GLOBAL BUSINESS MANAGEMENT REVIEW

https://e-journal.uum.edu.my/index.php/gbmr

How to cite this article:
Ali, H., Yahya, M. H., Latip, M., & Fitriani, A.M. Capital structure and performance of firms in Asean: The role of debt financing. Global Business Management Review, 17(2), 1-17. https://doi.org/10.32890/gbmr2025.17.2.1

CAPITAL STRUCTURE AND PERFORMANCE OF FIRMS IN ASEAN: THE ROLE OF DEBT FINANCING

[1]Hanan Ali, [1]*Mohd Hisham Yahya, [2]Malisah Latip & [3]A.M. Fitriani

[1]School of Business and Economics, Universiti Putra Malaysia, Serdang, Malaysia
[2]Faculty of Humanities, Management & Science, Universiti Putra Malaysia Sarawak, Malaysia
[3]Faculty of Economics and Business, Universitas Sebelas Maret, Surakarta, Indonesia

**Corresponding author: mohdhisham@upm.edu.my*

Received: 2/10/2025 Revised: 23/1/2026 Accepted: 30/1/2026 Published: 30/1/2026

ABSTRACT

This study examines the relationship between debt financing and business performance across six ASEAN countries: The Philippines, Malaysia, Singapore, Indonesia, Thailand, and Vietnam. As a vital component of business funding, debt financing significantly impacts financial stability, growth, and profitability. The research analyzes how short-term and long-term debt structures influence key performance metrics, including return on equity (ROE) and return on assets (ROA), providing insights into how different financing strategies affect business outcomes in diverse economic environments. Using data from publicly listed companies from 2015 to 2023, the study reveals significant variations in debt utilization and its effects on business success. Firms in more developed economies, such as Singapore and Malaysia, tend to rely more on long-term debt, which correlates positively with higher profitability and stable growth. In contrast, businesses in developing nations like Vietnam and Indonesia exhibit a greater dependence on short-term debt, increasing the risk of financial instability and constraining long-term expansion. The findings underscore the importance of balanced debt strategies in mitigating financial risks while leveraging growth opportunities. Additionally, the study highlights how industry-specific factors, firm size, and equity ratios influence the effectiveness of debt financing. By emphasizing the need for tailored debt management strategies aligned with each country's economic and regulatory landscape, this research offers valuable insights for business managers, investors, and policymakers in the ASEAN region.

Keywords: Debt Financing, Firm Performance, ASEAN Economies, Capital Structure

1.0 INTRODUCTION

In managerial finance, the relationship between firm performance and debt financing is widely examined and considered crucial. The trade-off between the benefits and costs of debt financing, as noted by Ye et al. (2023), highlights that tax advantages may not always outweigh the overall costs of debt. A firm's ability to navigate its competitive environment while achieving value and profitability through an optimal level of debt is therefore essential. Capital structure decisions, involving a strategic mix of debt and equity, are central to firm value. These decisions are critical because they affect the risk and return for shareholders, and mismanagement can lead to financial issues and suboptimal use of funds (Wasiuzzaman & Nurdin, 2023).

The impact of debt financing on firm performance has been a central issue in financial research. Modigliani and Miller argued that in a perfectly efficient market, free from transaction costs, taxes, and information asymmetry, financing choices do not affect firm operations, the cost of capital, or overall performance. Their framework rests on strict assumptions, including the absence of taxes, uniform investor behavior, and the absence of agency conflicts. Within this context, firms that rely on debt may gain benefits through tax-deductible interest payments, which lower their effective cost of capital (Wang & Gu, 2024). However, in practice, these assumptions rarely hold. Markets are shaped by imperfections such as information asymmetry, transaction costs, moral hazard, and agency conflicts, which limit the applicability of the original propositions in real-world settings.

Previous research has examined the connection between debt policy and firm performance (Wasiuzzaman & Nurdin, 2023). Firms with a weak repayment capacity are advised to limit their reliance on debt, as excessive borrowing can increase the risk of bankruptcy. A balanced capital structure should weigh the advantages of tax savings against the potential costs of financial distress. High leverage is associated with rising capital costs, which can eventually diminish firm value (Ali & Shaik, 2022). In the ASEAN region, banks remain the main providers of financing because of the limited development of bond and equity markets. Government-backed financial institutions often extend both short- and long-term credit, but their lending practices have sometimes led to weaker performance in financial and non-financial sectors. Since lending decisions are not always based on firm performance, overall efficiency may be compromised. Global debt financing challenges continue to influence both emerging and advanced economies. Considering that prior studies have not fully addressed the joint effects of debt structure, firm size, and age, the present investigation is particularly relevant.

To attain an ideal capital structure, a company needs to strike a balance between its short- and long-term growth goals. This necessitates keeping enough capital on hand in both good and bad times. Whenever feasible, businesses would rather use their own resources for funding than turn to the market for outside capital in the form of bonds or bank loans. However, equity financing becomes a possibility when internal resources are insufficient, even though issuing additional shares may dilute current ownership. The use of debt in a company's capital structure results in agency costs. These expenses are a result of the interactions that exist between debt holders and shareholders, as well as between managers and shareholders (Ye et al., 2023). Research conducted in ASEAN countries has revealed a robust correlation between trade credit, long-term debt, and short-term debt and firm performance.

Figure 1 shows the average return on equity (ROE) and return on assets (ROA) for companies with low and high levels of short-term debt are shown in Figure 1. The findings demonstrate that there are notable differences in performance measures among companies with high levels of short-term debt. Businesses that have a lot of short-term debt frequently have more operational liquidity, which helps them pay their

bills on time. On the other hand, over-reliance on short-term debt can result in higher financial risks, such as higher refinance costs and cash shortages. These risks have the potential to impair profitability and cash flow management, which would eventually lower shareholder value.

