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THE PHILOSOPHY OF DEBT BURDEN MANAGEMENT IN COMMERCIAL ORGANIZATIONS

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Abstract: The COVID-19 pandemic has had a negative impact on the financial system and the financial condition of commercial organizations in the real sector. Therefore, the development of new solutions in the financial management system and their implementation in practice is vital to overcome the crisis. The main purpose of this paper is to improve the behavioural theory of capital by developing a learning model. According to finance management philosophy, the forecast results were used to adjust the marginal ranges between a specific commercial organization's debt burden, capital structure, and indicators of the organization's liabilities secured by the organization's assets. One of the main advantages of the proposed approach is the determination of marginal ranges in line with the predicted preferred variants of liabilities for the sets of indicators assessing the debt burden. Within the framework of this article, this method was implemented for the studied Armenian organizations. The proposed model, with an overview of the philosophy of financial management, makes it possible to determine the general marginal ranges of the indicators that are the basis of financial policy development.

Keywords: financial stability indicators, financial stability assessment, debt burden indicators, adaptive moment estimation

Introduction

The financial management industry has undergone profound changes amid the lockdown of the COVID-19 pandemic. The psychological behaviour of both consumers and business entities has undergone significant changes. It requires new knowledge of financial literacy.

It is very important to fully understand the philosophy of financial stability and debt management in order to practically control a successful business. In the economic environment of the Republic of Armenia, in line with the current development trends of commercial organizations, special requirements are set for financial stability as a strategic factor for the financial security of the organization, perspective development of the business and investment attractive

ness.

The issue of ensuring financial stability has been strongly emphasized since the global financial crisis in 2008, which gave rise to the need to enshrine financial stability in legislation. In the Republic of Armenia, the responsibility for ensuring financial stability is vested in the Central Bank of the Republic of Armenia (Constitution of the Republic of Armenia, 2015, Article 200.2; Law of the Republic of Armenia "On the Central Bank of the Republic of Armenia", 1996, Article 4).

In order to ensure systemic financial stability in the Republic of Armenia, the Central Bank of the Republic of Armenia continuously pursues a macroprudential policy and controls the risks observed in the whole economy by using assessment and testing systems. It becomes clear from the above-mentioned that ensuring financial stability is also very important at the micro level.

Review of the Main Financial
Stability Indicators

Various methods and approaches for calculating financial stability indicators have been developed for commercial organizations in various research works on the improvement of financial management. At present, in a crisis economy, these figures do not often correspond to reality. They distort the financial situation and do not reliably describe the financial stability of the organization.

Western experience in analyzing the financial stability of organizations demonstrates that it is the assessment of financial risks that is important to the organization, not the specific financial stability. According to the findings of a study based on the reports of 79 organizations, the western researcher W. H. Beaver (1966) identified 6 important financial indicators:

- Net cash flow / total debt;
- Net profit / total assets;
- Total debt / balance-sheet total;
- Working capital / balance-sheet total;
- Current assets / current liabilities;
- Working capital / operating expenses (p. 85).

Altman attempted to find significant differences between financially stable and not stable organizations by classifying the organizations he surveyed into financially stable ones and likely bankrupt ones on the basis of the following indicators.

- Equity / total assets
- Retained earnings / total assets;
- Earnings before interest and taxes / total assets;
- Market value of the organization / total liabilities;
- Sales revenue / total assets (Paradi, Wilson, & Yang, 2014, p. 9).

The International Monetary Fund recommends the following financial stability indicators for non-financial sector organizations:

- Financial leverage: borrowed capital/equity,
- Return on equity – net income / equity;
- Debt service ratio: net operating income/total debt service;
- Net open foreign exchange position/equity (*Financial soundness indicators: Compilation guide*, 2006, pp. 75-104).

The high level of financial leverage weakens an organization's ability to repay its debt liabilities. According to the approach proposed by the International Monetary Fund, profitability is key to assessing financial stability. It affects the ability of an organization to raise funds, its operational potential, its ability to withstand adverse situations and the ability to repay its debt obligations. According to the IMF, the sharp decline in profitability is a decisive indicator for revealing the existing trends in the real sector. Therefore, in addition to the return on equity, from this point of view, the return on assets and the return on sales are also important. In the process of analysis-evaluation, the behaviour of profitability indicators should be followed dynamically, as they directly depend on the sectoral affiliation of the organization and the existing competition.

