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APPLICATION OF THE STRATEGIC BALANCE SHEET METHOD FOR DEVELOPING A SCALE OF RELATIVE COEFFICIENTS

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Abstract : Capital structure planning represents an important component of asset management and can significantly contribute to increasing the value of a company. The primary objective of financing is to identify an optimal combination of capital sources that, given a certain level of investment and assets, reduces financing costs while maximizing the overall firm value. However, in practice, various challenges and inconsistencies arise, making it difficult to determine the optimal capital structure. Therefore, it is necessary to establish clear guidelines and apply appropriate analytical methods. This paper applies the strategic balance method, which enables the identification of the most important factors influencing capital structure. Its application allows for a systematic analysis and facilitates the identification of weaknesses in the existing capital structure, thereby supporting more effective financial decision-making.

Keywords: capital structure, balancing, analytical methods.

Introduction

Decisions regarding capital structure represent one of the most important strategic financial decisions within a company, as they determine the relationship between debt and equity used to finance business operations

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and investments. The selection of an appropriate capital structure directly affects the cost of capital, the level of financial risk, and the overall value creation of the company. Due to its complexity, this decision cannot be based on a single factor, but rather requires a balanced consideration of multiple financial and strategic criteria.

In this context, the concept of strategic balance represents a useful framework for decision-making. It enables managers to evaluate and compare various factors influencing capital structure by assigning them appropriate importance. The formation of a scale of relative importance allows these factors to be systematically organized, thereby ensuring a more objective and transparent decision-making process.

This paper presents an example of how the strategic balance method can be applied in practice to develop a scale of relative importance in capital structure analysis. It also examines how such an approach can contribute to more rational financing, greater financial stability, and increased firm value. Achieving a balance between value maximization, stability, and low financing costs represents a complex task that requires careful analysis and strategic planning (Jeličić, 2024).

The objective of this paper is to apply the strategic balance method in order to define initial assumptions for shaping an appropriate capital structure. This approach aims to align key requirements—value maximization and acceptable financing costs—within a unified decision-making framework (Praća, Krstić & Božić, 2024).

Assumptions for the Formation of Relative Coefficients

The capital structure of a company can be formed in accordance with the capital structure coefficient, which reflects the relationship between long-term sources of financing, i.e., borrowed capital and equity sources in the form of share capital (preferred and common shares), depending on the structure of assets in the balance sheet. In order to isolate the effects of changes in capital structure on the current value and development of the company, this model is based on the assumption that investment decisions remain constant. This implies that changes in the financial structure can occur only through borrowing and share repurchases, or through equity issuance and debt repayment (Miljković & Arsić, 2025).

The inclusion of additional sources of financing, such as borrowing or financial leverage, leads to a situation in which equity assumes a subordinated position relative to fixed financial obligations. As a consequence of the reduction in equity and the tendency of creditors to minimize their own risk, the overall financial risk of the company increases.

The capital structure is closely related to the asset side of the balance sheet, but also to other important aspects of business operations. This interdependence requires a detailed analysis and a clear definition of the relationships between different financial positions within the company. This includes determining the relationship between equity and debt, taking into account risk and the company's position in the business environment.

Risk is reflected in greater fluctuations in earnings per share, as well as in an increased probability of illiquidity or insolvency.The proposed model for forming the capital structure is applied under conditions of an imperfect market with limited information, where companies interact with each other and partially depend on the market (Dašić, 2024). The financial market is assumed to be perfect, with the cost of debt being lower than the cost of equity, under the assumption of the absence of tax effects.

Methodological Assumptions of the Study

The research is based on a mathematical model that applies the strategic balance method to construct a scale of relative importance of factors influencing capital structure (Pamučar, Stević & Sremac, 2018).

The decision regarding capital structure depends on a set of *n* factors:

$X = \{x_1, x_2, x_3, \ldots, x_n\}$ (1)

where each x_i represents a determinant such as the cost of capital, profitability, risk, liquidity, or market conditions.

Normalization

Since the variables are measured in different units, they are normalized using the min–max transformation:

$z_i = (x_i - \min(x_i)) / (\max(x_i) - \min(x_i)), \quad z_i \in [0,1]$ (2)

Weight Assignment

Each factor is assigned a weight w_i, where:

$$\sum w_i = 1, \quad w_i \geq 0 \qquad (3)$$

The weights reflect the relative importance of the factors and are determined based on expert judgment or statistical methods.