Figure 1

Average ROA and ROE by Short-Term Debt Levels in ASEAN Countries

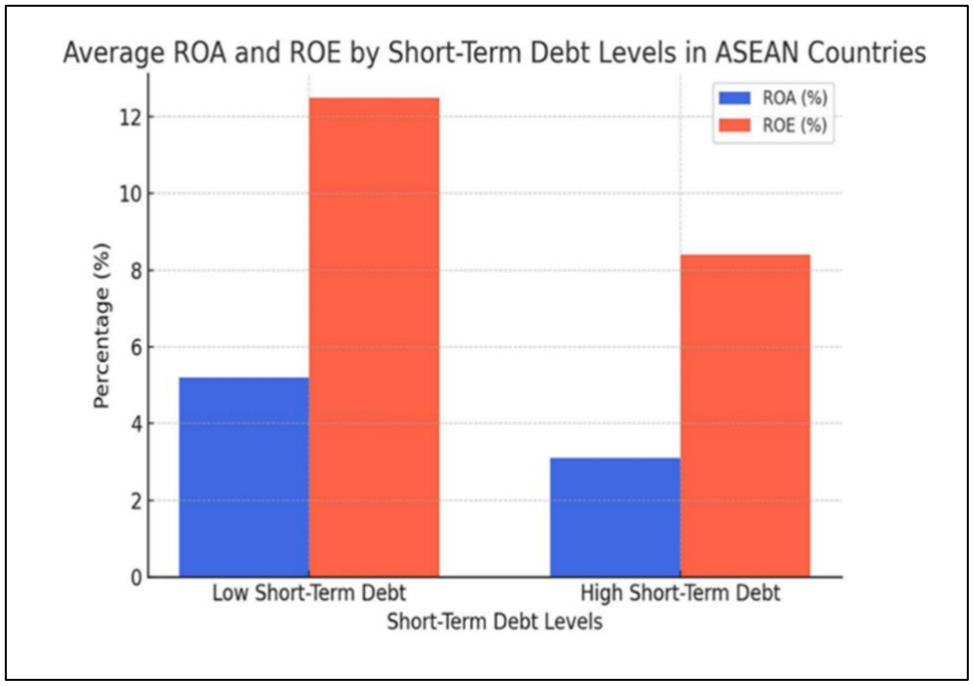
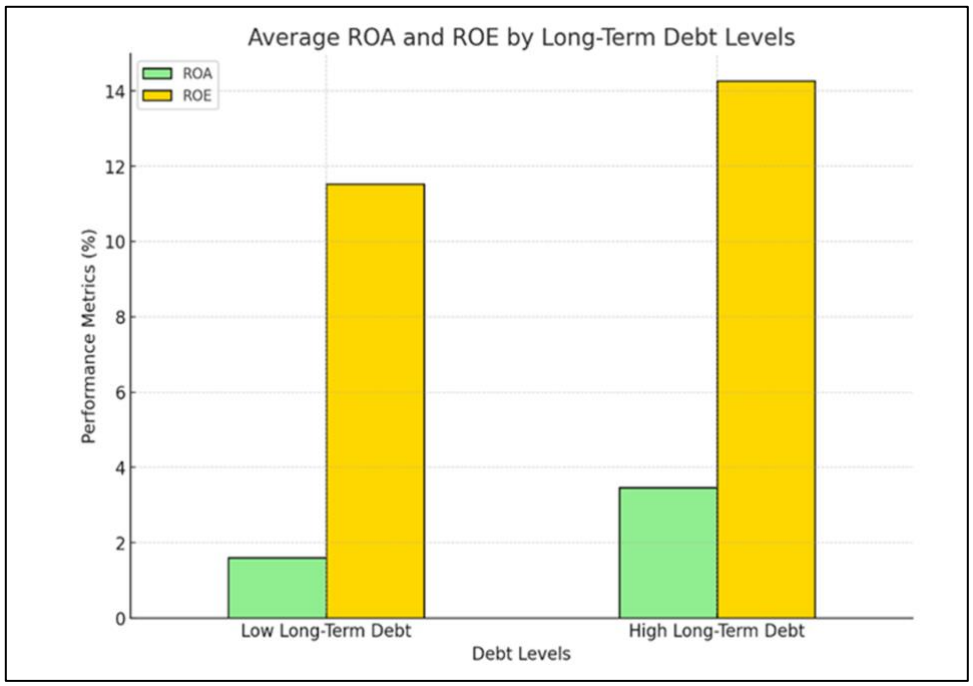


Figure 2 contrasts the average ROA and ROE of companies with low and high levels of long-term debt. This figure illustrates the two ways that long-term debt affects business performance. On the one hand, long-term debt helps companies fund significant investments and promotes steady growth, especially in sectors that require a lot of cash. However, long-term debt's higher financial costs, such as interest payments and financial covenants, can put pressure on profit margins and reduce financial flexibility.

Figure 2

Average ROA and ROE by Long-Term Debt Levels in ASEAN Countries



With its six largest economies, Singapore, Malaysia, Indonesia, the Philippines, Thailand, and Vietnam, the ASEAN region relies heavily dependent on debt financing to propel growth and development, the ASEAN area is one of the most important economic centers in the world. Each country has implemented distinct policies tailored to economic priorities, ranging from significant infrastructural initiatives to industrial expansion and financial stability. The implications of external shocks like COVID-19, business financial performance, debt composition, and debt-to-GDP ratios are all covered in detail in this study. Singapore records the highest government debt-to-GDP ratio in ASEAN, with a value of more than 140%. This high ratio reflects the nation's sophisticated financial structure, which enables both government and private entities to obtain long-term funding at affordable rates, is reflected in this high ratio. This financing supports major infrastructure initiatives, such as the approximately $10 billion Changi Airport expansion project, which is essential to bolstering Singapore's commerce and tourism industries.

