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STUDY OF THE EVALUATION OF THE ACTIVITY OF ENTITIES CARRYING OUT REHABILITATION, DEVELOPMENT AND MAINTENANCE OF PUBLIC ROADS IN THE REPUBLIC OF MOLDOVA

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Abstract:
In order to appreciate the activity of the entities, which carry out rehabilitation, development and maintenance works of public roads in the Republic of Moldova, the paper offers an analysis of the patrimony according to the degree of liquidity, the financial autonomy that expresses the ability of the entity to face financial commitments and the estimation of the quality and entity management efficiency. The object of the study is the official financial statements of the entities in the field. According to the results of the study, the problematic aspect of a ranking for entities in the field of public roads is the selection of the necessary number of indicators that would most accurately characterize the characteristics of the field, which would allow determining the rank of an entity among competitors. In this respect, further development of the credit scoring methodology is needed to improve the quality of the risk assessment for the entities analysed. The results of this study can be used for the development of risk management of entities in the field of public roads, considering the need to perform both financial statements audit and internal audit, improve the efficiency of cash flow and asset management, assess the facts to prevent risky events and reduce possible losses. The definition of research is based on the use of specific research tools such as: observation, collection and processing of data and information, analysis, synthesis, comparison and deductive reasoning.

Key words: *credit scoring methodology; entities in the field of public roads; financial performance; financial position; financial stability; liquidity; risk level; solvency.*

JEL Classification: *M41.*

I. INTRODUCTION

Continuous changes in the current economic coatezt generate comples and wide-ranging information needs, so each beneficiary adapts them to personal requirements. In practice, these changes give rise to varied and original research directions, as contemporary society is characterised by new concepts, improved laws, major changes in value systems, etc. In this context, current reality confirms that these phenomena are manifesting themselves in all aspects of economic, social, cultural, political and financial activities, etc.

Thus, the development of the entity from its own sources of funding and maintaining a sufficient level of financial stability are some of the aspects particularly relevant to the activity. The main objective of any entity is to maximise its value, which can only be achieved if the financial structure is optimal and financial equilibrium is maintained. Today, keeping stability indicators in balance is a challenge, in particular due to the continous progress of information technologies and the globalisation of business. In this context. the successful development of entities in terms of profitability, solvency and sustainability underpins an efficient economy.

Although economic theory operates with a large number of ratios, in practice each entity uses a relatively narrow range of indicators that best reflect its interests. Therefore, the management team looks for those ratios that allow decisions to be made on how to maintain or develop the entity in an economic environment that is constantly being disrupted by changes and crises. In contrast, creditors look for solvency ratios that provide them with information on the security of the capital invested in the entity, and shareholders look for rates of return. particularly financial returns.

In order to assess the financial position and performance, the present study aims to examine the financial statements of joint-stock companies, which carry out activities of rehabilitation, development and maintenance of public roads in the Republic of Moldova, because the analysis of financial statements provides important information about the activity of an entity and its state. Kovaliov and Volkova (2002) argue that one of the most important characteristics of the entity's financial condition is its financial stability from the forward-looking position. It is primarily related to the overall financial structure of the entity. the level of dependence on creditors and investors. Melinic and Gherasimova (2008) consider that the entity is in a stable financial situation, if it has sufficient volume of capital to ensure the continuity of its activity, related to the production and realization of

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goods and services in the established quantity, also to fully and timely honor its obligations to staff, budget and suppliers.

Financial position and performance are often dealt with in the literature (Murphy, Trailer, Hill, 1996), (Niculescu & Lavalette, 1999), (Harrington, 2000), (Verboncu & Zalman, 2005), (Albu & Albu, 2005), (Jianu, 2007), (Zhu, 2009), (Petcu, 2009), as they are in a continuous transformation due to the increasing information needs of stakeholders, as well as the frequent changes brought by the accounting harmonization process.

In this context, the topicality of the research is supported, first of all, by the frequent changes that have occurred in recent years in the sphere of financial reporting. with significant consequences on the ways of expressing and interpreting the concepts of financial position and performance. Starting from the premise that a sound financial position is a basic condition for compliance with the going concern principle, it can be said that the analysis of these concepts and their relevance to stakeholders is still topical. At the same time, any entity aims to ensure that its business is performing well, both from the point of view of the beneficiaries of its results and in relation to its employees.

According to the provisions of the NAS „Presentation of Financial Statements", *financial position* is the relationship between the assets, equity and liabilities of the entity presented in the Balance Sheet, and financial *performance* is the relationship between the income and expenses of the entity presented in the Statement of Profit and Loss (National Accounting Standards „Presentation of Financial Statements").

Based on these considerations, any entity can be represented by two fundamental pictures, namely the financial position held on the one hand and the financial performance achieved on the other. Both financial position and financial performance aim at a dual approach, reflecting how assets are financed on the basis of equity and debt (financial position) (Badicu & Mihaila, 2019) and recording a structuring on efforts (expenses) and effects achieved (revenues) (Bucur & Badicu, 2015).