Strategic Balance Function

The overall value of the strategic balance is defined as a weighted sum:

$$S = \sum (w_i \cdot z_i) \qquad (4)$$

Scale of Relative Importance

The relative importance of each factor is determined as:

$$R_i = w_i \cdot z_i \qquad (5)$$

Based on the values of R_i, the factors are ranked and a scale of their importance is established.

Model Constraints

In order to ensure financial sustainability, the following constraints are introduced:

$$D + E = A$$

$$D / E \leq \lambda (6)$$

where D represents debt, E equity, A total assets, and λ the permissible level of leverage.

Sensitivity Analysis

To assess the stability of the model, a sensitivity analysis is conducted:

$$\partial S/\partial w_i, \quad \partial S/\partial z_i \quad (7)$$

It shows how changes in weights and factor values affect the overall strategic balance.

Such an approach enables a systematic and quantitative analysis of capital structure and provides a basis for determining the relative importance of key factors in the financial decision-making process.

Application of the Method to Analytical Indicators

For the assessment of a company's capital capacity, given the stated assumptions, the strategic balance method is applied. This approach is based on the premise that the company operates in an open market environment, where its internal strengths and weaknesses are evaluated in relation to external market conditions and the overall value of the company.

From an accounting perspective, value creation is determined by comparing the internal advantages of the company with external constraints. In analyzing the strategic position, the strategic balance framework enables the identification of key constraints that affect development potential and provides a clearer picture of the company's capital capacity.

In this study, the strategic balance consists of several key elements: capital, intangible assets, financial assets, liabilities, and the number of employees. Each of these components is presented according to its role in the production structure, with assets expressed as positive values and liabilities as negative values within the strategic balance. On the asset side, the dependence of other competing companies on the observed company is presented, while on the liability side, the dependence of the observed company on other competitors is shown (Tintor, 2001).

The analysis procedure is carried out through several phases:
a) analysis and evaluation of dependence on each individual factor, i.e., each balance sheet item, based on available data, after which the results are entered on the asset and liability sides;

b) recording assets and liabilities in the balance sheet, where totals by positions are obtained through summation;

c) defining existing constraints and applying appropriate measures to correct the existing balance sheet structure.

Based on further analysis, specific measures are selected and a plan for adjusting the company's capital structure is developed.

The input of data into the strategic balance is performed based on processed data (Rosić & Getman, 2025). The values of the observed elements represent average relative values of a group of companies within the same industry in relation to the observed company, as shown in Table 1. It is important to note that this sample is representative, as it includes

approximately two-thirds of the total number of companies in that group. The balance sheet presents the positions, while total values are obtained through their summation. The visual representation in Table 1 is based on graphical marking of the relative values of factors, where the intensity of shading and the position on the scale indicate their relative importance within assets and liabilities

Table 1. Relative Values in the Strategic Balance Sheet

Factors %	Assets										Liabilities									
	100	90	80	70	60	50	40	30	20	10	10	20	30	40	50	60	70	80	90	100
Capital																				
Intangible Assets																				
Tangible Assets																				
Financial Assets																				
Liabilities																				
Employees																				

From the strategic balance, the values of the marked positions can be observed in the following overview. The identification of the key constraint, i.e., the strategic bottleneck, is carried out in the third phase by ranking based on deviations of the marked positions. The ranking of the obtained results is presented in Table 2.

Table 2. Ranking of Selected Positions

Strategic Elements	Marked Positions in Assets	Marked Positions in Liabilities	Sum of Marked Positions (A + P)	Rank
Capital	72.6	81.5	154.1	6
Intangible Assets	87.3	42.1	129.4	3
Tangible Assets	52.7	62.5	105.2	2
Financial Assets	79.2	63	142.2	4
Liabilities	42.6	51.3	93.9	1
Employees	82	61.3	143.3	5
Total	416.40	913.40	768.10	-

The strategic balance presented in this way can be understood as a specific test of a company's strengths and weaknesses. The magnitude of strengths is reflected through the marked positions in assets, while the magnitude of weaknesses is indicated through the marked positions in liabilities. For analytical purposes, it is essential to observe the relative relationships between the asset and equity components of the balance sheet.