Malaysia's debt-to-GDP ratio is almost 67%. The nation finances its development objectives through a mix of foreign bonds and domestic bank loans. For instance, the construction of the Kuala Lumpur Light Rail Transit system was funded by the sale of bonds, which benefited the economic expansion of the urban transportation sector. The World Bank estimates that long-term debt, which finances infrastructure and energy projects, makes up about 60% of Malaysia's total debt. With a comparatively low debt-to-GDP ratio of 41%, Indonesia is taking a cautious approach to external borrowing. To finance infrastructure projects like toll roads and ports, the Indonesian government has deliberately concentrated on domestic funding, utilizing local resources.

As a result of COVID-19, the Philippines' debt levels increased by 20%, the most of any ASEAN nation. The government provided economic stimulus packages totaling more than $24 billion to help struggling companies. Similarly, Thailand's debt increased by 18% as a result of significant government borrowing intended to help SMEs, which are the foundation of the country's economy. Vietnam's industrial and

agricultural development is heavily reliant on debt. The World Bank estimates that about half of Vietnam's debt is used to finance solar power plants and other renewable energy projects, which have been essential in helping to diversify the nation's energy mix. Furthermore, agricultural industries have benefited from government-backed financing, which has increased output by 5% annually over the previous five years. There is a noticeable difference between the ASEAN nations' reliance on short-term and long-term debt.

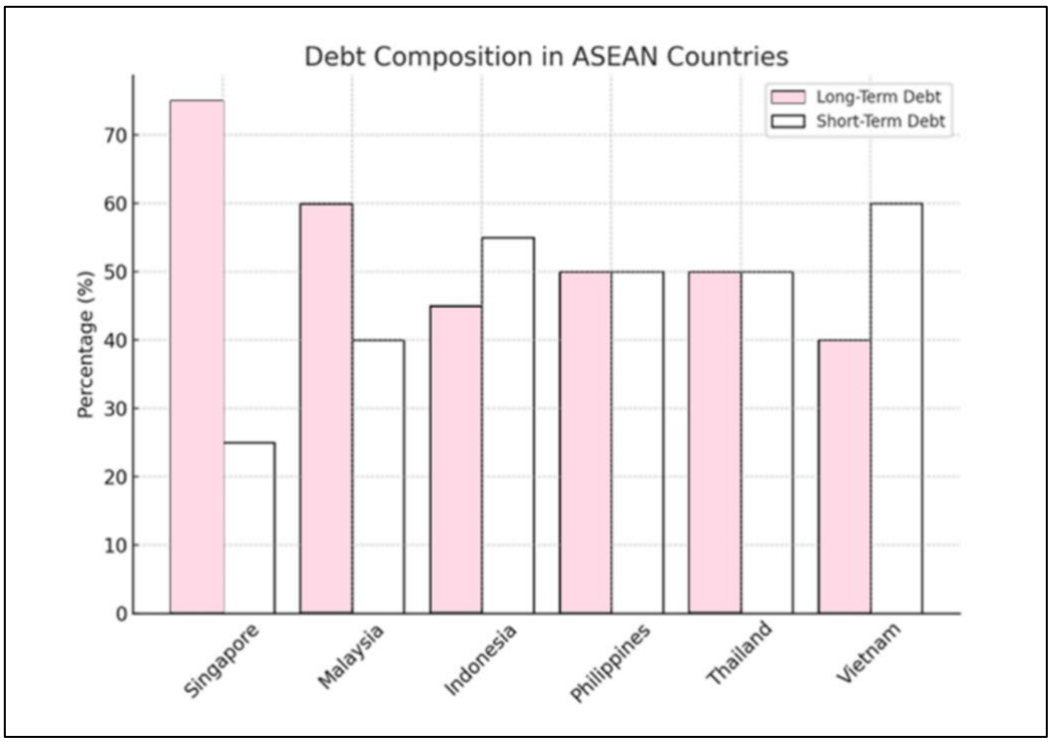
Singapore and Malaysia primarily rely on long-term debt, which accounts for about 70% of their total borrowing. This enables large-scale initiatives with long-term effects and reduces refinancing risks. Vietnam and Indonesia, on the other hand, are more dependent on short-term debt to pay for operating costs, which leaves them vulnerable to changes in the market and rising interest rates. In order to support their industrial and service sectors, the Philippines and Thailand have embraced a more balanced debt composition, utilizing both short- and long-term debt. In ASEAN, the COVID-19 outbreak has fundamentally changed how debt is financed. For instance, stimulus plans totaling more than $50 billion were provided to Thailand and the Philippines to boost their economies. These debt rises were crucial for preserving business stability and averting economic collapse, particularly in the manufacturing and service sectors. But worries regarding debt servicing and sustainability in the future have arisen as a result of the debt surge.

Businesses with long-term debt, like those in Singapore and Malaysia, performed better than those with short-term borrowing. Due in large part to their efficient use of borrowed funds for asset acquisition and expansion, Malaysian companies with greater debt levels reported an annual gain in sales of 7%. Comparing Singaporean businesses to their less indebted equivalents, the former showed a 5% rise in ROA. However, businesses in Vietnam and Indonesia, which rely more on short-term loans, have had difficulties because of the restricted refinancing choices and higher borrowing prices. Ratios of debt to assets provide important information on the financial health of ASEAN businesses. With a debt-to-assets ratio of 55%, Malaysia is the group leader, reflecting the nation's significant reliance on outside funding for capital-intensive projects. With levels of almost 50%, Vietnam and the Philippines demonstrate a balanced approach to using assets as collateral for loans. At 45%, Indonesia has the lowest ratio, indicating a more cautious approach meant to reduce financial risks. These ratios are essential for determining the sustainability of the region's debt-driven growth.