A timely analysis of financial position and performance consists not only of studying the components of Financial statements, but also of determining the influence of each factor on financial position and performance. This is the responsibility of management, who must decide on the action to be taken based on an analysis of the influence of each factor on financial position and performance, with the air of correcting negative influences and maximising the action of factors with a positive influence.

In order to show the practical way in which the information needs of stakeholders in the field of public road management are met, related to financial position and performance, we conducted an examination of the data provided by the financial statements of 10 joint-stock companies, located throughout the country, in the field of road operation, for the years 2018-2021, information posted on the official website of the Public Property Agency (http://app.gov.md/societati-pe-actiuni-3-379/). Financial statement analysis is a method of reviewing and analyzing a company's accounting reports (financial statements) in order to gauge its past, present or projected future performance. This process of reviewing the Financial statements allows for better economic decision making (Said & Benmouffeki, 2021).

Public roads in the Republic of Moldova are administered by the Ministry of Infrastructure and Regional Development through the State Road Administration, which is responsible for the efficient management of financial resources allocated from the State Budget, the Road Fund and external sources for the rehabilitation, development, modernization and maintenance of the national public road network of the Republic of Moldova. For the maintenance of the national public road network, the State Road Administration has concluded contracts with 12 road operating entities - JSC „Drumuri" in the territory (https://www.asd.md), which stipulate the conditions of annual road maintenance and regulate the relationship with the State Road Administration.

The paper aims to examine the situation of joint-stock companies with majority state share capital on the basis of indicators to assess their financial position and performance, in order to base relevant decisions on solvency and financial stability. The problem of maintaining the optimal level of solveney of the entity is extremely topical for the Republic of Moldova, but also the problem of choosing methods of crisis prediction that would allow with high accuracy to forecast the state of financial crisis in the enterprise. Therefore, in order to predict the crisis from the early stage, and throughout the entire life cycle, a compier, much broader approach to crisis diagnosis is needed, based not only on the entity's financial indicators, but also on a number of other indicators characterizing factors of both the entity's internal and external environment.

Considering that the only category of users, which is fully informed by joint stock companies, in the field of road operation is the Public Property Agency, in the present study we aimed to provide additional information for all categories of users on the evolution of the financial position and performance of road operating entities, solvency and financial stability.

Taking into account the multitude of indicators for assessing financial stability, their different safety intervals, and the related difficulties in assessing the liquidity and solvency of the extity, we used the credit scoring technique, which was first proposed by the American economist D. Duran in the early 1940s (Савицкая, 2006), which, in our opinion, can be a quite reliable method (Saidi & Benmouffeki, 2021), (Скобелева, 2013), (Cruceresсu, 2011), but also subjective, as it may not fully reflect the real economic situation, because it is based only on the data of financial statements and does not take into account many qualitative indicators of the entity.

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The application of the credit scoring technique in the field of road operation in the RM is little studied in the literature, although it can provide a useful lever in separating factors and is of particular interest to investors and the management team, as they aim, in particular, to maximise the interest in personal investment by achieving the highest possible return on equity, above other financial investments. From another point of view, the management team is directly interested in increasing financial returns in order to attract new investment in the business.

This model is a cause-and-effect analysis tool for business efficiency, expressing a schematic distribution of the dependence of the profitability indicator on different influencing factors and their relationships. Given that there is a concern about maintaining the financial position and improving the performance of entities, we believe that the application of the credit scoring technique will allow us to divide the entities, in the road operation sector, by levels of solvency and to demonstrate the degree of solveney, both individually and at the sector level.

In our opinion, the analysis of financial position and performance provides a degree of information for users of individual financial statements, they are not mutually exclusive, but rather complement each other and contribute to better informing stakeholders, which is a basic condition for optimal decision-making.

The general objective of the study is to analyse the individual financial statements in order to assess the financial position and performance of joint stock companies, their solvency and financial stability respectively, which carry out rehabilitation, development and maintenance of public roads in the Republic of Moldova and to identify ways to improve these aspects.

The importance of this study is to report the impact of using modern methods of financial analysis, such as credit scoring technique in the analysis and evaluation of the activity of joint stock companies engaged in rehabilitation, development and maintenance of public roads and the inference of its future status.

In order to observe the practical way in which certain categories of stakeholders may perceive the information presented in the individual financial statements of entities carrying out public road rehabilitation, development and maintenance activities in the Republic of Moldova, we conducted an analysis of entities in this sector, investigating four consecutive financial periods (2018-2021), of which the first two were conducted in a normal environment, and the years 2020-2021 are marked by the pandemic context. Thus, the entities under analysis are joint-stock companies engaged in rehabilitation, development and maintenance of public roads, which have submitted financial statements as required by the SNCs for the years 2018-2021. The data in the tables and graphs represent own processing (in Excel) based on the financial reports of joint stock companies, taken from the website http://app.gov.md/.