According to the IMF approach, debt service indicators play a significant role, which directly reflects the deteriorating financial position of the organization. In particular, the decline in debt service potential indicates an increase in financial risk. Another important indicator is the net open foreign exchange position equity ratio. It shows the effect of the exchange rate difference on equity, which is reflected in the financial accounting in Armenia.

M. Abryutina (2006) and A. Grachev (2006)

identified the essence of financial stability with the solvency of the organization. According to them, the financial stability of the organization is characterized as guaranteed solvency and does not depend on the behaviour of partners and the randomness of the market structure.

L. P. Belikh and M. A. Fedotova (2004), in their joint research, describe the concept of financial stability as a state of the organization that guarantees the desired solvency in the long-term perspective.

In their joint opinion, researchers V. Rodionova and M. Fedotova (2007) described the financial stability of organizations as a state of financial resources, their distribution and use, which allows ensuring the further development of the organization based on capital and profit growth, maintaining solvency and creditworthiness within the permissible risk limits.

In her research, A. Purtova (2014) describes the financial stability of the organization in terms of security in equity and the efficiency of its use.

Another researcher emphasizes the importance of the following in ensuring the financial stability of commercial organizations (Barilenko, 2015).

- maintaining a financial balance, which means ensuring a ratio of own and borrowed funds in which the organization retains the ability to repay its debt liabilities to creditors;
- refinancing loans and borrowings at the preferred price for the organization;
- keeping the financial risks at an adequate level.

In the mentioned research, the issue of the ratio of own and borrowed funds from the perspective of assessment of debt burden in ensuring the financial stability of commercial organizations is also reviewed, the solution of which is directly related to the process of optimization of the capital structure.

N. Selezneva and A. Ionova (2017) describe financial stability as a condition of the assets of the organization that guarantees permanent solvency.

Another definition of financial stability in terms of solvency relationship was given by V. Borisova (2000). According to her, financial stability is a state of the organization's calculations that guarantees its constant solvency.

In his research, I. Blank (2001) describes the financial stability of the organization as a state of

financial and economic activity in which the organization has sufficient resources for normal operations, liquidity balance and required solvency.

In their research, L. Gilyarovskaya and A. Eendovickaya (2015) (Analysis and assessment of the financial stability of commercial organizations: a textbook for university students studying in the specialities) noted that the financial stability of any business entity is the ability to carry out main and other activities to maximize the material well-being of the owners in the conditions of changing external environment and business risk, as well as the strengthening of the competitive advantages of the organization by taking into account the interests of the state and society.

In our opinion, equating the financial stability of an organization with solvency, liquidity and profitability, as is the case in the above-mentioned research, is not correct. Financial stability should be considered as a separate component of the financial position, assessing its potential interactions with other components of the financial position.

Within the scope of this study, importance is attached to those definitions of financial stability, which emphasize issues related to the capital structure of the organization. Particularly, in their research, M. Melnik and E. Gerasimova (2008) consider the financial position of the organization to be stable if the latter has managed a sufficient volume of capital, which has ensured continuous operation and a possibility for timely and full repayment of liabilities, as well as the renewal and growth of non-current assets.

Some researchers link the assessment of the financial stability of the organization with solvency and security in its own working capital (Bakanov & Sheremet, 2002).

In our opinion, these researchers have raised a significant theoretical problem within the scope of financial management, the practical solutions to which will be presented within the scope of this research by developing and applying their own approaches.

In her research, M. Kreynina (2001) characterizes the financial stability of an organization by the situation as dependent on its own capital in the financing sources; moreover, borrowed funds for financing are used by the organization only to the extent enabling to ensure their timely

return, and current liabilities must not exceed the value of resources and unfinished production.

In her research, G. Savickaya (2005). Links the financial stability of an organization with the state of gross capital disposed of, activities of the latter and the ability to develop, proposing three types of financial stability: stable, pre-crisis and crisis.

Researchers have a number of issues to be clarified in the general assessment of the financial stability of commercial organizations. In practice, there are almost no uniform regulatory standards observed for the indicators under consideration, or they are appropriate for not all organizations due to the fact that they are non-universal. Let us also mention that the level of regulation depends on multiple factors, such as sectoral affiliation, lending terms, the structure of sources of funds, asset turnover of the organization, etc. Although certain comparisons are possible for economic entities of the same specialization, they bear a very limited nature.

