

# LIQUIDITY OF ENTREPRENEURS IN THE REPUBLIC OF SERBIA

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## Abstract

The purpose of the conducted research is to examine the level and trends of liquidity ratio of entrepreneurs in the Republic of Serbia in the period from 2014 to 2023. The research was conducted on the basis of the aggregate data of entrepreneur operations in the Republic of Serbia, published by the Business Registers Agency within the Financial Statements Annual Bulletin. For the paper purposes, liquidity was measured by the current ratio, quick ratio, cash ratio and net working capital. The research showed that during the observed ten-year period, the liquidity ratio values were below reference values, with a growing trend. It was also found that during this period the net working capital value increased, being positive in all these years.

**Key words:** *liquidity, entrepreneurs, ratios, net working capital, the Republic of Serbia.*

## INTRODUCTION

According to the economic growth models developed so far, innovations, new technologies and entrepreneurial capital are key factors for an improvement of economic performances at the national, regional and local levels (Josipović et al., 2019, p. 868). As these authors state, the theoretical explanation for linking entrepreneurship with the economic growth and development implies that entrepreneurship has been recognized as an instrument for transforming knowledge, skills and creativity of individuals into economic knowledge that can be successfully commercialized within new business organisations (Josipović et al., 2019, p. 868). It has impact on the reduction of inequality in income distribution and consequently, through poverty reduction, it performs an important social function by creating jobs for different groups of people, and efficient allocation of resources (Paunović, 2017).

The state is obliged to provide all conditions for entrepreneurship development, because with their support unemployment will decrease (Šormaz, 2021). In the past years in our country there has been growing awareness of the considerable contribution that entrepreneurship and entrepreneurs make in the transition of our social and economic system, being a significant lever for the economic recovery and growth (Ilić, 2018). However, nevertheless, entrepreneurship in the Republic of Serbia has not reached the necessary development level (Aničić, et al., 2017). As the authors state, the results of SME and entrepreneurs are below the expected ones, followed by illiquidity, high indebtedness and unfavourable financing resources in which too expensive bank loans dominate.

The subject of this paper is the liquidity of entrepreneurs in the Republic of Serbia. The aim of the paper research is to present the levels and trends of liquidity ratio of entrepreneurs in the Republic of Serbia in the period from 2014 to 2023. The current ratio, quick ratio, cash ratio and net working capital have been used for measuring liquidity of entrepreneurs.

## RESEARCH METHODOLOGY

Liquidity is ability of a company to settle its obligations at any time within their maturity (Knežević, et al., 2019). In the professional literature, a liquidity analysis of a company is usually equated with the analysis of short-term financial safety or analysis of short-term investment risk (investing) into one company (Malinić et al., 2019, p. 85). Liquidity ratios show the ability of the company to meet its short-term obligations, and/or they can show current solvency of the company, as well as its ability to remain solvent in the case of any financial problems (Van Horne, 2020). The most significant and widely used liquidity ratios are the current ratio, quick ratio, cash ratio and net working capital.

The Current Ratio is the ratio between current assets and short-term liabilities. Thus, it measures a company's ability to respond to its short-term obligations by using the whole current assets. It is usually stated that a company is financially strong if the value of this ratio is 2 or above, while when it is below 2 it implies a higher risk of illiquidity. The threshold is stated to be 1, when current assets comprise cash and assets easily converted into cash at the market. A company may encounter a situation that apart from the high value of this ratio it cannot pay for its short-term liabilities. The reason can be in the fact that this liquidity ratio puts total current assets and short-term obligations into ratio, i.e. it does not differentiate between certain types of current assets.

The Quick Ratio is the ratio between liquid assets and short-term liabilities, thus being much stricter liquidity ratio than current ratio. Namely, this liquidity ratio excludes inventories from current assets, which present in full or in majority, despite relative fast turnover, permanent investments of the company which is rather similar to investment into fixed assets (Malinić et al., 2019). In other words, this liquidity ratio measures the company's current ability to settle obligations, because the numerator includes receivables, cash and securities, while less liquid current assets, such as inventories, are excluded (Knežević et al., 2019). In the situation when the value of quick ratio is 1 and above, we may say that the company is safe, meaning that liquid assets are at least equal to its short-term liabilities.

