

Profitability Drivers in Malaysian Timber Trading Firms: The Role of Leverage and Liquidity

Norzanalina Saadun¹, Adrian Tang Hoaw Shiang², Zaiton Samdin², Tee Wan Ping¹

¹Faculty of Forestry and Environment, Universiti Putra Malaysia, 43400 UPM Serdang, Selangor, Malaysia, ²Institute of Tropical Forestry and Forest Products, Universiti Putra Malaysia, 43400 UPM Serdang, Selangor, Malaysia
Corresponding Author Email: norzanalina@upm.edu.my

To Link this Article: <http://dx.doi.org/10.6007/IJARAFMS/v14-i3/22604> DOI:10.6007/IJARAFMS/v14-i3/22604

Published Online: 06 September 2024

Abstract

Understanding the connection between leverage and liquidity on profitability is crucial for businesses to optimize financial strategies, manage risks, and enhance performance. While this relationship has been widely studied across different firms, industries and regions, there is limited research on Malaysian wood-based industries. This study aims to fill this gap by investigating how leverage and liquidity impact the profitability of timber trading firms in Malaysia. The study analyzed data from ten timber trading firms listed in Bursa Malaysia, using financial statements from 2013 to 2022. The results of the regression analysis revealed that both leverage (measured by the debt-to-equity ratio, DER) and liquidity (measured by the current ratio, CR) have a significant relationship with profitability (measured by return-on-assets, ROA). However, liquidity (CR) alone does not significantly affect profitability, while leverage (DER) significantly impacts profitability. These findings suggest that financial managers of timber trading firms can improve their operational funding and achieve higher profitability and efficiency by adopting a lower DER. This study emphasizes the importance of managing financial indicators to enhance a firm's performance in the wood-based industry.

Keyword: Financial Management, Liquidity, Leverage, Profitability, Wood-Based Industry.

Introduction

In Malaysia, timber trading firms are pivotal in procuring, processing, and distributing timber products, acting as a crucial bridge between timber producers and consumers. This sector is vital for domestic use and export, significantly contributing to the national economy. According to the Ministry of Plantation and Commodities (MIPC) (MPIC, 2023), the wood-based industry achieved an export revenue of approximately RM25.21 billion in 2022, up from RM22.7 billion in 2021, marking an increase of about 11.06%. Additionally, the industry employed around 190,000 workers in 2022. Given its substantial economic impact, timber

trading firms must operate efficiently to support ongoing development and growth within the sector.

Financial management is a significant factor in a firm's success and survival, impacting the business's effectiveness and efficiency. Assessing financial performance involves evaluating a company's financial health and operational efficiency using various financial indicators and techniques. There are myriad ways for a firm to evaluate its financial performance, with financial ratio indicators as the most common, which can be categorized into several indicators: profitability, liquidity, leverage (debt), and efficiency (Brigham & Ehrhardt, 2021). Financial ratios provide a structured way to evaluate various aspects of a company's operations and financial status, offering insights beyond raw financial statements and essential tools for multiple stakeholders, including investors, creditors, financial analysts, regulatory authorities, and business managers (Damodaran, 2018).

A firm's profitability performance is paramount for business owners and financial administrators. Profitability helps determine a firm's capacity for managing expenses and generating profits relative to these expenses. It also indicates a firm's ability to maximize its wealth or value (Modigliani & Miller, 1963). Various indicators can be used to measure an organization's profitability, such as return on equity (ROE), return on assets (ROA), net profit (NP), return on capital employed (ROCE), and earnings before interest and tax (EBIT) (Brigham & Ehrhardt, 2021).

Financial profitability indicators are closely related to other financial indicators, creating a comprehensive picture of a company's financial health. Understanding these relationships can provide deeper insights into how different aspects of financial performance interconnect and help stakeholders make informed decisions about managing and improving a company's financial health (Altman, 1968; Khan & Khokhar, 2015). Numerous previous studies have examined the relationship between financial indicators, with liquidity and leverage being crucial factors (Bintara, 2020). Businesses can develop strategies that enhance profitability while maintaining financial stability by analyzing leverage and liquidity.