This model establishes an accounting concept of value creation influenced by the capital structure (Kuč & Kaličanin, 2020). Since the marked areas represent strengths on the asset side, and weaknesses and dependency constraints on the liability side, their sum integrates positive contributions from assets and offsets limitations arising from liabilities. A higher total indicates a more favorable position of the company, while a total below 100% indicates pronounced weaknesses in the structure of strengths (Asante, 2024). The lowest total represents the greatest strategic constraint or strategic bottleneck, which in this case is attributed to the "Liabilities" factor, as indicated by the assigned rank of "1".

The assessment of strengths and weaknesses, including the evaluation of the dependence of other entities on the company (assets) and the company's dependence on others (liabilities), is based on the actual characteristics of the observed parameters.

Identifying the strengths and weaknesses of individual strategic success factors within the asset and liability sides of the balance sheet, as well as determining the factor with the greatest constraints—i.e., identifying the strategic bottleneck—does not represent the final stage of the analysis.

Results and Discussion

When observing the balance sheet presented in Table 2 and assuming ideal market conditions, such as a perfect capital market and the absence of taxes, it can be concluded that the market value of the company is not affected by the relationship between debt and equity in the capital structure (Krstić, 2020). In such an environment, the market position of the company, as well as its capital structure, is determined by the magnitude and risk level of cash flows arising from its obligations (Gibbard & Stevens, 2011). These cash flows must be considered in relation to the company's assets, as both sides of the balance sheet are interconnected. Therefore, the stability and structure of financing depend not only on the organization of assets, but also on the risk characteristics and volume of cash flows generated by the company's liabilities.

This study is based on the assumption that debt financing is generally less expensive than equity financing. Accordingly, an increase in the share of debt in the capital structure is expected to lead to a reduction in the overall cost of capital.

Traditional financial theory supports the view that there is an optimal capital structure that companies can achieve. From this perspective, increased use of financial leverage may initially reduce the cost of capital, which can subsequently increase the overall market value of the company (Gherghina, 2021).

Although shareholders demand higher returns as leverage increases, this effect can initially be offset by the advantages of cheaper debt. However, once a company reaches a high level of indebtedness, this balance changes. At that point, the rising cost of equity, required by investors,

outweighs the benefits of debt, and the overall cost of capital begins to increase instead of decreasing.

When tax effects are incorporated into company valuation, financial leverage is generally viewed as a value-enhancing factor, as the tax shield on debt increases the overall value of the firm. Within this framework, the value creation effect is positively related to the level of indebtedness in the capital structure. This occurs because interest on debt is a tax-deductible expense, which reduces taxable income and increases the portion of profit available to shareholders. As a result, greater use of debt generates tax savings that contribute to a higher market value of the company (Zupur, 2024). These tax savings represent an additional benefit to equity holders and can be viewed as the present value of the tax advantages of borrowing.

Under extreme theoretical conditions, this reasoning suggests that a fully leveraged capital structure could be optimal, as increasing leverage would continuously enhance firm value through tax benefits. However, in practice, this is limited by the requirement for companies to maintain a minimum level of equity to ensure financial stability and meet operational and regulatory requirements (Murombi & Mohammed, 2025). This level of capitalization raises important questions regarding the supply and demand for borrowed funds in financial markets. When taxation is included in the analysis, a smaller portion of profit remains available for reinvestment and strengthening the capital position. In this way, taxes directly affect the structure of the balance sheet through the relationship between debt and equity, assuming all other factors remain unchanged.

The concept of an optimal capital structure is based on achieving a balance between the benefits and costs of borrowing. In other words, it represents a trade-off between the positive effects of debt—such as the tax shield and lower cost of capital—and its negative consequences, including increased financial risk, mandatory interest payments, and potential costs of financial distress or bankruptcy. From this perspective, companies with higher business risk should generally use less debt compared to companies with lower operating risk, under similar conditions. The reason is that higher business risk increases the likelihood of financial difficulties and instability, regardless of the level of financial leverage. Therefore, firms operating in more uncertain or volatile environments tend to adopt more conservative

capital structures in order to maintain financial stability and reduce the risk of insolvency (Krstić, 2018).

Companies whose balance sheets are dominated by tangible assets can use higher levels of debt in their capital structure compared to companies dominated by intangible assets, which is not the case in this study (Wang, Xu & Yang, 2026). Intangible assets, such as patents, licenses, and concessions, carry a higher risk of value loss compared to tangible assets, especially in less developed countries such as the one considered in this study. This represents an important risk factor in forming the capital structure, as it may lead to short-term fluctuations in the value of the "Intangible Assets" position in the balance sheet (Lalafaryan, 2024). Companies operating in environments with higher tax rates are generally encouraged to use a higher proportion of debt, as interest expenses generate greater tax savings. In other words, higher corporate taxes increase the importance of the tax shield, making borrowing more attractive from a financial perspective.

