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THE IMPACT OF FUNDING DECISIONS ON THE ECONOMIC ENTERPRISE VALUE

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ABSTRACT

This study aims to highlight the relationship between the financial structure decision of the examined enterprise and its contribution to enhancing its market value, specifically through analyzing the effect of financial leverage. The significance of this research lies in identifying the appropriate funding decision that will inevitably impact the enterprise's present and future.

The study concludes that the funding decision adopted by the examined enterprise has a negative effect on profitability ratios—specifically, as the volume of loans increases, profitability decreases. In other words, the effect of financial leverage is negative.

KEYWORDS

Funding Decision, Financial Leverage, Financial Profitability, Market Value, Capital Structure

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Introduction:

The funding decision is among the most critical financial decisions made by an enterprise, owing to its profound implications for its future. Indeed, it affects all departments including production, marketing, research and development, and others. Consequently, enterprise management, particularly the Chief Financial Officer, must accord this decision the utmost attention, as it will inevitably influence both the present and future of the enterprise within a business environment characterized by continuous change.

1. Concept of the Funding Decision

The first concept:

“Funding decisions encompass choices regarding the acquisition and utilization of funds, requiring knowledge of how to determine whether the Enterprise should maintain, expand, or reduce its current investment across all asset categories.” (Hussein, 1988, p. 51)

This definition underscores that decisions concerning fund acquisition are not made in isolation from investment decisions. Rather, they are intrinsically linked to the Enterprise's need to either expand or maintain its current operational scale, based on factors such as the nature of the investment, cost of funding, and broader economic conditions.

The second concept:

“A set of decisions concerning how to obtain the necessary funds to finance the enterprise's investments, and determining the optimal mix of debt and equity capital to meet the Enterprise's financial requirements.” (Al-Jazrawi, 1998, p. 20)

This definition emphasizes the modern perspective on funding, focusing on two core elements: cost and return. Typically, the least costly source of funding is prioritized first. The cost depends on the composition of the capital structure and the proportion of each component within it. Moreover, the return on invested capital must exceed the interest rate paid to creditors; otherwise, the enterprise risks falling into financial deficit.

Based on the foregoing, the funding decision can be defined as the process by which the financial manager determines the most effective means of acquiring necessary funds and allocating them to the most beneficial uses, while carefully considering the two fundamental criteria of cost and return.

2. Determinants of the Funding Decision

Several factors must be considered prior to making a funding decision, as the selection of funding sources depends on a range of often conflicting variables—including the Enterprise’s internal conditions, the general economic climate, and industry-specific circumstances. Furthermore, management does not possess absolute discretion in determining the optimal debt-equity mix within its capital structure.

The primary factors influencing the choice of appropriate funding sources for an enterprise are as follows:

2.1. Appropriateness

This refers to the alignment between the type of funds acquired and the nature of the assets they are intended to finance. Long-term funds should finance long-term needs (e.g., acquisition of fixed assets), whereas short-term funds should finance short-term requirements (e.g., seasonal working capital needs). (Kurraj, 2006, pp. 109–110)

2.2. Assets’ Composition

Assets’ composition influences funding strategy. Enterprises with a high proportion of long-term assets tend to favor long-term debt funding, whereas those with substantial working capital requirements rely more heavily on short-term borrowing.

2.3. Enterprise Size

An enterprise’s capacity to utilize debt funding depends on its size. Small enterprises primarily rely on equity funding, whereas larger ones increasingly use debt as they expand. Enterprise size may be measured by total assets or sales volume. (Al-Amri, 2009, p. 168)

2.4. Timing

This refers to the enterprise’s ability to select the optimal time to acquire funds at the lowest possible cost—whether through debt or equity issuance. Proper timing of borrowing and funding activities across business cycles can yield significant cost savings.

Despite its importance, timing is sometimes secondary to urgency. In certain cases, immediate funding needs may necessitate borrowing even at relatively high costs. Conversely, low-cost debt may be available, yet remain unused due to lack of immediate need. Thus, market conditions and the Enterprise’s specific requirements at a given time play a crucial role in funding timing decisions. (Kurraj, 2006, p. 114)

2.5. Legal Form of the Enterprise

Enterprises differ in legal structure—private or public, and further classified as capital-based companies (e.g., joint-stock companies, limited partnerships by shares) or personal companies (e.g., general partnerships, limited liability companies). Each legal form dictates compatible funding mechanisms. For instance, public enterprises may issue public subscription instruments, while joint-stock companies can open their capital to unlimited shareholders.