Research on the relationship between leverage, liquidity, and profitability has produced conflicting results. These variations often arise due to differences in research methodologies, industry contexts, and economic conditions. Bintara (2020), found a negative relationship between leverage (measured by DER) and profitability (measured by ROA) and no significant relationship between liquidity (measured by CR) and profitability in 13 Indonesian companies involved in property, real estate, and building construction. Yulianita and Isywardhana (2019) also found a negative relationship between leverage and profitability in 29 Indonesian manufacturing companies. However, Wijaya and Isnani (2019), found a negative relationship between leverage and profitability but a positive relationship between liquidity and profitability in 7 Indonesian pharmaceutical companies. Similarly, Ramlan (2020), observed a positive relationship between liquidity and profitability and a negative relationship between leverage and profitability in 21 Malaysian IT, manufacturing, and construction firms.

While previous studies offer valuable insights, the specific context of Malaysian timber trading remains underexplored. This gap presents an opportunity to analyze how leverage and

liquidity impact the profitability of timber trading firms in Malaysia. The wood-based industry often requires significant investments in infrastructure, equipment, and raw materials, which can affect leverage due to high capital needs and potential returns on investment. Furthermore, challenges such as labor shortages and raw material scarcity (Ratnasingam et al., 2020) can impact operational efficiency and profitability. Additionally, the sector is highly susceptible to changes in environmental regulations and sustainability requirements (Saadun et al., 2019; Saadun et al., 2021; Subramaniam et al., 2023), significantly influencing financial stability and profitability.

Therefore, this study aims to determine the relationship between financial leverage and liquidity with the profitability performance of Malaysian timber trading firms. Comprehending these relationships within the context of the wood-based industry enables better financial planning, risk management, and strategic decision-making tailored to the industry's specific challenges and opportunities. This understanding is crucial for policy development to ensure the sector's continued growth and economic contribution.

Literature Review

Overview of Malaysian Wood-based Industry

The wood industry in Malaysia is distinguished by its broad range of activities, including logging, sawmilling, wood processing, and manufacturing. This sector is vital in supporting various industries, such as construction, furniture-making, and specialized areas like flooring and cabinetry. As a fundamental component of the Malaysian economy, the wood-based sector significantly contributes to export earnings and job creation. It serves as a sustainable source of timber that not only generates substantial revenue but also supports numerous companies, thereby bolstering global economic prospects. Jemali et al (2020), highlight the industry's impact, noting its contribution of billions of dollars in income, the creation of numerous jobs, and the enhancement of Malaysia's export earnings.

In 2022, wood and wood-based products substantially impacted Malaysia's export revenue, reaching RM25.21 billion (MPIC, 2023). The export data for that year revealed that wooden furniture had the highest export value at RM11,144.69 million, followed by plywood at RM3,320.25 million, sawn timber at RM2,663.97 million, builders, joinery and carpentry at RM 1,380.62 million, veneer RM928.99 million, and mouldings at RM107.05 million. The primary export markets included the United States, Japan, China, the European Union (EU), Singapore, and Australia.

Trade-off Theory

The Trade-off Theory in corporate finance is a fundamental concept that explains how firms balance the costs and benefits of debt and equity financing to determine their optimal capital structure. This theory suggests that there is a trade-off between the tax advantages of debt and the costs associated with financial distress, bankruptcy, and agency issues. Firms aim to find the optimal level of debt that maximizes their value while minimizing costs. From its foundational principles laid by Modigliani and Miller (1958) to the formalization by Kraus and Litzenberger (1973) and its integration with other theories and contemporary research, the theory has continued to be influential.

The Trade-off Theory provides a valuable framework for understanding the complex relationship between leverage, liquidity, and firm profitability. The Trade-off Theory suggests that there is an optimal capital structure where the marginal benefit of the tax shield from additional debt equals the marginal cost of financial distress and other debt-related expenses. At this point, a firm's value is maximized (Modigliani & Miller, 1963). Determining this optimal mix of debt and equity involves careful consideration of the firm's specific circumstances, including its industry, market conditions, and risk profile.

Liquidity is essential in the Trade-off Theory as it influences a firm's ability to manage debt and maintain operational stability. High liquidity ensures that a firm can meet its short-term obligations and invest in profitable projects without resorting to external financing. This can enhance profitability by avoiding the costs associated with issuing debt or equity. Conversely, low liquidity can increase the reliance on external financing, raising the risk of financial distress and related costs.

Financial Leverage, Liquidity, and Profitability Performance

The profitability performance of a firm is influenced by multiple factors, with financial leverage and liquidity being two significant ones (Zulkipli et al., 2019). Understanding how these elements interact, and influence profitability is essential for effective financial management.