Figure 3 shows how long-term and short-term debt are distributed among ASEAN economies. Malaysia and Singapore prioritize long-term debt, which makes up about 70% of their total borrowing. This approach promotes long-term funding of major projects and supports financial stability. However, with 60% and 55% of their respective debt being short-term, Vietnam and Indonesia are more vulnerable to market volatility and refinancing difficulties. Both Thailand and the Philippines have a healthy balance of short- and long-term debt, using both forms of funding to boost their industrial sectors and economic recovery.

Figure 3

Debt Composition in ASEAN Countries



2.0 PROBLEM STATEMENT

Debt finance has a significant impact on how effectively a company performs, especially in the dynamic and diversified ASEAN economies. It can be difficult for managers, investors, and policymakers to comprehend how various types of debt, both short- and long-term, affect important performance indicators, including asset efficiency, profitability, and equity returns. Although theoretical frameworks like the pecking order theory and trade-off theory offer broad guidelines, it is uncertain if these frameworks can be applied in the ASEAN context because of the region's wide differences in economic development, regulatory frameworks, and financial market maturity. The consequences of debt financing are frequently generalized in existing studies without distinguishing between the distinct effects of short-term and long-term debt. Although short-term debt provides flexibility and liquidity, excessive usage of it can increase financial risks and jeopardize business profitability and stock performance. On the other hand, long-term debt promotes stability and progress but can also result in increased financial expenses, especially in nations with inadequate financial markets or less access to reasonably priced credit.

For stakeholders, these understanding gaps pose serious difficulties. Underleveraging or overleveraging are examples of inefficient debt methods that businesses may use, which can lead to financial trouble, lost growth prospects, or decreased shareholder value. Furthermore, the need for region- specific insights into debt management techniques that complement the distinctive features of ASEAN economies has been further heightened by the economic shocks and elevated debt-to-GDP ratios that followed the COVID-19 pandemic. By empirically examining the different effects of short-term and long-term debt financing on firm performance across ASEAN countries, this study tackles these issues. The study intends to close a

significant gap in the literature by investigating the connections between different debts types and performance indicators like ROE and ROA. This research aims to evaluate the effect of long-term debt financing and investigate the impact of short-term debt financing on the performance of firms in ASEAN countries.

3.0 LITERATURE REVIEW

Debt financing refers to the method by which firms raise capital through borrowing, usually through bonds or loans, as opposed to equity financing, which entails selling the company's shares. Ilu et al. (2024) explore the relationship and influence mechanism between equity pledge behavior and the expense of debt financing in listed companies, utilizing data from 2015 to 2021. The study finds that the equity pledge practices of controlling shareholders significantly affect the debt financing cost of these companies, leading to higher financing burdens. Wasiuzzaman & Nurdin (2023) examine the link between debt levels and corporate outcomes over five years among listed firms in Bursa Malaysia, with a particular emphasis on the property sector. The research applies robust statistical tests, such as the Breusch-Pagan LM test and the Hausman test, to identify the most appropriate fixed-effect model for analyzing panel data of fifty Malaysian listed companies between 2015 and 2019. Hussain et al. (2022) highlight the connection between debt financing and firm performance in Pakistan's sugar sector. Panel regression analysis was applied to evaluate data from 27 sugar industry firms listed on the Pakistan Stock Market between 2010 and 2019. The use of panel data in the study enables the capture of both cross-sectional and time-series variations, which enhances the robustness of the analysis.

Egbunike and Oranefo (2022) examined the effect of debt financing on the valuation of quoted non-financial firms listed on the Nigerian Stock Exchange (NSE). Their analysis assessed the impact of short-term debt to equity, long-term debt to equity, and total debt to assets on Tobin's Q. To ensure reliability, the study employed panel regression techniques alongside the Arellano Bond Dynamic Panel-data Estimation Model. In a related study, Alwan et al. (2022) analyzed debt financing and investment decisions among commercial banks listed on the Iraqi Stock Exchange. Their research explored how different forms of bank debt financing influence investment choices, while also highlighting the role of other factors such as deposits financing, business expansion, and firm size.

Aslamiah et al. (2023) examine the relationship between financial distress and consumer goods companies listed on the Indonesia Stock Exchange between 2017 and 2021 using Return on Assets (ROA), Current Ratio (CR), and Debt to Assets Ratio (DAR). The study concludes that while CR has no discernible effect on financial distress, ROA and DAR have a positive and significant impact using secondary data from financial statements and logistic regression analysis. Shahani et al. (2023) investigate the effect of board characteristics on the choice of debt financing model among companies listed on the Tehran Stock Exchange. Using a sample of 146 companies over eight years (2011-2018), the study employs a descriptive exploratory design and field data collection method. The results reveal a significant relationship between board characteristics and debt financing decisions.

Soesetio et al. (2022) analyzed the link between financial distress and consumer goods firms listed on the Indonesia Stock Exchange from 2017 to 2021, focusing on Return on Assets (ROA), Current Ratio (CR), and Debt to Assets Ratio (DAR). Their findings revealed that CR has no significant impact on financial distress, whereas ROA and DAR show a strong and positive association. The study was based on secondary data from financial statements and employed logistic regression analysis. Similarly, Sadiq et al. (2023) investigated the relationship between debt, capital structure, and company performance in 56 Jordanian

firms listed on stock exchanges from 2012 to 2016. Their research explored the influence of theoretical perspectives, including stewardship theory, pecking order theory, and concentrated ownership theory, on firms' capital structure decisions and performance outcomes by applying both qualitative and quantitative approaches. The results suggested the existence of non-linear relationships between debt and firm value, moderated by macroeconomic factors such as GDP per capita and domestic credit provided by the financial sector.