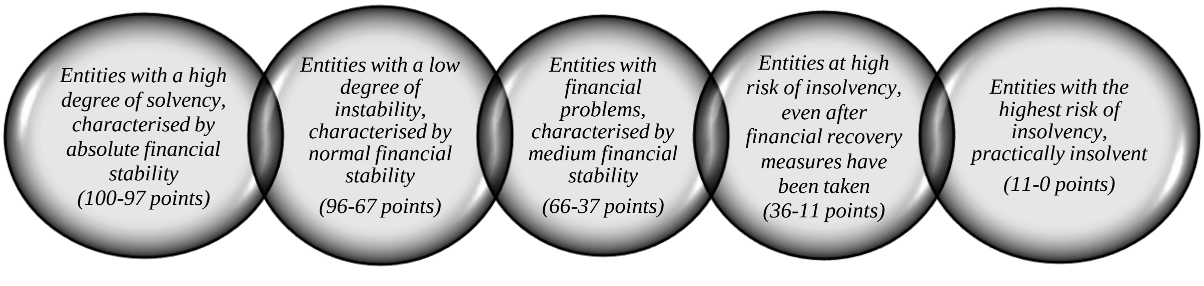
We believe that the paper has been prepared by combining theoretical research with practical, qualitative aspects with quantitative research. Thus, the following research methods were used in the paper:

a) *descriptive method* by reviewing the literature on the concepts of financial position and performance, solvency, financial stability.

b) *studying the individual financial statements* of joint-stock companies, which carry out activities of rehabilitation, development and maintenance of public roads in the Republic of Moldova and assessing their liquidity, solvency and economic profitability,

c) *comparative analysis* was used for the information in the financial statements of public limited companies both in time and space of the basic components;

d) *Credit Scoring methodology* has been used to classify entities by creditworthiness levels, divided into *five classes of entities, for which credit researchers assign rating points*:



e) *participatory observation* by interpreting the results of the analysis of the financial statements and drawing conclusions on the whole content of the work;

f) *graphical representation* was used to present the results of the empirical analysis in order to enhance the quality of the information obtained.

In order to complete the research and contribute to the state of knowledge, a number of specific research tools were used, such as observation, data and information collection and processing, analysis, synthesis, comparison and deductive reasoning.

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II. BASIC CONTENT

The existing trend worldwide is an obvious one of globalization in the field of accounting, and the single reporting framework towards which most economies of the world are tending is the one established in IFRS. In the Republic of Moldova, all entities, except for those of public interest, keep accounts and prepare financial statements in accordance with the National Accounting Standards (NAS), which are based on European Union directives and IRS, developed and approved by the Ministry of Finance of the Republic of Moldova (Law on Accounting and Financial Reporting No 287/2017, art. 5).

The information presented in the financial statements that outlines the financial position, cash flows and financial performance is based on the following:

Financial statements		
Total assets	Total liabilities, *inclusive:* Equity Total debts Provisions	**The Balance sheet presents the Financial Position:** *Total assets – Total Debts - Provisions = Equity*
Total income Total expense Financial result		**The Profit and Loss Statement demonstrates Financial Performance:** *Total income – Total expense = Financial result*
Total receipts Total payments Total net cash flow		**The cash flow statement confirms Cash Flow:** *Total receipts – Total payments = Total net cash flow*

Figure 1 - Financial position, cash flows and financial performance through the prism of financial statements
Source: Elaborated by the author

Research has allowed us to find that the balance sheet presents assets and liabilities by structure, which gives the balance sheet a picture of a financial structure tool rather than a financial position tool (Petrescu, 2010), In our opinion, the balance sheet can be seen as a source of raw data, which needs to be processed to get a picture of the financial position. Considering these aspects, as well as the informational needs of stakeholders, which cannot be fully satisfied on the basis of this information, we endorse the idea presented by Socea (2010), according to which the true meaning provided by the information presented in the balance sheet is achieved only as a result of the application of analysis and interpretation processes. At the same time, we note that financial statements have certain limits in reflecting the situation of an entity and its analysis. Thus, the balance sheet records monetary values and provides a picture at a given point in time, which is likely to be rapidly modified by future operations.

In order to be able to assess the financial position, we will start from the data presented in the balance sheet and on the basis of these we will calculate a series of indicators that will give stakeholders a picture of the entities analysed. Given that we are referring to public roads, their importance in the national economy is high, as the state probably has the greatest interest in the financial position of the entities in this field. We estimate that the main interest of the state related to the public roads sector concerns both the solvency of the entities, compliance with the going concern principle, efficiency in the use of assets and general liquidity.