Based on the research, it can be concluded that the observed company has a relatively low level of indebtedness, meaning that the level of debt is negatively correlated with the specific characteristics of its business operations (Mirković, 2025).

This implies that it is important to consider not only the probability that borrowing may lead to illiquidity or financial difficulties, but also the potential reduction in the overall value of capital that may arise in such situations. In other words, the consequences of excessive borrowing should be viewed more broadly, encompassing both short-term liquidity risks and long-term effects on firm value and financial stability (Stanković, 2025).

The strategic balance approach to determining the optimal capital structure enables the integration of multiple relevant factors into the decision-making process. These include tax effects, different types of risk, and broader business conditions such as sales performance, fluctuations in market demand, and the reliability of raw material supply (Janković & Golubović, 2025). By incorporating these elements, the method provides a more comprehensive and realistic assessment of the company's financial position.

In transition economies, it is particularly important for management to design a capital structure that ensures access to relatively low-cost sources of

financing while maintaining an acceptable level of financial risk. This balance is crucial because such markets are often characterized by higher uncertainty, less developed financial institutions, and increased volatility in business conditions.

Achieving this objective largely depends on the level of management's knowledge of financial markets, particularly in assessing available financing sources and developing appropriate financial policies. By applying the strategic balance method, management can more effectively identify weaknesses and imbalances in the company's balance sheet structure (Dašić, 2025; Milojević, Milanović, 2025). In this way, a solid and systematic foundation is created for developing a well-structured, efficient, and sustainable financial strategy aimed at long-term value creation.

Conclusion

The analysis has shown that liabilities represent the most critical point in the company's capital structure, indicating the need to direct financial policy toward their reduction and optimization. In the context of the topic "Application of the Strategic Balance Sheet Method for Developing a Scale of Relative Coefficients," this result can be interpreted as the identification of the factor with the greatest negative impact within the scale of relative importance. In other words, the "Liabilities" position is ranked as the strategic bottleneck in the strategic balance sheet, meaning that it has the highest relative constraint coefficient compared to other balance sheet items. Given that the analysis refers to a specific company operating in an imperfect market, increasing equity represents one of the key measures for improving the financing structure, through the conversion of liabilities into equity and the strengthening of the capital base. Within the strategic balance method, such a transformation is viewed as a shift of relative coefficients from a high-risk zone toward more stable sources of financing, where the market rewards companies that successfully manage risk and innovate in the structure of financing sources.

The application of the strategic balance method enables different balance sheet positions (capital, liabilities, intangible and tangible assets, financial assets, and employees) to be quantified and ranked through a scale of relative coefficients, where each position is assigned an appropriate weight depending on its impact on overall financial stability and company value. In this context, liabilities, as the factor with the greatest constraint, have the

highest negative relative contribution, while capital and stable asset positions have positive coefficients that contribute to strategic balance.

The impact of risk on value creation can be further mitigated through the application of a combination of asset structures, aiming to achieve an optimal balance between financing sources and risk within the strategic balance framework. This approach implies that, given a certain level of risk, the expected return is maximized or portfolio risk is minimized for a given level of return, which is directly reflected in the values of relative coefficients in the model.

Within the scale of relative coefficients, such optimization leads to a rebalancing of the balance sheet, where negative coefficients (liabilities) are gradually reduced, while positive coefficients (capital and stable assets) increase. As a result, the company can expect a reduction in overall financing costs, an improvement in its credit rating, and an increase in the market value of its shares. In this way, the strategic balance method is not only an analytical tool for identifying weaknesses, but also an instrument for developing a quantitative scale of relative coefficients that supports decision-making regarding the optimal capital structure. This creates a systematic framework for managing financial risk and achieving long-term value growth through a balanced capital structure.

Conflict of interests

The authors declare no conflict of interest.

Author Contributions

Conceptualization, I:M.; methodology,I:M. and A.R.; software, I.M. ; formal analy-sis, I.M. and I.M; writing-original draft preparation, M.N.; writing-review and editing, A.R. and I.M All authors have read and agreed to the published version of the manuscript.

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Data Availability Statement

The data supporting the findings of this study are available from the corresponding author upon reasonable request.

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