4.0 FIRM PERFORMANCE

Detthanamong & Chansaman (2023) examine the link between corporate performance and trade credit. Although this relationship has not been fully explained, there is some empirical evidence suggesting that trade credit investment can affect firm performance, especially in agricultural firms. Their study applies a panel data approach using listed agricultural firms in Thailand from 2001 to 2020, covering 51 Thai-listed firms with 708 firm-year observations. Sorong & Kartadjumaen (2023) also investigated stock performance in the IDX construction sector from 2016 to 2021, identifying which companies performed best and worst. By analyzing key financial ratios such as book value, price-to-book ratio, debt-to-equity ratio, and return on equity, their study provides insight into the determinants of stock performance in the construction sector. The findings help investors make better decisions by offering useful information about Indonesian construction firms listed on the stock exchange.

Rasyidi & Zakaria (2023) evaluate the financial performance of PT Wijaya Karya Beton Tbk from 2019 to 2022, focusing on liquidity, profitability, and solvency ratios. Using a case study approach and descriptive analysis, they provide systematic and accurate information about the company's financial condition. Juliani et al. (2023) extend this by analyzing the impact of financial ratios on the performance of manufacturing firms listed on the Indonesia Stock Exchange, with variables such as the Current Ratio, Debt-to-Equity Ratio, and Total Asset Turnover. Using panel regression and hypothesis testing with secondary data from 2016–2020, their results indicate that Total Asset Turnover negatively affects financial performance, while the Current Ratio and Debt-to-Equity Ratio have a positive and significant effect.

Dasilas, A. (2024) offers a perspective on how employee stock ownership plans (ESOPs) affect business performance. Although ESOPs can enhance productivity, attract top personnel, and align business and employee interests, excessive ownership levels can also result in inefficiencies and disputes. The institutional setting and the regulatory environment have a big impact on how ESOP implementation turns out. These dynamics should be further investigated in future studies, especially in developing nations like China, where state ownership and legal systems have a big impact on business performance and governance. Additionally, Heo (2024) adds to this by presenting empirical data from Korean businesses during the Great Financial Crisis that demonstrates how trade credit might lessen the detrimental effects of financial crises on business performance. Nevertheless, not every company can reap the advantages of trade credit, which emphasizes the necessity for a comprehensive understanding of its function in corporate finance.

Alhady (2023) examines Indonesian healthcare organizations and demonstrates how independent board governance and voluntary disclosure greatly lower debt costs, improving financial stability. Meanwhile, Nguyen (2022) underscores the significance of tangible assets in obtaining long-term loans, which are essential for capital-intensive sectors like real estate and manufacturing. Together, these findings show that excessive debt frequently leads to financial hardship, but moderate debt levels might promote growth and operational efficiency in developed ASEAN economies. The necessity for customized methods for debt

financing and performance optimization that take governance, liquidity, and capital requirements into account is highlighted by the sectoral variances.

5.0 RESEARCH METHODOLOGY

The publicly traded financial companies in banking, investment services, and investment holding companies in ASEAN are analyzed in this study. These businesses' profitability and financial health are greatly impacted by the variety of financial activities they engage in. The literature review and the study's goals served as the foundation for the research design. Finding and analyzing the link between the independent variables (short-term and long-term debt) and the dependent variables (return on equity and return on assets) while accounting for firm-specific variables like size and profitability is the primary goal of the study. The emphasis on financial organizations acknowledges that their distinct regulatory frameworks and debt arrangements significantly influence how well they perform. As a result, this study's research design is quantitative and makes use of secondary data gathered from databases and financial reports for the years 2015–2023.

Population and Sampling

In this study, 304 publicly traded financial companies from six ASEAN nations, Malaysia, Indonesia, Thailand, Singapore, the Philippines, and Vietnam that are involved in banking, investment services, and investment holdings represent the research population. These companies are listed on the primary stock exchanges in each of these countries as of 2023. The sample panel data used in this study covers the years 2015–2023. The time frame is chosen to examine the connection between business performance during a recent and extensive economic period and short-term and long-term debt financing.

Excluded Criteria for Companies

i. Companies with incomplete or missing data for the chosen variables during the study period were excluded.
ii. Companies whose 2015–2023 annual reports are not readily available were excluded.

Data Collection Method

The study's secondary sources of data include financial databases and the annual reports of publicly traded companies. Financial firms in the banking, investment services, and investment holding companies from six ASEAN countries constitute the dataset. The data, which covers the years 2015–2023, contains financial statement variables that are essential for examining how debt financing affects firm performance. In this research, non-probability sampling is used. From 2015 to 2023, convenience sampling was used to choose companies based on the accessibility and availability of data from financial databases and annual reports.

6.0 MEASUREMENT OF CONSTRUCT

Debt Financing

Short-term and long-term debt financing are the two components used in this study to measure debt financing, and they are taken straight from the dataset. The percentages of total assets financed by short-term and long-term debt are represented by these variables, respectively. This differentiation enables a thorough analysis of the ways in which various debt financing strategies affect firm performance. The use of borrowed money to finance a company's operations and investments is known as debt financing. Although short-term debt financing frequently offers flexibility in handling daily operations, it can also raise liquidity risks when cash flow is volatile. On the other hand, long-term debt financing encourages long-term, strategic expenditures but, over time, may result in substantial financial commitments. The structure of debt financing is crucial for financial organizations, including those in banking, investment services, and investment holding companies, since it has a direct impact on sustainability, risk management, and profitability.

Firm Performance

Three main indicators, return on equity (ROE), return on assets (ROA), and equity ratio (REQ) will be utilized to measure company performance as the dependent variable. These indicators offer a perspective on the performance of the company:

- ROE shows how effectively a company makes money for its owners.
- ROA analyzes how well a company makes use of its resources to produce profits.
- REQ provides information on the firm’s capital structure and leverage by reflecting the percentage of assets financed by equity.