Solvency looks at the ability of the entity to pay its total liabilities from total resources, thus being able to assess the risk of long-term default. Solvency can be assessed by the financial autonomy ratio (equity solvency) and the overall solvency ratio.

The theoretical ceiling of the financial autonomy rate is ≥ 50%. This means that own sources must contribute at least 50% to the financing of the entity. At the same time, it is considered that the minimum admissible value of this rate can be 33%. Between these amounts the entity can borrow, but must benefit from leverage. If equity capital constitutes 66% of total sources, the entity has a high degree of financial autonomy, with almost certain guarantees for long-term bank credit. If the equity ratio is below the minimum allowable amount (<33%), the entity is in an unfavourable situation in terms of insolvency risk. The dynamic increase in the listed ratio means an increase in the financial autonomy of the entity as a result of the growth rate of equity exceeding the growth rate of total sources. It is advisable that this increase in equity is due to a faster increase in net profit than in other equity items. The dynamic reduction in the financial autonomy ratio expresses the reduction in financial autonomy as a result of equity changing at a slower pace than total sources. This is considered normal if it is due to the faster growth of current liabilities (provided that suppliers assume relaxed payment terms) and long-term bank loans (provided that the entity benefits from leverage) (Taci & Tcaci, 2020).

With regard to the general solvency ratio, we consider that it is of high importance for the State, because by assessing the extent to which an entity is or is not in difficulty to pay its debts (*this being a basic indicator in assessing the risk of bankruptcy*) the State can grant certain facilities to road companies in order to ensure the achievement of strategies. The theoretical ceiling for the overall solvency ratio is ≥ 2.0, i.e. total sources must

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exceed total liabilities at least 2 times. A dynamic increase in the general solvency ratio means a reduction in the level of indebtedness and an increase in financial autonomy (Morosan, 2006).

The results of these indicators over the 4 financial periods analysed are shown in Table 1.

Table 1. Solvency dynamies in the public roads sector in the Republic of Moldova in 2018-2021

Entity	Patrimonial solvency, %					General solvency, %				
	2018	2019	2020	2021	Mediate	2018	2019	2020	2021	Mediate
1	72,02	75,24	74,66	58,69	70,15	357,36	403,82	394,64	242,09	349,48
2	69,70	74,09	83,71	85,37	78,22	330,02	385,92	613,84	695,18	506,24
3	67,33	77,81	61,01	74,09	70,06	306,06	450,74	256,48	385,89	349,79
4	62,36	60,05	53,89	64,26	60,14	265,64	250,32	216,88	279,77	253,15
5	72,59	77,21	78,75	80,87	77,36	364,81	438,83	470,65	522,69	449,24
6	80,52	79,57	79,29	64,24	75,91	513,33	489,49	482,95	279,64	441,35
7	69,71	86,41	89,23	89,38	83,68	330,15	736,01	928,72	941,68	734,14
8	81,62	78,06	85,71	87,27	83,16	544,04	455,69	699,97	785,58	621,32
9	65,95	75,91	73,27	69,64	71,20	293,66	415,65	374,17	329,41	872,59
10	85,85	87,50	93,11	81,19	86,91	706,64	800,21	1452,03	531,50	388,52
Mediate	**72,31**	**75,99**	**74,68**	**73,77**	**74,19**	**361,09**	**416,51**	**395,00**	**381,49**	**388,52**
Growth rate	**-**	***105,09***	***98,28***	***98,78***	***X***	**-**	***115,35***	***94,83***	***99,87***	***X***

Source: own processing based on the financial statements of the entities analised

The calculations presented in Table 1 show that all entities have a high level of financial autonomy and are far from insolvency. This is due to the actual value of the financial autonomy ratio above the established norm (> 33%), which reflects the degree to which equity capital is self-financing and expresses the entities' ability to meet their financial commitments. Increasing and maintaining a buoyant solvency ratio means increasing the financial autonomy of the entity as a result of the rate of growth of equity exceeding the rate of growth of total sources. An analysis of the average level recorded by each entity over the 4 years shows that all entities recorded levels above the optimal threshold. Dynamically, the indicator increases in 2019 compared to 2018, i.e. by 5.09 percentage points, while in 2020 it decreases compared to the previous year, by 1.72 percentage points, and in 2021 insignificantly. The analysis of the overall solvency of the companies analysed shows that, in general, we are dealing with solvency ratios that exceed the financial safety margin (*considered to be the optimum level as close as possible to 200%*). This shows that the entities analysed are somewhat reluctant to resort to foreign sources to finance the assets needed to carry out their activities, relying mainly on the use of equity capital. Looking at the evolution of each entity over the 4 years, it can be seen that all entities tend to maintain their overall solvency above the optimal level.

The average evolution of overall solvency for the analysed area shows a non-uniform trend from year to year in the period 2018-2021. If we refer strictly to the state's need to ensure that entities in the field of public roads in the Republic of Moldova have a solvency that ensures a stable financial position, based on the evolution of solvency shown in Figure 2, we can undoubtedly state that this is fully achieved.