The Cash Ratio is the ratio between cash and cash equivalents on the one hand, and short-term liabilities on the other hand. It is the strictest liquidity ratio because it puts into ratio the most liquid assets – cash and/or its equivalents to short-term liabilities. If the cash ratio is 1 or higher, the company may settle its short-term liabilities from available cash assets.

The Net Working Capital is very often used as a liquidity ratio. This liquidity ratio is difference between current assets and short-term liabilities (Knežević, 2009). A higher value of net working capital implies higher liquidity of a company. In other words, if a company has negative net working capital, then it is not able to pay for its business expenses (Knežević et al., 2019).

Table 1 shows the manner of determining the above-mentioned liquidity ratios.

**Table 1: Liquidity ratios and the method of their calculation**

<b>Liquidity ratio</b>	<b>Calculation method</b>
Current ratio	Current assets/Short-term liabilities
Quick ratio	(Current assets-Inventories)/Short-term liabilities
Cash ratio	Cash and cash equivalents/Short-term liabilities
Net working capital	Current assets-Short-term liabilities

Source: The authors, from the available literature

As a source of data for the purpose of this research, the data from Financial Statements Annual Bulletin published since 2014 by the Republic of Serbia Business Registers Agency were used. Actually, it is a report which includes aggregate balance sheets and income statements for two years in a row for companies, entrepreneurs from the real sector, financial institutions and non-profit organisations. In this paper, for the purpose of research, only data from the balance sheet for the period from 2014 to 2023 shall be used.

## RESEARCH RESULTS

During the observed ten-year period, there were oscillation in the number of entrepreneurs operating in the Republic of Serbia (Table 2). Namely, during 2015 and 2016 their number decreased compared to 2014, and from 2017 they started growing. The most considerable increase occurred during 2019. Milašinović et al., (2021) state as a reason for this sudden increase in the number of entrepreneurs “that after enacting the Law on Amendments to the Law on Personal Income Tax the number of entrepreneurs increased, which during 2019 became obligors for double-entry bookkeeping, as well as for the production of and reporting of financial statements to the Business Registers Agency (p. 8). Therefore, at the end of 2002, there were 6 times more entrepreneurs in the Republic of Serbia than at the end of 2014. Regarding the number of employees in entrepreneur entities, there was a growing trend throughout this period. At the end of 2020, there were 5 times more employees in entrepreneur entities than at the end of 2014. The number of entrepreneurs has grown steadily but more slowly over the last three years. The number of employees stayed the same in 2022 but grew more in 2023. The entrepreneurial sector is developing positively. However, employee growth does not always match this trend. This may show the need to explore factors like productivity, economic cycles, or market demand.

**Table 2: The number of entrepreneurs and their employees in the Republic of Serbia in the period from 2014 to 2023**

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Number of entrepreneurs	18.204	17.109	17.098	17.382	18.407	108.557	112.703	115.241	116.427	117.115
Number of employee	43.025	45.545	47.906	50.955	56.675	210.455	225.404	230.260	230.325	233.094

Source: The Republic of Serbia Business Registers Agency, *Financial Statements Annual Bulletin from 2014 to 2023*

In the period from 2014 to 2023, the average share of current assets in total business assets of entrepreneurs was approximately 72%. In the structure of current assets, inventories had the highest share during all 10 observed years. The average share of inventories in current assets was approximately 47%. The reason for such high share of inventories in the structure of current assets may be in the fact that entrepreneurs purchased the same for cash (due to certain lack of confidence in suppliers), as well as due to the fact that entrepreneurs tried to achieve some economic benefit by purchasing large quantities (in the form of discount on quantities). Apart from inventories, receivables against sale has a significant share in current assets of entrepreneurs in the Republic of Serbia.

Therefore, in the period from 2014 to 2023 their average participation in current assets was somewhat below 28%. It may imply their bad collection policy, as well as problems of buyers' illiquidity.

The dramatic increase in total assets, current assets, inventories, receivables, and cash between 2018 and 2019, continuing into 2020, could be attributed to an economic boom, increased investments, or specific policies or market conditions in Serbia that supported business growth. The spike in cash holdings from 2020 could reflect a strategic shift towards maintaining liquidity during uncertain times (likely a result of the COVID-19 pandemic). Businesses may have started holding more cash to weather potential downturns or disruptions in operations.