Control Variables in Debt Financing

To take into consideration its impact on the relationship between debt financing and company performance, total assets are included as a control variable in this analysis. A company’s size is indicated by its total assets, which have a big influence on its operational effectiveness and financial structure. Total assets are expressed in their natural logarithmic form to reduce uncertainty and guarantee comparability between businesses. A company’s size has a significant impact on its financial performance; larger companies are typically more stable, have easier access to capital, and are better able to manage debt. To ensure solid and accurate results, the impacts of both short-term and long-term debt financing on business performance are separated by using total assets as a control variable. Table 1 shows the summary of the variables used in this research.

Table 1

Variables Summary

Variable	Abbreviation	Description
Dependent variables		
Return on equity	ROE	Net income/Shareholders' equity
Return on assets	ROA	Earnings before taxes (EBT)/ Total assets
Equity ratio	REQ	Shareholders' equity /Total assets
Independent variables		
Short-term debt	STD	Long-term debt / Total assets
Long-term debt	LTD	Long-term debt / Total assets
Control variable		
Firm size	SIZE	Log of total assets

Panel Data Regression

Panel data analysis approaches will be employed because our sample comprises observations of publicly listed financial enterprises over nine years (2015–2023) in six ASEAN nations. Panel regression techniques have the benefit of allowing for the control of time effects and unobservable firm-specific factors that could affect business performance.

The models are set up as below:

1) ROE i,t = β0 + β1 * Short Term Debt_{i,t-1} + β2 * Long Term Debt_{i,t-1} + β3 * SIZE_{i,t-1} + εi,t
2) ROAi,t = β0 + β1 * Short Term Debt_{i,t-1} + β2 * Long Term Debt_{i,t-1} + β3 * SIZE_{i,t-1} + εi,t
3) REQi,t = β0 + β1 * Short Term Debt_{i,t-1} + β2 * Long Term Debt_{i,t-1} + β3 * SIZE_{i,t-1} + εi,t

7.0 RESULTS AND ANALYSIS

Descriptive Analysis

The chosen firms' mean, lowest, maximum, and standard deviation values are displayed in Table 2. The analysis employed six variables, which are divided into three groups: one control variable, two independent variables, and three dependent variables. The three dependent variables that serve as stand-ins for firm performance are ROE, ROA, and the equity ratio. Short- and long-term debt are the two independent variables, and firm size, as indicated by total assets, serves as the control variable. Long-term debt has a mean of 12.87 percent, a minimum of 0.00 percent, a maximum of 69.12 percent, and a standard deviation of 15.96 percent. Comparably, the average amount of short-term debt is 7.77 percent, with a standard deviation of 12.14 percent and a range of 0.00 percent to 70.98 percent. ROE for the dependent variables has a mean of 9.47 percent, a minimum of -2102.57 percent, a maximum of 63.48 percent, and a standard deviation of 81.19 percent. The ROA has a mean of 2.70 percent, a standard deviation of 3.55 percent, and a range of -16.90 percent to 30.84 percent. The equity ratio includes a standard deviation of 116.07 percent, a mean of 111.46 percent, and a minimum and maximum of 0.00 percent and 668.81 percent, respectively. There is significant diversity in firm sizes within the sample, as evidenced by the control variable, firm size as assessed by total assets, which has a mean of 29.4 billion.

Table 2

Descriptive Statistics of Variables

Variable	Observations	Mean	Standard Deviation	Minimum	Maximum
Long-term Debt	829	12.86997	15.96383	0	69.12086
Short-term Debt	677	7.76814	12.13789	0	70.98264
Total assets	867	2.94e+10	5.77e+10	4096514	4.41e+11
Return on Equity	690	9.465348	81.18835	-2102.566	63.477
Return on Assets	675	2.704504	3.54552	-16.9	30.84
Equity Ratio	861	111.455	116.0747	0	668.811

Correlation Analysis

The observed variables' Pearson correlations are displayed in Table 3. To investigate the connections between debt financing, business size, and firm performance indicators, including ROE, ROA, and equity ratio correlation analysis has been conducted. Long-term debt has a positive association with both ROE (0.2698) and ROA (0.4258), according to the results of the Pearson correlation study. This suggests that higher levels of long-term debt might be linked to better profitability indicators. Likewise, there is a

positive correlation between short-term debt and both ROE (0.0745) and ROA (0.1918), though this relationship is weaker than with long-term debt. Companies with greater equity ratios are more likely to employ both types of debt, which indicates that the equity ratio has strong positive correlations with both short-term debt (0.5885) and long-term debt (0.6790). Additionally, there is a negative association between long-term debt (-0.2984) and short-term debt (-0.2351) and business size (total assets), indicating that larger enterprises tend to be less dependent on debt funding.

Table 3

Correlation for Sample Data

	Long-term Debt	Short-term Debt	Total Assets	Return on Equity	Return on Assets	Equity Ratio
Long-term Debt	1.0000					
Short-term Debt	0.1657	1.0000				
Total Assets	-0.2984	-0.2351	1.0000			
Return on Equity	0.2698	0.0745	-0.0773	1.0000		
Return on Assets	0.4258	0.1918	-0.2633	0.5022	1.0000	
Equity Ratio	0.6790	0.5885	-0.2236	0.2804	0.1301	1.0000

Regression Analysis for Debt Financing

The regression analysis's findings regarding the influence of particular variables on long-term debt financing are shown in Table 4. The study looks at how long-term debt and firm-specific factors, including total assets, ROE, ROA, and equity ratio, relate to each other. A strong positive correlation is suggested by the findings, which show that the lagged value of long-term debt (L1.lagged) has a positive and significant coefficient of 0.5292 with a p-value of 0.000. This suggests that there is a significant relationship between increased long-term debt in the present period and an increase in long-term debt in the prior period.