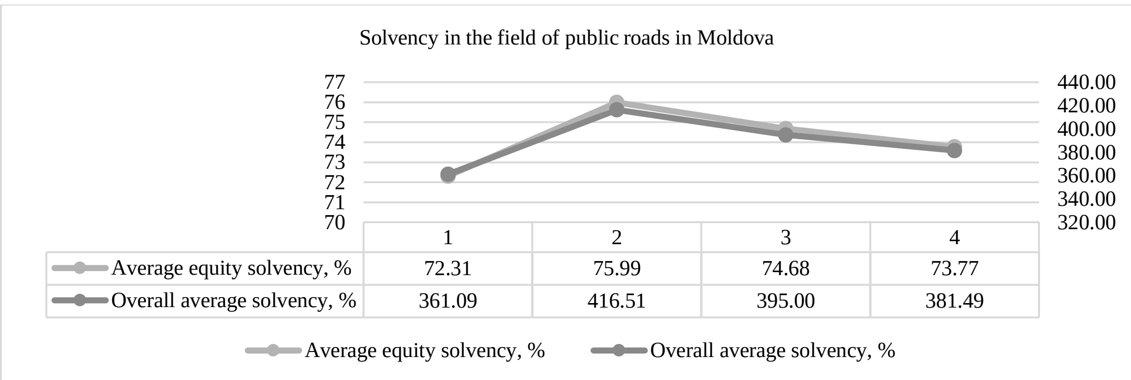

Figure 2 - Evolution of solvency in the field of public roads in the Republic of Moldova in the years 2018-2021
Source: own processing of information from Table I

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In terms of *business continuity*, this is a rather difficult concept to perceive through indicators based strictly on balance sheet data, or even on financial statements as a whole. We believe that the solvency analysis itself, as presented above, could be an indication of going concern. However, it must be correlated with other financial-accounting indicators. Most stakeholders, including the founder (the state), have a major interest in business continuity, but this principle can never be ensured by the financial position alone. It is the synergistic result of a combination of factors such as financial position, financial performance, competitive conditions, managerial experience, demand for the services or work of the entities under review, liquidity, etc., and its analysis is a process that often leaves much room for discussion.

In order to satisfy the interests of customers to receive benefits under the contracts entered into in respect of the information required, this is not demonstrated in any section of the financial statements, except by the insertion of a statement that the financial statements have been prepared on a going concern basis. In our opinion, going concern should not be stated, but demonstrated, using forecasts over different time horizons to show, taking into account as many different factors as possible, whether it is indeed acceptable to apply the going concern principle.

One very important aspect that stands out and can influence the financial position of an entity is the overall liquidity. Even if we are dealing with entities in which the proportion of fixed assets is high (*on average for the area under investigation - 60%*), to the extent that these fixed assets are easily convertible into cash or cash equivalents, there will be an impact on the liability structure. In practice, entities with high liquidity can more easily face short and medium term liabilities. These findings are also supported by Sibilkov (2009), who demonstrates a direct and positive dependence of debt levels on liquidity.

We note that the most convenient variant regarding balance sheet liquidity will be the variant in which:

- *current assets are higher than debts current; and,*
- *chronologically, a portion of current assets will be converted into cash before a larger portion of current liabilities become due.*

Any other alternative represents a significant risk to the entity's continued operation.

The research results for the entities analysed in terms of overall liquidity are presented in Table 2.

Table 2. Dynamics of general liquidity in the publc roads sector in the Republic of Moldova in 2018-2021

Entity	General liquidity, coefficient				Appreciation interval											
					<2,0				2,0-2,5				>2,5			
	2018	**2019**	**2020**	**2021**	**2018**	**2019**	**2020**	**2021**	**2018**	**2019**	**2020**	**2021**	**2018**	**2019**	**2020**	**2021**
1	1,30	1,59	1,45	0,99	1,30	1,59	1,45	0,99	-	-	-	-	-	-	-	-
2	16,29	2,03	3,27	3,15	-	-	-		-	2,03	-	-	16,2 9	-	3,27	3,15
3	1,23	1,64	1,39	1,54	1,23	1,64	1,39	1,54	-	-	-	-	-	-	-	-
4	1,64	1,61	1,57	1,79	1,64	1,61	1,57	1,79	-	-	-	-	-	-	-	-
5	1,60	0,18	1,92	2,04	1,60	0,18	1,92	-	-	-	-	2,04	-	-	-	-
6	1,60	2,63	3,11	1,68	1,60	-	-	1,68	-	-	-	-	-	2,63	3,11	-
7	1,81	3,89	5,98	6,34	1,81	-	-	-	-	-	-	-	-	3,89	5,98	6,34
8	X	1,73	2,68	2,65	X	1,73	-	-	-	-	-	-	-	-	2,68	2,65
9	1,03	0,97	0,81	0,57	1,03	0,97	0,81	0,57	-	-	-	-	-	-	-	-
10	1,74	1,96	4,03	1,61	1,74	1,96	-	1,61	-	-	-	-	-	-	4,03	-
Mediate	**1,81**	**1,76**	**2,0**	**1,77**	**1,81**	**1,76**	**1,96**	**1,36**	**X**	**2,03**	**X**	**2,04**	**16,29**	**3,26**	**3,21**	**4,05**

