ratios were calculated on the basis of their adjusted aggregate balance sheets obtained from the SBAR database. Based on the analysis it can be concluded that enterprises were significantly more solvent than entrepreneurs during the whole observed period. The research found that both fixed assets financing ratios went in favor of enterprises, too.

Enterprises' Equity to total debt ratio has been continuously increasing from 2015 to 2017. Despite a slight decrease in 2018, the amount of this solvency ratio was satisfactory. Although the share of equity in enterprises' permanent capital slightly fluctuated in the analyzed period, it can be stated that solvency ratio, reflecting this relation, was satisfactory. In the period from 2015 to 2017, the share of liabilities in enterprises' asset financing continuously decreased slightly. However, the share of assets financed by debts increased due to a significant increase in long-term liabilities in 2018. Despite the slight increase in Equity to total debts ratio in 2018 compared to 2017, it can be stated that this solvency ratio reflects the poor financial structure of Sector A entrepreneurs in the whole observed period. The share of equity in entrepreneurs' permanent capital fluctuated in the observed period. Compared to the initial year of observation, this ratio increased by 35% in the last observed year. This ratio was higher in 2017 and 2018 than 2013, but it was below the level in 2016. Although the share of total liabilities in asset financing in 2018 decreased by 16% compared to 2013, it was still very high. This Debt ratio indicates an extremely high level of borrowed funds at the level of entrepreneurs throughout the observed period.

The Ratio of fixed assets financing by equity and Ratio of fixed assets financing by permanent capital are two relevant financial position indicators. The

level of enterprises' fixed assets has been continuously increasing, indicating the significant investment activities during the observed period. In 2018, almost a quarter of fixed assets were not financed by the equity. The lack of equity to finance new enterprises' investments was almost completely compensated by long-term borrowing. Although the ratio of entrepreneurs' fixed assets financing with equity increased from 43% to 70% in the observed period, this indicator was not adequate because it shows that a high amount of fixed assets was financed with liabilities. Despite the increase in fixed assets financing by permanent capital ratio in 2018, its values were not satisfactory because they show that the part of fixed assets was financed by the short-term borrowed sources.

According to the research results, an affirmative answer can be given to the research question posed in the Introduction because there were significant differences in the solvency and financing of fixed assets between Sector A enterprises and entrepreneurs. Since this paper is a subject research extension of papers in which the profitability and liquidity of this Sector were meticulously considered, further research should focus on the analysis of the impact of liquidity and solvency on the profitability of its entities. Future study can be done by examining countries from ex-Yugoslavia to compare this Sector financial position and performance using traditional ratios. Moreover, future research may include financial position and profitability assessment of Section A developing countries.

## References

- Aziz A., & Rahman, A., (2017) The Relationship between Solvency Ratios and Profitability Ratios: Analytical Study in Food Industrial Companies listed in Amman Bursa, *International Journal of Economics and Financial Issues*, No. 7(2), 86-93.
- Bogicevic, J., Domanovic, V., & Obradovic, V., (2020). Agriculture, Forestry and Fishing Sector Profitability in the Republic of Serbia, *Fresenius Environmental Bulletin*, Volume 29 – No.11/2020, pp. 9730-9740
- Fraser, L.M., & Ormiston, A., (2013). *Understanding Financial Statements*, Pearson Education Limited, Essex, England
- IFRS Foundation, (2012). *International Accounting Standard 1 – Presentation of Financial Statements*, <http://www.ifrs.org>
- Obradović, V., & Karapavlović, N. (2014). Analiza finansijskog položaja i rentabilnosti privrednih subjekata iz Kragujevca, *Monografija Stanje i perspektive ekonomskog razvoja grada Kragujevca*, Ekonomski fakultet Univerziteta u Kragujevcu, str. 445-457.
- Olubode-Awosola, O.O., Chilonda, P., Minde, I., & Bhatt, Y. (2008). Indicators for Monitoring and Evaluation of Agricultural Performance and Shared goals in Southern Africa, *ReSAKSS Working paper*, No. 21, Southern Africa
- Robinson, T.R., Henry, E., Pirie, W.L., Broihahn, M.A. (2015), *International Financial Statement Analysis*. 3rd ed. Hoboken, New Jersey: Wiley
- SBRA – Serbian Business Registers Agency, *Financial Statements Annual Bulletins*, Belgrade, available at: <https://www.apr.gov.rs/registri/finansijski-izvestaji/publikacije/godisnji-bilten-finansijskih-izvestaja.2127.html> 07.08.2019.)
- White, A. (2007-2008), *Financial analysis of an Agricultural Business – Liquidity & Solvency*, Farm Business Management Update, Virginia Tech.

## **SOLVENTNOST I FINANSIRANJE OSNOVNIH SREDSTAVA U SEKTORU POLJOPRIVREDE, ŠUMARSTVA I RIBARSTVA U REPUBLICI SRBIJI**

**Apstrakt:** Cilj rada je da se ispita solventnost i finansiranje fiksne imovine Sektora poljoprivrede, šumarstva i ribolova (Sektora A) u Republici Srbiji. Takođe je ispitano da li postoji razlika između preduzeća i preduzetnika ovog Sektora u pogledu ova dva aspekta njihovog finansijskog položaja. Istraživanje je bazirano na godišnjim biltenima finansijskih izveštaja dostupnim na zvaničnom sajtu Agencije za privredne registre Republike Srbije. Istraživanjem je obuhvaćen period od šest uzastopnih godina (2013-2018). Analizirani su solventnost i finansiranje fiksne imovine posebno za preduzeća, a posebno za preduzetnike Sektora A. Za određivanje ovih relevantnih aspekata finansijskog položaja korišćeni su standardni racio indikatori. Sprovedena analiza je pokazala razlike između preduzeća i preduzetnika ovog Sektora u pogledu solventnosti. Rezultati istraživanja pokazuju da su, i pored neznatnog poboljšanja određenih indikatora solventnosti, preduzetnici bili insolventni u posmatranom periodu. Indikatori finansiranja fiksne aktive pokazuju da je nedostatak sopstvenog kapitala za finansiranje novih investicija kompenzovan uglavnom dugoročnim pozajmicama na nivou preduzeća i kratkoročnim pozajmljenim izvorima na nivou preduzetnika.

**Ključne reči:** Sektor poljoprivrede, šumarstva i ribolova, solventnost, finansiranje fiksne imovine, preduzeća, preduzetnici.

### **Authors' biographies**

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