The relationship between long-term debt and firm size (total assets) is negative and significant, with a p-value of 0.003 and a coefficient of -1.01e-11. This implies that larger businesses are less dependent on long-term debt, most likely as a result of having more internal funding resources. Long-term debt is also significantly negatively impacted by ROE, with a p-value of 0.025 and a coefficient of -0.0100. This suggests that businesses with higher ROEs tend to rely less on long-term debt. On the other hand, there appears to be no significant relationship between ROA and long-term debt, as evidenced by the statistically insignificant negative coefficient of -0.0611 (p-value = 0.618). Finally, a positive and significant coefficient of 0.0301 (p-value = 0.000) for the equity ratio suggests that companies with greater equity ratios are more likely to expand their long-term debt financing.

Table 4

Regression Results for Long-Term Debt Financing

Long-term Debt	Coefficient	Standard Error	Z (z-Statistic)	P>z (p-Value)	[95% Confidence	Interval]
Long-term Debt						
L1. Lagged	.5292193	.0626051	8.45	0.000	.4065156	.651923
Total Assets	-1.01e-11	3.43e-12	-2.96	0.003	-1.69e-11	-3.41e-12
Return on Equity	-.0100449	.0044919	-2.24	0.025	-.0188489	-.001241
Return on Assets	-.0611252	.1225173	-0.50	0.618	-.3012548	.1790043
Equity Ratio	.0301361	.0048878	6.17	0.000	.0205561	.039716

Regression Analysis for Short-Term Debt

The regression results for the factors influencing short-term loan financing are shown in Table 5. Key firm-specific indicators, such as total assets, ROE, ROA, and equity ratio, are examined in relation to short-term debt. According to the findings, the lagged value of short-term debt (L1.short-term debt) has a highly significant and positive coefficient of 0.5916 (p-value = 0.000). This demonstrates the persistence of short-term debt financing over time by showing that it is significantly impacted by the debt structure in the prior period. The relationship between short-term debt and firm size (total assets) is positive but statistically insignificant, with a coefficient of 1.18e-11 (p-value = 0.247). The implication is that short-term debt is not significantly impacted by firm size. Short-term debt is significantly and adversely affected by ROE, as indicated by a coefficient of -0.0547 (p-value = 0.000). This suggests that stronger businesses typically depend less on funding from short-term debt. However, with a coefficient of 0.2335 (p-value = 0.081), ROA and short-term debt have a positive but marginally significant link. Although the results are inconclusive, this implies that increased asset efficiency might be a contributing factor to the usage of short-term debt. Finally, the strong and highly significant coefficient of 0.0520 (p-value = 0.000) for the equity ratio suggests that companies with greater equity ratios are more likely to rely more heavily on short-term debt financing.

Table 5

Regression Results for Short-Term Debt Financing

Short-term Debt	Coefficient	Standard Error	Z (z-Statistic)	P>z (p-Value)	[95% Confidence	Interval]
Short-term Debt						
L1. Lagged	.591598	.0194054	30.49	0.000	.5535642	.6296318
Total Assets	1.18e-11	1.02e-11	1.16	0.247	-8.16e-12	3.17e-11
Return on Equity	-.0546754	.0155154	-3.52	0.000	-.085085	-.0242659
Return on Assets	.2334965	.1338833	1.74	0.081	-.0289099	.4959029
Equity Ratio	.0519969	.0098427	5.28	0.000	.0327055	.0712882

8.0 CONCLUSION

The study examined how debt financing affected the performance of businesses in ASEAN nations, paying particular attention to equity ratios, ROE, and ROA. The results of the study showed that, in terms of ROE, Malaysian companies performed the best on average (9.47%), followed by Singaporean companies (8.15%) and Indonesian companies (7.8%). With 60% of debt being long-term, Malaysia's balanced use of long-term debt and equity financing demonstrates that strong capital structure strategies are responsible for this performance. As a measure of company profitability, ROE varied from -2102.57% to 63.48%, with a mean of 9.47%, according to the study. Significant variety is shown here, representing both the sample's high and low performers. With the highest value at 30.84% and the lowest at -16.90%, the ROA also averaged 2.70%. The aforementioned statistics indicate that whereas certain businesses made effective use of their resources, others encountered considerable difficulties in producing profits. In terms of the debt financing structure, the results show that short-term debt represented a high of 70.98% of total assets, with an average of 7.77%.

Conversely, long-term debt made up a maximum of 69.12% of total assets and an average of 12.87%. These findings demonstrate how ASEAN businesses, especially those in Singapore and Malaysia, depend on long-term debt to fund significant expenditures, but businesses in Indonesia and Vietnam depend more on short-term debt to meet their operational requirements. The average equity ratio, which shows the percentage of assets financed by shareholders' equity, was 111.46%. This shows that, although there were regional variances, ASEAN companies generally kept a strong equity foundation. With an equity ratio of 55%, Malaysian companies were the most dependent on outside finance, whereas Indonesian companies took a more cautious stance, with a lower equity ratio of 45%. The results also showed that short-term debt accounted for a sizable share of the average 58% of total assets financed by debt in ASEAN companies. This demonstrates how highly leveraged the region's businesses are financially and emphasizes how crucial effective debt management is to long-term success and financial stability.