Source: own processing based on the financial statements of the entities analysed

From the calculations presented in Table 2 and Figure 2, it appears that the entities analysed during the periods 2018-2021 maintained an uneven trend in the evolution of overall (current) liquidity. Thus, the results obtained during the analyzed period demonstrate a shortage of current assets for the payment of current liabilities in full amount for 8 entities in 2018, 7 entities in 2019, 5 entities in 2020 and 6 entities in 2021. This demonstrates the obligation of these entities to resort to long-term sources of financing to cover their current needs, with negative consequences on the balance of the financial position. An exception to the trend of the indicator is found in the case of the 2nd Entity, which in 2019 fell within the optimal range. And 5 entities in the analyzed period fell within the range of inefficient use of available current assets (>2.5). In this context, we note that entities have above-normal inventories and receivables, which do not bring in income, but at the same time demonstrate the existence of working capital.

Overall, over the period under review, the average liquidity in the public road sector falls within the range of insufficient current assets, as shown in Figure 3.

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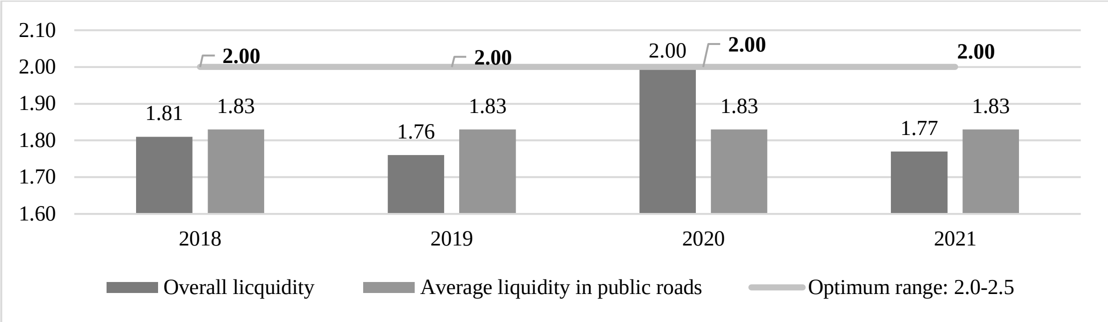

Figure 3 - Evolution of general liquidity in the public roads sector in the Republic of Moldova in the period 2018-2021

Source: own processing based on the financial statements of the entities analysed

Another very important aspect that emerges and can influence the financial position of an entity is the economic return on (assets) (ROA), *which reflects the level of profit earned on each leu of economic assets invested in the circulation of the entity regardless of their source of financing*. If the entity makes a loss, the level of this indicator will be negative and will reflect the amount of loss earned per leu of assets. Return on assets is used as an *indicator of the quality and efficiency of the management of the entity, an indicator of the efficiency of the means invested in the business, a method of forecasting the increase in profit, an indicator of the sources of financing borrowed (loans).*

As a definition, economic profitability reflects the ratio between an economic result and the economic goods employed to obtain it (Pierre, 2004). The literature offers several ways of calculation (*operating result, gross profit*, *EBIT*) (Ramage, 2004), (Morosan, 2006), (Coordinator Tiriulnicova, 2011), (Baltes & Dragoe, 2015), (Melega et al., 2021), and the result obtained determines a specific view of its meaning (Valceanu, Robu & Georgescu, 2004):

- *the use of the financial result will determine a rate that is independent of both fiscal policy and capital structure (financing policy) and extraordinary flows*;
- *if the economic rate of return is to be constructed on the basis of gross operating surplus, it will also be independent of the depreciation policy, in addition to the elements mentioned above;*
- *the use of gross profit, a less commonly used option, is useful to company managers and will result in a higher rate, as long as the other activities (financial and exceptional) are profitable.*

ROA as a composite measure is considered to be more comprehensive indicator of performance. It combines a measure of efficiency (do things right) and effectiveness (do the right thing). It is the best single return measure. Assets turnover indicates how firms use their assets (the amount of which is predominantly determined by the kind of industry they operate in) to maximize revenues by satisfying customer needs and it is regarded as an indicator of external effectiveness (Copeland, 1994).