2.6. Cost

The cost of capital is among the most critical elements underpinning financial decisions, as it represents the minimum acceptable return on investment. Each funding source carries a specific cost that must be accounted for when meeting financial requirements. Therefore, the optimal capital structure is the one that minimizes the weighted average cost of capital (WACC) and, consequently, maximizes earnings per share.

The following section elaborates further on the cost of capital.

3. Stages of the Funding Decision-Making Process

The steps involved in making funding decisions vary across enterprises depending on factors such as business activity, size, and operating environment, making it difficult to prescribe a universal method. However, most enterprises follow a common logical sequence of stages (Hanafi, 1990, p. 13):

3.1. Identifying the Enterprise’s Financial Needs

The enterprise must continuously assess its current and future financial requirements, prioritizing them to determine available internal resources. This necessitates a flexible and scalable financial plan. At project inception, fixed asset requirements (e.g., land, buildings) must be clearly defined.

Importantly, financial needs assessment is not limited to the startup phase; it is an ongoing process due to evolving business conditions that continually generate new funding requirements.

3.2. Determining the Required Amount of Funds

Once financial needs are identified, the enterprise estimates the quantum of funds required to meet them. This is inherently challenging, so it is advisable to establish upper and lower bounds for funding any transaction or project. These bounds should be based on calculations of capital asset costs, working capital requirements, and other incidental expenditures.

3.3. Selecting the Appropriate Funding Instrument

Enterprises may resort to issuing shares or bonds when relying on external funding. Seasonal activities are typically funded through seasonal loans with corresponding repayment schedules. It is crucial to avoid excessive issuance of bonds or shares, as this imposes specific obligations on the Enterprise—similarly to loans. Hence, alignment between funding duration and instrument type is essential.

3.4. Developing a Financial Needs Timeline

After identifying needs, amounts, and suitable instruments, a detailed financial timeline should be established. This timeline must account for the lead time required by financiers to fulfill the enterprise's funding requests.

3.5. Formulating and Refining the Funding Plan

The funding plan outlines funded activities, expected returns, and collateral mechanisms to secure funding and mitigate repayment risks. It also specifies cash inflows and outflows, thereby reassuring lenders about repayment schedules.

3.6. Implementing, Monitoring, and Evaluating the Funding Plan

Successful implementation requires a well-structured, actionable plan, coupled with continuous monitoring to correct deviations arising from execution errors or external factors. Given that funding plans may become obsolete over time, they must be regularly updated to reflect emerging requirements.

Challenges include:

- Lack of accurate information on funding sources and their respective costs, hindering the financial manager's ability to select the optimal funding type and cost.
- Difficulty in determining the relative weights of each funding source's cost within the capital structure.
- Potential variation in these weights over time for each cost component.

4. Tools Used in Funding Decision-Making

Funding decision-makers employ several analytical tools, the most important of which include: financial analysis, break-even analysis, and financial and operating leverage, discussed below.

4.1. Financial Analysis

Financial analysis is defined as:

“A field within management sciences that focuses on the financial aspects of the enterprise, aiming to achieve and implement various financial objectives and plans through a set of methods, approaches, and techniques that facilitate the Enterprise's integration into the financial environment.” (Qarishi, Financial Management, 2006, p. 57)

4.2. Financial Ratio Analysis

Financial ratio analysis involves establishing quantitative relationships between elements of the balance sheet or income statement. Given the multitude and interdependence of financial ratios, financial managers must carefully select those most relevant to their specific objectives.

Key ratios used in financial analysis include:

4.2.1. Capital Structure Ratios

These ratios reveal how an enterprise finances its assets, the extent of financial indebtedness, and its degree of financial independence and ability to meet obligations, particularly when seeking new loans.

4.2.1.1. Permanent Funding Ratio

Based on the principle of matching permanent resources with fixed uses, managers should at least ensure parity between these two elements. This ratio assesses each funding source's contribution to asset funding, particularly fixed assets:

$$\{\text{Permanent Funding Ratio}\} = \frac{\{\text{Permanent Funds}\}}{\{\text{Fixed Assets}\}}$$

(Shiha, 2013, p. 94)

-> 1: Permanent funds fully cover fixed assets, with surplus funding current assets (positive net working capital).