The outcomes of this study offer important new information about how debt financing and business performance relate to one another in ASEAN nations. This study demonstrates that long-term debt can be strategically used to enhance business performance, especially when it comes to funding significant investments and promoting long-term growth. In countries like Malaysia and Singapore, where long-term debt makes up a sizable portion of businesses' capital structures, the positive correlation found between long-term debt and performance indicators like ROA and ROE emphasizes its function as an efficient instrument for attaining financial stability and growth. On the other hand, the study shows that short-term debt is linked to higher financial risks and lower profitability, even while it provides liquidity and operational flexibility. This is particularly true in countries like Vietnam and Indonesia, where businesses that rely significantly on short-term debt encounter difficulties, including increased refinancing fees and restricted access to steady capital. Additionally, the analysis of firm-specific factors like size and equity ratios highlights how crucial they are in assessing the effects of debt financing. Due to economies of scale and improved access to credit markets, larger companies with stronger equity bases showed higher levels of financial stability and profitability. In conclusion, this study finds that although debt financing is an essential instrument for sustainability and growth, its efficacy is dependent on the prudent handling of both short-term and long-term debt.

9.0 ACKNOWLEDGMENT

This research did not receive any external funding. The authors gratefully acknowledge Universiti Putra Malaysia for providing the facilities and support that made the completion of this study possible. The authors also confirm that the research was carried out without any personal gain, commercial or financial conflicts, and declare that there are no competing interests with any funders or organizations.

10.0 REFERENCES

Alhady, M. A. (2023, June). Effect of good corporate governance, company size, and voluntary disclosure on cost of debt in healthcare companies listed on the Indonesia Stock Exchange (Period 2017–2021). *IOP Conference Series: Earth and Environmental Science, 1188*(1), 012030.

Ali, A., & Shaik, A. R. (2022). Effect of debt financing on firm performance: A study on energy sector of Saudi Arabia. *International Journal of Energy Economics and Policy, 12*(6), 10–15.

Alwan, H. A. A. A., & Radi, H. H. K. (2022). Debt financing and its impact on investment decisions: An applied study in a sample of commercial banks listed in the Iraqi Stock Exchange. *World Economics and Finance Bulletin, 6*, 51–60.

Aslamiah, S., Karyatun, S., & Digdowiseiso, K. (2023). The influence of return on assets, current ratio and debt to asset ratio on financial distress in consumption goods industry sector companies listed on the Indonesia Stock Exchange in 2017–2021. *Jurnal Syntax Admiration, 4*(4), 583–596.

Dasilas, A. (2024). The nonlinear relationship between employee stock ownership plans and firm performance: Evidence from China. *Journal of Business Research, 173*, 114470.

Detthamrong, U., & Chansanam, W. (2023). Do the trade credit influence firm performance in agro-industry? Evidence from Thailand. *Heliyon, 9*(3), e13509.

Egbunike, C., & Oranefo, P. C. (2022). Debt financing and firm valuation of quoted non-financial firms in Nigeria Stock Exchange. [Unpublished manuscript].

Heo, Y. J. (2024). The effect of trade credit on firm performance: Evidence from Korean firms during the Global Financial Crisis. *Journal of International Money and Finance, 140*, 102987.

Hu, J., Zhong, L., & Qiao, J. (2024). Equity pledge and debt financing of listed companies. *Finance Research Letters, 59*.

Hussain, R. T., Durrani, K., & Asif, M. (2022). Impact of debt financing on operating, financial and stock market performance: Does economic cycle empirically matter. *International Journal of Business and Management Sciences, 3*(4), 65–77.

Juliani, D. I., Karyatun, S., & Digdowiseiso, K. (2023). The effect of current ratio, total asset turnover and debt to equity ratio on the financial performance of manufacturing companies listed on the Indonesia Stock Exchange for the 2016–2020 period. *Jurnal Syntax Admiration, 4*(4), 630–643.

Malik, N., & Kashiramka, S. (2024). Impact of ESG disclosure on firm performance and cost of debt: Empirical evidence from India. *Journal of Cleaner Production, 448*, 141582.

Nguyen, T. N. (2022). Factors influencing debt maturity structure of real estate companies listed on the Ho Chi Minh Stock Exchange. *The Journal of Asian Finance, Economics and Business, 9*(5), 355–363.

Rasyid, A., & Zakaria, Z. (2023). The effect of financial performance on the stock price of service companies listed on the Indonesia Stock Exchange (IDX). *Golden Ratio of Finance Management, 3*(1), 22–34.

Sadiq, M., Yousaf, S. U., Anser, M. K., Sriyanto, S., Zaman, K., Van Tu, D., & Anis, S. N. M. (2023). The role of debt financing in the relationship between capital structure, firm's value, and macroeconomic factors: To throw caution to the wind. *The Quarterly Review of Economics and Finance, 87*, 212–223.

Shahani, A. A., & Ahmadi, H. (2023). Investigating the effect of the characteristics of the board in choosing debt financing mode of the company: Evidence from Tehran Stock Exchange. *International Journal of Nonlinear Analysis and Applications, 14*(1), 1999–2005.

Soesetio, Y., Adiningsih, G. S., & Rudiningtyas, D. A. (2022). The impact of corporate governance implementation and debt financing on manufacturer's firm performance: Evidence from emerging country. *Adpebi International Journal of Multidisciplinary Sciences, 1*(1), 126–136.

Sorreng, Y. P. D., & Kartadjumena, E. (2023). Company performance and stock returns in Indonesia construction companies. *Jurnal Ekonomi, 12*(2), 717–723.

Wang, Y., & Gu, H. (2024). Impacts of trust on the cost of debt financing: The perspectives of in-group trust and out-group trust. *Finance Research Letters, 105151*.

Wasiuzzaman, S., & Nurdin, N. (2023). Debt financing decisions of SMEs in emerging markets: Empirical evidence from Malaysia. *International Journal of Bank Marketing, 37*(1), 258–277.

Ye, Z., Shahab, Y., Riaz, Y., & Ntim, C. G. (2023). Strategic deviation and the cost of debt financing. *Economic Modelling, 125*, 106371.