In terms of management philosophy, A. Golubovich, A. Sitnin and B. Khenkin (1991) share a common opinion that the analysis of the financial situation of organizations is presented "as a unique interpretation, in case of which the managing staff of the organization explains the reasons for the change in the financial indicators" (p. 70).

The financial stability of an organization may be manifested in various ways, the most essential of which is considered to be investment attractiveness. In particular, in her research, E. Gukalova (2009) mentions that, for potential investors, from among the indicators reflecting the financial stability of an organization, the amount of own capital, monetary flows, and the business image of the organization gain a primary significance.

Nowadays, researchers use various classifications of indicators for assessing financial stability, reflected, for example, by A. Grachev (2002), V. Kovalyov (2007), G. Savickaya (2002), J. Lang, C. Izzo, S. Fahr, and J. Ruzicka (2019).

At the current stage, the need for elaboration of a complex approach is deemed to be of priority for the analysis of separate groups of indicators for assessing the financial stability of commercial organizations. Grouping of indicators of financial stability in terms of assessment of the

debt burden, the assessment of various factors impacting them will provide an opportunity to reveal the strengths and weaknesses of commercial organizations, detect hidden reserves and determine stability risk zones and, in particular, propose limit values for the indicators selected.

Approach for Prediction of the Marginal Ranges of the Debt Burden Indicators

Within the scope of this article, we have set a goal to clarify – with the use of the teaching model for predicting the capital structure of organizations we have built (Kingma & Jimmy, 2015) – the marginal ranges of indicators characterizing the interrelations between the capital structure of components of the debt burden of organizations and indicators characterizing the level of security of liabilities with the assets of an organization (Baboyan, 2020).

As a result, in the context of the relation of the financial stability describing the financial situation of commercial organizations, it will also be created an opportunity to regulate, in an interrelated manner, the marginal ranges of the indicators assessing solvency, liquidity, business activity and profitability, which will be carried out during further research activities.

The steps for the proposed prediction approach are the following:
1. In the first step, the actual values of the indicators of the debt burden of the organization(s) characterizing the correlation between the components of the capital structure and actual values of the indicators characterizing the level of security of liabilities with the assets of an organization are calculated (Teplova & Getalova, 2013).
2. In the second step, a classification is made by the matrix method (tables) (Lyubushin, Lesheva, & Dyakova, 2002) using sets of indicators characterizing the debt burden and the preliminary marginal ranges are determined.
3. In the third step, using the training model developed by us for the prediction of the capital structure of organizations (Kingma & Ba, 2015; Baboyan, 2020), the capital structure of the studied commercial organization(s) is predicted.
4. In the fourth step, according to the predicted

structure of the studied organization(s), a classification of the indicators characterizing the correlation between the components of the capital structure and the indicators characterizing the level of security of liabilities with the assets of an organization is by using the matrix method.

5. In the fifth step, the actual and predicted values are combined, the marginal ranges are determined, and monitoring is carried out on the basis of mathematical trend assessments to improve managerial decisions.

Step 1. In this phase of the research, we will present the methodological bases for the proposed approach by studying the financial reports of "Proshyan Brandy Factory" LLC, financial reports of "Yerevan Champagne Wines Factory" OJSC and financial reports of "Kotayk Brewery" LLC. Based on them, the values of the capital structure components and the preferred ranges of indicators characterizing the security of liabilities with the organization's assets are defined.

The final part of the second step constitutes the determination of the marginal ranges underlying the control over financial stability by the matrix method for "Proshyan Brandy Factory" LLC, "Yerevan Champagne Wines Factory" OJSC and "Kotayk Brewery" LLC.

It should be noted that in 2011-2015 and 2015-2018, common intersection ranges (areas) were formed in "Proshyan Brandy Factory" LLC, which has caused certain complications from the point of view of effective control over the debt burden and is conditioned by the non-preferable capital structure in the given phases. Taking into consideration the aforementioned, in the next step, we will seek to offer an effective solution through the training model we built for "Proshyan Brandy Factory" LLC in terms of capital structure and solve the problem of harmonization between the two sets of indicators for the assessment of the debt burden.

According to the analysis, general control frameworks (areas) were not defined for "Yerevan Champagne Wines Combine" OJSC, so changing the existing capital structure in this organization is not recommended from the perspective of effective debt burden control. Hence, optimization of the capital structure for the mentioned organization based on the training model will not be envisaged in the next step.