- < 1: Permanent funds are insufficient; part of fixed assets is financed by current liabilities (negative net working capital).

- = 1: Permanent funds exactly cover fixed assets.

Thus, this ratio should exceed 1 to ensure financial equilibrium.

4.2.1.2. Equity Funding Ratio (Self-Funding Ratio)

$$\{\text{Equity Funding Ratio}\} = \frac{\{\text{Equity}\}}{\{\text{Fixed Assets}\}}$$

(Adoun, 1999, p. 53)

This ratio measures the extent to which fixed assets are covered by the Enterprise's own funds.

- If the ratio equals 1, equity fully covers fixed assets, and long-term debt (if any) finances current assets, forming net working capital.

4.2.1.3. Financial Independence Ratio

$$\{\text{Financial Independence Ratio}\} = \frac{\{\text{Equity}\}}{\{\text{Total Debt}\}}$$

- This ratio should be ≥ 1 , indicating equity exceeds debt.

- A higher ratio signifies greater financial autonomy and flexibility in dealing with creditors.

- A low ratio indicates heavy indebtedness, limiting access to additional funding without burdensome collateral.

4.2.2. Debt Ratios

To further dissect the capital structure, the general debt ratio compares debt to equity:

4.2.2.1. General Debt Ratio

$$\{\text{General Debt Ratio}\} = \frac{\{\text{Total Debt}\}}{\{\text{Equity}\}}$$

- A lower ratio indicates better creditor protection and greater borrowing capacity.

- Many experts consider 1 (or 100%) as the maximum acceptable threshold.

For greater precision, debt is classified into medium/long-term and short-term categories, yielding separate ratios for each relative to equity.

5. Financial Leverage

Financial leverage is defined as:

“The degree to which an enterprise relies on fixed-income funding sources—whether debt or preferred shares—that it is obligated to service, thereby affecting owners' returns and their exposure to financial risk.” (Adhab, 2021)

To fully understand the impact of fixed-cost funding—particularly debt—on financial profitability, we must first define economic profitability and financial profitability.

5.1. Economic Profitability

Economic profitability focuses on core operations, excluding secondary or exceptional activities. It incorporates operating income (from the income statement) and economic assets (from the balance sheet).

$$\{\text{Economic Profitability Rate}\} = \frac{\{\text{Operating Income}\}}{\{\text{Economic Assets}\}}$$

(Qarishi, Financial Management, 2006, p. 168)

This measures the contribution of each monetary unit of economic assets to operating income.

5.2. Financial Profitability (Return on Equity)

Financial profitability encompasses all enterprise activities, using net income (from the income statement) and equity (from the balance sheet). (K. Chiha, 2010, p. 58)

$$\{\text{Financial Profitability}\} = \{\text{ROE}\} = \frac{\{\text{Net Income}\}}{\{\text{Equity}\}}$$

Alternatively, it can be expressed as:

$$\{\text{ROE}\} = \{\text{ROA}\} + (\{\text{ROA}\} - i) \times \left(\frac{\{\text{Net Debt}\}}{\{\text{Equity}\}} \right)$$

where:

- ROA = Return on Assets (Economic Profitability)

- (i) = Cost of debt

(Meyer, 2014, p. 26)

This ratio reflects equity's contribution to generating net income, enabling equity replenishment and growth. Conceptually, ROE equals ROA when debt is zero.

5.3. Effect of Financial Leverage

The principle of financial leverage holds that when an enterprise borrows and invests the proceeds in its core operations, it should generate an economic return exceeding the cost of debt. The resulting surplus—i.e., the difference between ROA and the interest rate—accrues to shareholders, thereby enhancing ROE. This amplification effect gives rise to the term “leverage.”