**Table 3: Total and current assets of entrepreneurs and the structure of current assets**

	Total assets (000 dinars)	Current assets (000 dinars)	Inventories (000 dinars)	Receivables under sale (000 dinars)	Cash and cash equivalents (000 dinars)
2014	93.012.888	68.250.878	33.475.163	20.446.573	7.845.932
2015	98.489.330	71.078.438	34.368.339	21.260.702	9.000.044
2016	107.440.255	76.892.580	36.285.151	22.417.449	10.312.934
2017	117.803.926	83.912.668	39.845.167	23.305.979	11.960.089
2018	133.006.476	93.690.294	42.956.264	26.209.015	14.650.109
2019	406.570.115	297.705.350	140.877.674	75.299.692	51.898.387
2020	473.132.934	346.192.660	157.748.138	84.707.542	67.470.853
2021	552.300.421	402.153.345	182.293.250	99.224.725	80.117.685
2022	631.725.868	462.615.434	209.526.779	116.723.698	87.991.930
2023	691.596.809	501.796.229	215.636.459	126.636.881	104.789.362

Source: The Republic of Serbia Business Registers Agency, *Financial Statements Annual Bulletin from 2014 to 2023*

The growing cash balances are positive, but entrepreneurs might consider investing some of that excess cash into higher-yield opportunities, especially once economic uncertainties decline.

During the observed period, most of the entrepreneurs' assets originate from short-term borrowed sources. Over the 10-year period, short-term liabilities grew by 453.73%, indicating a significant increase in the use of short-term borrowed funds. The most important part of short-term liabilities accounted for liabilities from operations (obligations towards suppliers). Their average share in short-term liabilities of entrepreneurs in the Republic of Serbia in the period 2014-2023 was around 53%. Short-term financial liabilities (with average 25.65% share) were also a significant form of short-term liabilities of entrepreneurs. In 10-year, period it grew by 319.22%. This is slower than the growth in both total short-term liabilities and liabilities from operations, suggesting that entrepreneurs are less reliant on financial institutions for short-term credit than on suppliers. The share of short-term financial liabilities started at around 27-29% between 2014 and 2018, but declined to 21-26% from 2019 to 2023. This indicates a gradual reduction in reliance on financial institutions for short-term debt in recent years. The sharp increases in short-term liabilities in 2019 can likely be attributed to a combination of more factors (such as changes in lending policies, supplier terms, or market conditions), rather than a single event. Analyzing specific economic reports and industry trends from that time would provide more detailed insights into the precise drivers of this behavior.

The structure of short-term liabilities in the Republic of Serbia during the period from 2014 to 2023 is shown in Table 4.

**Table 4: The structure of short-term liabilities of entrepreneurs**

	Short-term liabilities (000 dinars)	Liabilities from operations (000 dinars)	Short-term financial liabilities (000 dinars)
2014	63.780.837	34.524.923	17.680.553
2015	64.641.868	35.109.274	17.487.323
2016	69.337.052	37.394.472	19.074.329
2017	74.044.434	38.601.585	21.539.442
2018	80.675.027	41.593.208	23.298.878
2019	230.813.575	121.790.620	60.184.697
2020	263.142.565	132.341.165	67.847.152
2021	298.949.465	154.218.172	71.270.979
2022	335.240.240	178.105.086	72.324.318
2023	353.121.154	191.340.366	74.153.246

Source: The Republic of Serbia Business Registers Agency, *Financial Statements Annual Bulletin from 2014 to 2023*

The Table 5 below shows the values of current assets, short-term liabilities and current ratio of entrepreneurs in the Republic of Serbia in the period 2014 - 2023.