According to the results of the model testing,

the problem of harmonizing the two indicators of debt burden assessment in terms of debt burden control in "Kotayk Brewery" LLC was solved in 2012. Therefore, the change in the capital structure in this organization is not urgent either. Hence, optimization of the capital structure for the mentioned organization based on the training model will not be envisaged in the next step.

In this step, using the average values of the determined P1-P5 quintets from the proposed variants of the training model that predict the preferred capital structure, the predicted balance sheets of the organization(s) under consideration are first developed. In this case, they are the balance sheets of "Proshyan Brandy Factory" LLC for the studied years, from among the data which the predictions required for the fourth step have been used.

Step 4. In this step, according to the predicted structure of the studied organization(s), the classification of indicators characterizing the correlation between the components of the capital structure and indicators characterizing the level of security of liabilities with the assets of an organization is made by using the matrix method. Let us note that this process is carried out by the same logic of actions described in the second step of the presented approach. The predicted final results for the two debt burden indicators are determined in the fourth step.

In the case of using the preferred capital structures of "Proshyan Brandy Factory", it became possible to neutralize the general intersection ranges (areas) for 2011-2015 and 2015-2018, which allows making control over the debt burden of the organization to more targeted and effective.

Step 5. In this step, the actual and predicted values of indicators characterizing the correlation between the components of the capital structure and indicators characterizing the level of security of liabilities with the assets of the organization are combined, the marginal ranges are determined, and on the basis of mathematical trend assessments, monitoring for improvement of the managerial decisions is carried out. In particular, the comparison of the actual and predicted values of the indicators characterizing the correlation between the components of the capital structure is calculated. According to the mathematical trend assessments, the settlement of the situation has required the implementation of individual

solutions and measures for each year.

Thus, in solving new strategic and tactical problems of financial policy, effective managerial decision-making becomes important. At the same time, the actual and predicted values of indicators characterizing the correlation between the components of the capital structure and indicators characterizing the level of security of liabilities with the assets of the organization can be used to determine the overall rating of financial stability.

Conclusions and Recommendations

In recent years, the financial and economic crises in the world economy have hit the financial situation of commercial organizations quite hard, significantly reducing the level of solvency and creditworthiness. The commercial organizations of the Republic of Armenia were not left out of such manifestations.

New solutions to the theoretical-methodological issues of financial policy and the search for effective ways to improve are of paramount importance to theorists and practitioners engaged in financial management.

In the conditions of low efficiency of the capital market activity and existing financing mechanisms, the commercial organizations of the Republic of Armenia face certain difficulties in the process of attracting financial resources, which influences the formation of an unfavourable capital structure. As a result, the high financial stress also poses some problems in terms of the creditworthiness of organizations.

It should be noted that the three groups assessing the debt burden of commercial organizations, namely the correlation between the components of the capital structure, the level of security of liabilities in the assets of the organization and the set of indicators characterizing the debt burden are essential in building approaches for assessment of financial stability, solvency and liquidity. Therefore, we consider that for the indicators included in the basis of managerial decisions, the determination of marginal values and differentiation of common areas of control over the components of the financial situation, with specific justification, are important ways to improve the financial management of commercial organizations.

The key features of the proposed approach are as follows:

- It is possible to find individual solutions in the context of the relationship between the marginal values of indicators assessing the debt burden for a particular organization and the preferred structure of its liabilities.
- One of the distinguishing features of the proposed approach is that it takes into account the results of the training model of prediction, which is very important for assessing the quality of management of the debt burden of an organization from the position of the preferred structure of liabilities.
- In case of a long time lag for a particular organization, it becomes possible to identify errors in the decisions made during the debt burden management regarding the choice of funding sources, formed structure and pricing policy for attracting financial resources.
- If organizations of the same sector are considered during the research, then this approach will make it possible, first, to justify the inter-sector threshold values of debt burden assessment indicators for a certain period, and secondly, to define the set of border area regulation measures, aiming to improve the quality of debt burden management in a particular organization.
- One of the most significant advantages of the proposed approach, in our view, is the determination of marginal ranges in line with the predicted preferred variants of liabilities for the sets of indicators assessing the debt burden. The establishment of marginal ranges for the sets of indicators assessing the debt burden of a particular organization is one of the most effective ways to improve internal control.
- In the context of the dynamic connection between the debt burden assessment indicators and the preferred structure of liabilities, the approach we have taken for the determination of marginal values and control areas is one of the new solutions aimed at improving the financial policy of commercial organizations.

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