The mathematical formulation of financial leverage is as follows:

$$R_{cp} = \left[R_e + (R_e - i) \cdot \frac{D}{C_p} \right] \cdot (1 - i_S)$$

Where:

- (R_{cp}) : Return on equity (ROE)
- (R_e) : Economic profitability rate (ROA)
- (i) : Cost of debt (financial expenses)
- (D) : Net debt
- (C_p) : Equity
- $(\frac{D}{C_p})$: Leverage ratio
- $(R_e - i)$: Margin between ROA and cost of debt
- $(R_e - i) \cdot \frac{D}{C_p}$: Leverage effect
- (i_S) : Corporate income tax rate

(Qarishi, Financial Management, 2011, p. 270)

5.4. Scenarios of Financial Leverage Effect

Using the above formula, we examine the impact of debt on profitability under three conditions: (Qarishi, Financial Management, 2006, pp. 190–192)

5.4.1. Zero-Debt Enterprise

A rare real-world scenario where funding is exclusively internal (equity):

$$R_{cp} = R_e \cdot (1 - i_S) \quad \text{when } D = 0$$

Here, no leverage effect exists; ROE equals after-tax ROA.

5.4.2. Indebted Enterprise

(a) $ROA > \text{Cost of Debt } (R_e > i)$

ROE increases with higher debt ratios → positive leverage effect.

(b) $ROA = \text{Cost of Debt } (R_e = i)$

Debt level has no impact on ROE → neutral leverage effect.

ROE = after-tax ROA, regardless of debt level.

(c) $ROA < \text{Cost of Debt } (R_e < i)$

ROE decreases as debt increases → negative leverage effect.

6. Case Study: Hodna Milk Enterprise (2020-2023)

To address the research question and substantiate the theoretical framework, this section presents an applied analysis of the capital structure of Hodna Milk Enterprise throughout the period 2020-2023.

6.1. The Enterprise Profile:

Hodna Milk is a private-sector commercial enterprise structured as a Limited Liabilities Company (LLC). Originally named “Hodna Dairy” and focused solely on milk production, it gradually diversified into dairy derivatives and rebranded as Hodna Milk LLC. It was established on December 15, 1998. It has a daily production capacity of 40,000 liters of processed milk. Its initial share capital was 600,000 DZD, with total investment of 80 million DZD—50% self-financed by partners and 50% sourced as a long-term bank loan from the National Popular Credit Bank. The company is co-owned by Dilmi brothers and two other partners from Batna state. It’s located in the southeastern industrial zone of M’Sila State. It occupies 32,000 m², with 22,000 m² built (including 10,000 m² unbuilt).

6.2. Additional Information about Hodna Milk, 2024:

- 20 foreign suppliers; 180 domestic suppliers
- 500 customers; 70 milk distributors
- 2 retail warehouses (Algiers and Annaba)

6.3. Financial Structure Analysis (2020-2023)

The following table presents the funding structure of Hodna Milk:

Table 1. Financial Structure of Hodna Milk Enterprise (2020-2023)Unit: DZD

Item	2020	2021	2022	2023
Equity	2,102,343,099.78	2,315,315,842.71	2,522,606,817.31	2,739,670,763.06
% of Equity	21.86%	24.62%	28.41%	28.71%
Debt	7,514,623,633.31	7,088,003,672.07	6,355,403,590.67	6,803,450,269.74
% of Debt	78.14%	75.38%	71.59%	71.29%
Total Funding	9,616,966,733.09	9,403,319,514.78	8,878,010,407.98	9,543,121,032.80

Source: Prepared by the author based on audited financial statements (2020-2023)

Debt dominates the capital structure throughout the period, with equity never exceeding 28.71%. This indicates heavy reliance on debt funding for investment projects. However, the debt ratio steadily declined from 78.14% (2020) to 71.29% (2023), while equity increased from 21.86% to 28.71%. This reflects a deliberate strategy by management to repay debt installments and increase share capital through retained earnings—allocating part of annual profits to shareholders and the remainder to equity capital during general assemblies.

The enterprise's high debt usage appears motivated by tax incentives and exemptions offered by the state to encourage investment.

6.1.1. Internal Funding Sources

(a) Self-Funding Capacity

Calculated as Net Income + Depreciation & Provisions:

Table 2. Self-Funding Capacity of Hodna Milk (2020-2023)Unit: DZD

Item	2020	2021	2022	2023
Net Income	201,022,540.19	303,944,156.12	296,037,922.72	298,299,971.06
Depreciation Provisions	3,654,619,909.07	4,346,829,492.81	5,013,285,324.83	5,765,966,051.49
Self-Funding Capacity	3,855,642,449.26	4,650,773,648.93	5,309,323,247.55	6,064,266,022.55
Growth Rate	—	20.62%	14.16%	14.22%

Source: Prepared by the author based on audited financial statements (2020-2023)

Self-funding capacity grew by 20.62% in 2021 due to higher net income. Growth slowed to 14.16% in 2022 (reflecting lower net income) and slightly rose to 14.22% in 2023. Depreciation provisions rose consistently—contrary to expectations under straight-line depreciation—indicating an expansionary strategy involving R&D, production line diversification, and distribution network growth.