**Table 5: Current ratio of entrepreneurs in the Republic of Serbia in the period 2014-2023**

	Current assets (000 dinars)	Short-term liabilities (000 dinars)	General ratio
2014	68.250.878	63.780.837	1,07
2015	71.078.438	64.641.868	1,10
2016	76.892.580	69.337.052	1,11
2017	83.912.668	74.044.434	1,13
2018	93.690.294	80.675.027	1,16
2019	297.705.350	230.813.575	1,29
2020	346.192.660	263.142.565	1,32
2021	402.153.345	298.949.465	1,35
2022	462.615.434	335.240.240	1,38
2023	501.796.229	353.121.154	1,42

Source: The authors on the basis of data of the Republic of Serbia Business Registers Agency, *Financial Statements Annual Bulletin from 2014 to 2023*

In the period 2014 – 2023 there was a growing trend of the values of current assets and short-term liabilities of entrepreneurs in the Republic of Serbia. Thus, current assets were by around 407% higher at the end of 2023 than at the end of 2014, while short-term liabilities were higher by around 312%. However, as the growth of current assets was higher than short-term liabilities growth over time, it resulted in the growth of the current ratio. During all ten observed years, the current ratio was below the bottom reference value of 1. In other words, each dinar of short-term liabilities was covered with more than 1 dinar of current assets. The lowest value of this liquidity ratio was marked in the first observed year, and the highest level was in the last observed year. The analysis of current assets and short-term liabilities from 2014 to 2023 reveals a positive trajectory in the financial health of entrepreneurs in the Republic of Serbia. With a growing current ratio, businesses are better positioned to manage short-term obligations, but attention must be given to maintaining a balance between liquidity and growth. Understanding the broader economic context, along with strategic financial management, will be essential for long-term success in an evolving market landscape.

**Table 6: The quick ratio of entrepreneurs in the Republic of Serbia in the period from 2014 to 2023**

	Current assets (000 dinars)	Inventories (000 dinars)	Short-term liabilities (000 dinars)	Quick ratio
2014	68.250.878	33.475.163	63.780.837	0,55
2015	71.078.438	34.368.339	64.641.868	0,57
2016	76.892.580	36.285.151	69.337.052	0,59
2017	83.912.668	39.845.167	74.044.434	0,60
2018	93.690.294	42.956.264	80.675.027	0,63
2019	297.705.350	140.877.674	230.813.575	0,68
2020	346.192.660	157.748.138	263.142.565	0,72
2021	402.153.345	182.293.250	298.949.465	0,72
2022	462.615.434	209.526.779	335.240.240	0,74
2023	501.796.229	215.636.459	353.121.154	0,75

Source: The authors on the basis of data of the Republic of Serbia Business Registers Agency, *Financial Statements Annual Bulletin from 2014 to 2023*

Apart from the above-mentioned growth in the value of current assets and short-term liabilities of entrepreneurs in the Republic of Serbia in the period 2014-2023, there was a growing trend in the value of inventories (Table 6). Thus, at the end of the last observed year inventories were higher by around 543.2% compared to the end of the first observed year. As with the general ratio, during the observed period there was a growing trend of quick ratio. As this was expected (due to low value of general ratio and significant share of inventories in current assets), the value of quick ratio was below reference value 1 during all four observed years. It implies that, if we consider entrepreneurs aggregately, each dinar of short-term liabilities was covered with less than one dinar of liquid assets.

The first observed year marks the lowest liquidity of entrepreneurs measured by the quick ratio, while the last observed year marks the highest liquidity level. A high inventory level may indicate overstocking or a proactive approach to meeting market demand. However, businesses should monitor their inventory turnover rates to avoid tying up excessive capital in unsold goods, which can

affect liquidity. Entrepreneurs may consider adopting strategies to enhance liquidity, such as optimizing inventory levels, improving receivables collection processes, and exploring financing options that balance short-term and long-term capital needs. Proactive financial management will be essential in navigating potential market fluctuations and ensuring sustainable growth.

The Table 7 presents the value of cash and cash equivalents, short-term liabilities, as well as the value of cash ratio of entrepreneurs in the Republic of Serbia in the period 2014 – 2023.