The interpretation of the research results for the entities analysed in terms of economic profitability is presented as follows:

Table 3. Dynamies of economic profitability in the field of public roads in the Republic of Moldova in 2018-2021

Entity	**2018**	**2019**	**2020**	**2021**	**Mediate**
1.	0,944	-0,830	0,006	-10,523	-2,601
2.	0,410	1,455	1,605	1,953	1,356
3.	1,435	3,098	2,029	-14,219	-1,914
4.	1,518	0,999	2,990	-10,575	-1,267
5.	3,555	1,392	1,421	0,740	1,777
6.	0,635	1,885	10,191	1,073	3,446
7.	1,899	0,747	1,911	-20,011	-3,864
8.	0,691	0,733	1,150	1,668	1,060
9.	0,376	1,103	1,082	-4,999	-0,610
10.	0,239	0,859	1,875	-3,900	-0,232
Mediate	**1,156**	**1,178**	**2,973**	**-5,189**	**0,030**

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Source: own processing based on the financial statements of the entities analysed

From the data in the table, it appears that the return on assets has an uneven trend from year to year and from entity to entity. It is worth noting that the level of profitability had a positive upward trend at the level of the analysed area, from 1,15 bani in 2018 to 2,97 bani in 2020, and in 2021 it is very low, as most entities in the area reported losses, which means that for every leu of assets, on average per area, they obtained 5,18 bani losses. So we conclude an inefficient use of available assets.

Given the variety of financial stability indicators, the difference in the level of their critical ratings, and the resulting difficulties in assessing an entity's financial stability and its risk of failure, many economists recommend a comprehensive financial stability assessment based on the Credit Scoring methodology. The technique was first proposed by the American economist D. Duran in the early 1940s, which is based on the analysis of the combination of several indicators (Saidi & Benmouffeki, 2021), (Маринина & Точило, 2015), (Скобелева, 2012), (Panayiotis & Courtis, 2003), (Савицвая, 2006). In the present study we will use the following 3 indicators: *economic profitability rate, general (current) liquidity, financial autonomy rate*.

The essence of this technique is to classify entities according to the degree of risk, based on the actual level of financial stability indicators and the rating of each indicator, expressed in points (Марннина & Точнло, 2015), (Савнцкая, 2006). Financial risk levels are divided into five classes from the zone of minimum to the zone of unacceptable risk, corresponding to the financial state from absolute financial stability to crisis state. To define a risk class using a rating score, the overall liquidity ratio, financial self-sufficiency ratio and economic rate of return are calculated. Depending on the results and the number of points, a risk class of loss of solveney, risk of loss of financial stability and an overall risk rating is assigned.

Based on the indicators of liquidity, financial autonomy, efficiency of asset utilization, the scoring rating results were obtained.

Table 4. Classification of entities by credit scoring methodology

Entity	ROA		General liquidity		Financial autonomy rate		Mediate	
	Class	Score	Class	Score	Class	Score	Score	Class
1.	V	0	IV	9,47	I	20	29,47	IV
2.	IV	6,78	I	30	I	20	56,78	III
3.	V	0	III	10	I	20	30	IV
4.	V	0	III	11,53	II	17,34	28,87	IV
5.	IV	8,885	III	10	I	20	38,885	III
6.	IV	17,23	I	30	I	20	67,23	II
7.	V	0	I	30	I	20	50,00	III
8.	IV	5,3	I	30	I	20	55,3	III
9.	V	0	V	0	I	20	20,00	IV
10.	V	0	I	30	I	20	50,00	III
Mediate	**V**	**0**	**II**	**21,53**	**I**	**20**	**41,53**	**III**

Source: own processing

According to the number of points, based on the scale established for the level of risk, the entities analysed in the period 2018-2021 fall predominantly in the third risk class (2, 5, 7, 8, 10), which is characterised by *medium financial stability*: four entities (1, 3, 4, 9) fall in the area of high *risk of insolvency*, even after taking financial recovery measures, and only one entity (6) ranks second - *entities with a low degree of instability, characterised by normal financial stability.* From the research conducted, we note that the predominant factor that led to the increase in the level of risk is the inefficient use of assets, as it is characterized by very low level, and in 2021, practically all the analyzed entities made losses from the activity carried out. We note that the level of return on assets may increase or decrease either by increasing or decreasing the return on sales revenue or by accelerating or slowing down the turnover of assets.

In order to present analytical material more clearly, in an accessible form, information can also be presented using graphical methods, namely diagrams. Thus, the grouping of entities, according to the level of risk over the whole period 2018-2021 is shown in Figure 3.