(b) Equity Composition

Equity comprises share capital, premiums/reserves, and net income:

Table 3. Equity Composition of Hodna Milk (2020-2023)Unit: DZD

Item	2020	2021	2022	2023
Issued Share Capital	1,800,000,000.00	1,900,000,000.00	2,100,000,000.00	2,100,000,000.00
Premiums & Reserves	101,320,559.59	111,371,686.59	126,568,894.59	141,370,792.00
Net Income	201,022,540.19	303,944,156.12	296,037,922.72	298,299,971.06
Total Equity	2,102,343,099.78	2,315,315,842.71	2,522,606,817.31	2,739,670,763.06
Growth Rate	—	10.13%	8.95%	8.60%

Source: Prepared by the author based on audited financial statements (2020-2023)

Equity grew steadily, though growth decelerated from 10.13% (2021) to 8.95% (2022) due to a 2.67% decline in net income—attributable to higher operating expenses. Growth remained modest in 2023 due to unchanged share capital.

7.1.2. External Funding Sources

(a) Short-Term Debt

Table 4. Short-Term Debt of Hodna Milk (2020-2023)Unit: DZD

Item	2020	2021	2022	2023
Suppliers & Affiliates	1,065,137,075.26	1,130,508,660.51	980,392,800.29	1,548,945,332.38
Taxes Payable	58,550,368.75	26,567,555.86	60,634,793.68	168,928,364.89
Other Debts	1,043,649,335.63	872,182,371.95	884,938,324.51	509,777,987.77
Negative Cash Balance	2,973,119,661.00	3,254,812,894.56	2,875,101,660.98	3,013,447,016.47
Total Short-Term Debt	5,140,456,440.64	5,284,071,482.88	4,801,067,579.46	5,241,098,701.51
Growth Rate	—	2.79%	-9.14%	9.17%

Source: Prepared by the author based on audited financial statements (2020-2023)

Short-term debt averaged over 54% of total liabilities. It rose by 2.79% in 2021 (due to higher supplier debt and short-term bank loans), fell by 9.14% in 2022 (debt repayment), and rose again by 9.17% in 2023 (increased supplier debt and short-term borrowing).

(b) Medium- and Long-Term Debt

Table 5. Medium- and Long-Term Debt of Hodna Milk (2020-2023)Unit: DZD

Item	2020	2021	2022	2023
Financial Loans & Debt	2,374,167,192.67	1,802,743,462.19	1,553,147,284.21	1,561,162,841.23
Provisions & Deferred Revenue	0.00	1,188,727.00	1,188,727.00	1,188,727.00
Total Medium/Long-Term Debt	2,374,167,192.67	1,803,932,189.19	1,554,336,011.21	1,562,351,568.23
Growth Rate	—	-24.02%	-13.84%	0.52%

Source: Prepared by the author based on financial reports (2020-2023)

Debt declined significantly in 2021 and 2022 due to repayments. A slight increase in 2023 resulted from a new bank loan.

6.2. Analysis of Capital Structure Ratios and Leverage Effect

Table 6. Capital Structure Ratios of Hodna Milk(2020-2023)Unit: Percentage (%)

Ratio	Formula	2020	2021	2022	2023
Permanent Funding Ratio	Permanent Funds / Fixed Assets	95%	99%	99%	102%
Equity Funding Ratio	Equity / Fixed Assets	25%	26%	27%	28%
Financial Independence Ratio	Equity / Total Debt	28%	33%	39%	40%
Debt-to-Total-Assets Ratio	Total Debt / Total Assets	78%	75%	72%	71%
General Debt Ratio	Total Debt / Equity	357%	306%	252%	248%

Source: Prepared by the author based on financial statements (2020-2023)

6.2.1. Permanent Funding Ratio

Below 100% in 2020–2022 → fixed assets partially financed by current liabilities → financial imbalance. Exceeded 100% in 2023 due to a new long-term loan → financial equilibrium achieved.