**Table 7: Cash ratio of entrepreneurs in the Republic of Serbia in the period 2014 – 2023.**

	Cash and cash equivalents (000 dinars)	Short-term liabilities (000 dinars)	Cash ratio
2014	7.845.932	63.780.837	0,12
2015	9.000.044	64.641.868	0,14
2016	10.312.934	69.337.052	0,15
2017	11.960.089	74.044.434	0,16
2018	14.650.109	80.675.027	0,18
2019	51.898.387	230.813.575	0,22
2020	67.470.853	263.142.565	0,26
2021	80.117.685	298.949.465	0,27
2022	87.991.930	335.240.240	0,26
2023	104.789.362	353.121.154	0,30

Source: The authors on the basis of data of the Republic of Serbia Business Registers Agency, *Financial Statements Annual Bulletin from 2014 to 2023*.

During the observed period, there was a growing trend in the value of cash and cash equivalents alongside the increasing value of short-term liabilities. By the end of 2023, cash and cash equivalents had grown by approximately 1,236.6% compared to the end of 2014. However, despite the significant increase in cash and cash equivalents relative to the growth in short-term liabilities, the cash ratio remained below the reference value of 1 throughout the ten-year period.

Similar to the previous liquidity ratios, the highest value of the cash ratio was observed in the last year, while the lowest was recorded in the first observed year. Entrepreneurs should focus on enhancing cash flow management, potentially by improving collections on receivables or optimizing payment terms with suppliers. These strategies can help ensure that cash resources are available to meet short-term liabilities.

The value of net working capital of entrepreneurs in the Republic of Serbia in the period 2014-2023 is presented in Table 8.

The value of net working capital exhibited a growing trend and maintained a positive value throughout all ten observed years (Table 8). This implies that entrepreneurs were able to cover their operating costs, such as salaries for employees and obligations towards suppliers. The lowest value of net working capital was recorded in the first observed year, while the highest value was achieved in the last observed year. Maintaining a healthy net working capital is crucial for operational

efficiency. Entrepreneurs should continue to monitor their working capital levels to ensure they can manage unexpected expenses or fluctuations in revenue.

**Table 8: Net working capital of entrepreneurs in the Republic of Serbia in the period 2014 - 2020**

	Current assets (000 dinars)	Short-term liabilities (000 dinars)	Net working capital (000 dinars)
2014	68.250.878	63.780.837	4.470.041
2015	71.078.438	64.641.868	6.436.570
2016	76.892.580	69.337.052	7.555.528
2017	83.912.668	74.044.434	9.868.234
2018	93.690.294	80.675.027	13.015.267
2019	297.705.350	230.813.575	66.891.775
2020	346.192.660	263.142.565	83.050.095
2021	402.153.345	298.949.465	103.203.880
2022	462.615.434	335.240.240	127.375.194
2023	501.796.229	353.121.154	148.675.075

Source: The authors on the basis of data of the Republic of Serbia Business Registers Agency, *Financial Statements Annual Bulletin from 2014 to 2023*

## CONCLUSION

The business of entrepreneurs is of great importance for all economies in the world. This paper examined the liquidity of entrepreneurs in the Republic of Serbia in the period from 2014 to 2023, on the basis of the aggregate financial data published by the Republic of Serbia Business Registers Agency. Liquidity was measured by the current ratio, quick ratio, cash ratio and net working capital.

Apart from the growing trend, it was found that during the observed period the liquidity ratios (general, quick and cash) of entrepreneurs in the Republic of Serbia were below the prescribed reference values. This implies that the liquidity of entrepreneurs in the Republic of Serbia, aggregately observed, was jeopardized. Furthermore, it was found by the research that the net working capital value was positive during all ten observed years.

Theoretical contribution to the research means supplementing the existing, similar research in this field (such as Milašinović et al., 2021 and Bogićević et al., 2021). Also, the research results can be of significance for the owners of entrepreneur entities, so that they can compare their own liquidity with the average liquidity of entrepreneurs in the Republic of Serbia.

The conducted research has several limitations:

- First, as the aggregate data on entrepreneur operations in the Republic of Serbia were observed, the following researches should analyse their individual liquidity.
- The following researches should analyse if there is difference between entrepreneurs in different industries, as well as those in different areas of the Republic of Serbia.
- Since the paper focuses only on the liquidity analysis, the following researches should also analyse the efficiency, solvency and profitability of entrepreneurs in the Republic of Serbia.



- Since the research is focused only on entrepreneurs in the Republic of Serbia, it needs to be expanded to include an analysis of entrepreneurs from neighboring countries.

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