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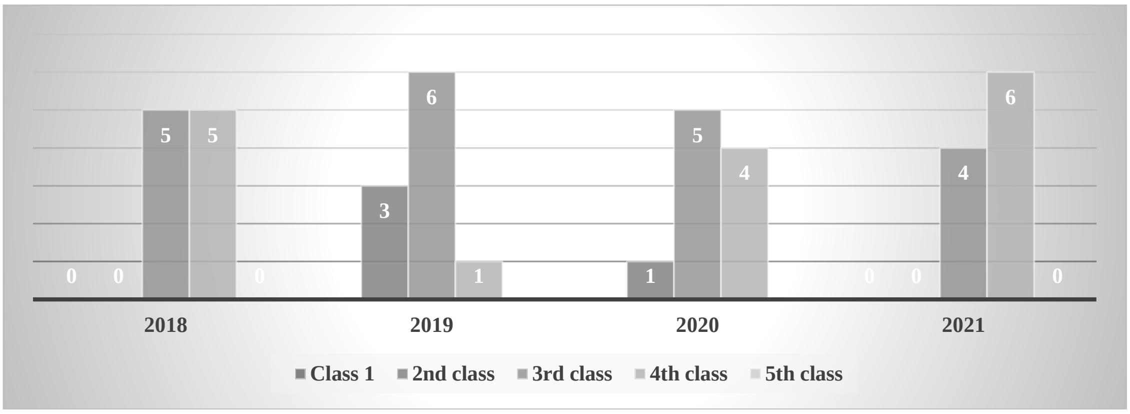

Figure 3 - Evolution of the ranking of the analysed entities by classes according to the solvency level
Source: own processing

From the information presented, it appears that practically 50% of the entities are in 4th class and 50% in 3th class respectively, which means that urgent measures must be taken to redress the situation and pay debts on time. We note that no entities are in class 1. Only in 2019, three entities found themselves in 2nd class and one entity in 2020, but not for long. At the same time, we note that no entity is found in 5th class, which is considered positive. The most stable entities, according to the calculations made, are the entities with the numbers 2 and 7 respectively, which are mainly in class 3. This shows the effort made by the entity's management to pay off debts successfully, but also to manage assets as efficiently as possible in order to obtain the greatest and most tangible benefit in the form of a profit.

If we were to analyse the causes of the entities' ranking in the 4th class, following the calculations, we see that the most problematic indicator is economic profitability. In this context, the entities analysed must determine the causes of the decline in the indicator and take measures to increase it, by carefully analysing the level of return on sales revenue and the acceleration or slowdown in asset turnover.

III. CONCLUSION

The research shows that all the entities analysed have a high level of financial autonomy and are far from insolvency. This is due to the actual value of the financial autonomy ratio above the established norm, which reflects the degree to which equity capital is self-financing and expresses the entities' ability to meet their financial commitments

From the analysis of the general solvency of the companies analysed, we deduce that, in general, we are dealing with solvency ratios that exceed the level of financial security, which shows that the entities analysed have a certain reluctance to resort to foreign sources to finance the assets necessary to carry out the activity, relying mainly on the use of equity capital.

During the periods analysed, an uneven trend in the evolution of general (current) liquidity has been maintained, showing a shortage of current assets to pay current liabilities in full amount for 8 entities in 2018, 7 entities in 2019, 5 entities in 2020 and 6 entities in 2021. This demonstrates the obligation of these entities to resort to long-term sources of financing to cover their current needs, with negative consequences on the balance of the financial position. An exception to the trend of the indicator is found in the case of the 2nd Entity, which in 2019 fell within the optimal range. And 5 entities in the analyzed period, fell within the range of inefficient use of available current assets, characterizing the fact that the entities in question have above-normal inventories and receivables, which do not bring in income, but at the same time demonstrate the existence of working capital.

Return on assets has an uneven trend from year to year and from one entity to another, mainly characterised by inefficient use of available assets. In 2021, this is due to the achievement of pirutions for most entities in the sector.

The results obtained from the analysis of the financial statements of joint-stock companies, which carry out activities of rehabilitation, development and maintenance of public roads in the Republic of Moldova, testify to the possibility of using complex evaluation methods such as credit scoring to identify the financial risks of entities in the field. The results of this study can be used for the development of risk management of entities in the field of public roads, considering the need to perform both financial statement audit and internal audit, improve the efficiency of cash flow and asset management, evaluate the facts to prevent risky events and reduce possible losses.

An important aspect of using this methodology, for the entities analysed, remains the selection of the necessary number of indicators that most accurately characterise the characteristics of the domain, which would allow the determination of an entity's rank among competitors. Thus, comparison of an entity with its related entities in terms of business domain would make it possible to determine its place among competitors, assigning

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it a certain significance in comparison with other entities (Ковалев, В.В., Волкова, О.Н., 2002). In this regard, further development of the credit scoring methodology is necessary to improve the quality of risk assessment for the analyzed entities.

In general terms, we consider the analysis carried out to be favourable for the decision-making process and the determination of the activity strategy. At the same time, the information obtained is relevant for both internal and external users, as they have the possibility to formulate a conclusion on the financial situation of the entity and its possibilities for expansion.

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