6.2.2. Equity Funding Ratio

Remained low (avg. 27%) → fixed assets not covered by equity → reliance on debt funding.

6.2.3. Financial Independence Ratio

Below 50% throughout → debt exceeds equity → financial dependence and high leverage.

6.2.4. Debt-to-Total-Assets Ratio

Consistently above 50% (benchmark: ≤50%) → weak solvency, limiting access to favorable new funding.

6.2.5. General Debt Ratio

Ranged from 357% (2020) to 248% (2023) → debt 2.5–3.5× equity. Far exceeds the benchmark of 100% → excessive leverage.

6.3. Analysis of Financial Leverage Effect

6.3.1. Economic Profitability Calculation

Table 7. Economic Profitability of Hodna Milk(2020-2023)Unit: DZD

Item	2020	2021	2022	2023
Current Assets (excl. cash)	4,726,642,022.38	4,959,115,962.81	4,605,745,866.24	5,282,909,071.20
Short-Term Debt (excl. bank overdrafts)	2,167,336,779.64	2,029,258,588.32	1,925,965,918.48	2,227,651,685.04
Working Capital Requirement	2,559,305,242.74	2,929,857,374.49	2,679,779,947.76	3,055,257,386.16
Net Investments	4,490,513,786.84	4,161,863,551.06	4,120,951,859.57	4,051,227,490.23
Economic Assets	7,049,819,029.58	7,091,720,925.55	6,800,731,807.33	7,106,484,876.39
Operating Income	333,518,706.93	569,996,129.86	288,995,325.06	316,947,366.71
Economic Profitability (ROA)	0.05	0.08	0.04	0.04

Source: Prepared by the author based on financial statements and income statements (2020-2023)

ROA peaked at 8% in 2021 (due to 70.9% higher operating income) but fell to 4% in 2022–2023.

6.3.2. Financial Leverage Effect Calculation

Assumptions:

- Cost of debt (i) = 7%
- Corporate tax rate (i_S) = 19%

Table 8. Financial Leverage Effect of Hodna Milk(2020-2023)

Item	Formula	2020	2021	2022	2023
Economic Profitability (ROA)	$Re = OI / EA$	0.05	0.08	0.04	0.04
Debt-to-Equity Ratio	D / Cp	2.54	2.09	1.72	1.74
Financial Profitability (ROE)	$[Re + (Re - i) * D/Cp] * (1 - i_S)$	-0.00065	0.082	-0.0094	-0.0098
Leverage Effect	$(Re - i) * D/Cp$	-0.051	0.021	-0.052	-0.052

Source: Prepared by the author based on financial statements and income statements (2020-2023)

Findings:

- Only in 2021 was ROE positive (8.2%) and leverage effect positive (0.021), due to high ROA (8% > 7% cost of debt).
- In all other years, ROA < cost of debt → negative leverage effect → higher debt reduced ROE.
- Excessive reliance on debt amplified funding costs, harming profitability.

6.3.3. Evolution of Added Value

Table 9. Added Value of Hodna Milk(2020-2023)Unit: DZD

Item	2020	2021	2022	2023
Added Value	1,796,538,202.43	2,103,102,872.52	2,009,250,338.56	1,877,100,213.09
Growth Rate	—	17.06%	-4.46%	-6.57%

Source: Prepared by the author based on income statements (2020-2023)

Added value rose in 2021 (coinciding with positive leverage) but declined thereafter (aligning with negative leverage). Thus, high debt levels negatively impacted enterprise value.

Conclusions

Analysis of Hodna Milk's capital structure reveals an excessively leveraged position, with an average debt-to-equity ratio of 290%—far exceeding the benchmark of 100%. This high indebtedness stems primarily from elevated working capital requirements in the operating cycle, compelling the Enterprise to rely heavily on debt funding.

Using financial leverage as an analytical indicator, we find that debt had a positive effect on financial profitability only in 2021. In all other years, excessive debt usage exerted a negative impact on profitability due to ROA falling below the cost of debt.

The study concludes that the funding decision—specifically, reliance on debt—adopted by the examined enterprise has a negative effect on profitability ratios: as loan volume increases, profitability decreases.

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