Financial leverage, an enduring topic of interest among financial analysts and academics, is vital in financial structure decisions (Banafa et al., 2015). It is an external source of funds, allowing firms to acquire additional assets and finance projects without using excessive equity. Properly managed financial leverage can either enhance a firm's profitability or negatively impact it if borrowed funds are mismanaged (Hongli et al., 2019). According to Bonin and Schaffer (1995), using debt can benefit firms due to the tax deductibility of interest payments, which can positively impact performance. However, the failure to repay borrowed funds can lead to bankruptcy (Hasan et al., 2014). Businesses typically utilize debt ratio, DER, and times interest earned to make more informed management decisions regarding debt management.

Liquidity represents a business's ability to quickly convert assets into cash without significant depreciation (Sartono, 2010). It reflects how well an organization maintains adequate current assets and liabilities to ensure a consistent cash flow for short-term and long-term obligations. Businesses use liquidity ratios like the current, quick, cash, and defensive interval ratios to manage their short-term obligations effectively (Robinson et al., 2015). These ratios significantly impact a firm's financial performance.

Hypothesis Development

Prior studies have examined the relationship between leverage and liquidity on the firm's profitability with various findings. Findings from past studies are diverse and sometimes conflicting results regarding the relationships between leverage, liquidity, and a firm's profitability.

Prior studies have explored the relationship between liquidity and profitability. Several studies have found a positive relationship between financial liquidity and firm profitability. Efficient liquidity management ensures that a firm can meet its short-term obligations, avoiding financial distress and enabling smooth operations. For instance, Lartey et al (2013), found that there is a positive relationship between liquidity (CR and quick ratio) and profitability (ROA and ROE) in Ghanaian banks. Similarly, Alshatti (2015), discovered a positive correlation between liquidity management and profitability in Jordanian banks. The study highlighted that banks with efficient liquidity management (measured using current, quick, and cash ratios) had higher ROA and ROE.

On the other hand, some studies have identified a negative relationship between financial liquidity and profitability, particularly when firms hold excessive liquidity. Gill, Biger, and Mathur (2010), found that efficient working capital management, indicated by optimal net working capital (NWC), CR, quick ratio, and shorter cash conversion cycle (CCC), is generally positively related to higher profitability metrics such as ROA and ROE. In their study, Vural, Sökmen, and Çetenak (2012) also found that maintaining high levels of liquidity can hurt profitability. Excessive cash reserves may indicate that the firm is not investing its resources in profitable ventures, leading to lower overall returns.

Therefore, the first hypothesis between financial liquidity and firm profitability for this study can be written as follows:

H₁: Financial liquidity has a significant relationship with firm profitability

Several studies have also explored the relationship between firm leverage and profitability with varying results. Some studies have identified a positive relationship, indicating that higher leverage can lead to increased profitability. For example, Fama and French (2002) explore how leverage affects profitability and provide evidence on the trade-off theory. The findings suggest that firms with higher leverage may have characteristics associated with profitability, especially when considering the trade-off theory's predictions. Specifically, the trade-off theory posits that firms balance the tax benefits of debt with the costs of financial distress, which can imply a positive relationship between leverage and profitability under certain conditions. Similarly, Putranto (2019), indicates a positive relationship between leverage and profitability in Indonesia's food and beverage sector, suggesting that higher leverage can be associated with higher profitability in this industry context.

While some studies have found a positive relationship between firm leverage and profitability, others have identified a negative relationship. Raza (2013), studied the impact of financial leverage on the performance of 482 non-financial industries listed on the Karachi Stock Exchange (KSE) from 2004 to 2009. The study concluded that the textile industry's leverage ratios have a negative impact on its profitability due to high levels of debt. Additionally, Wijaya and Isnani (2019) found that the DER partially negatively affected the ROA. Furthermore, Bintara (2020), discovered a significant negative relationship between leverage (DER) and profitability (ROA).

Thus, the second hypothesis between financial liquidity and firm profitability can be written as follows:

H₂: Financial leverage has a significant relationship with firm profitability

Conceptual Framework

Figure 1 illustrates the study's conceptual framework, a crucial element that guides the design and analysis of our research. In this framework, profitability is the dependent variable, and firm leverage and liquidity are the independent variables. The debt-to-assets ratio measures leverage, while the CR is a proxy for liquidity. The ROA is the key indicator for the profitability-dependent variable. The variables align with the measures employed by Wijaya & Isnani (2019), which determine the impact of debt and liquidity on pharmaceutical companies' performance in Indonesia. Wijaya and Isnani (2019) found that one of the variables, leverage (DER), has a significant negative impact on pharmaceutical firm profitability (ROA). Wijaya and Isnani (2019) also found that CR positively influences ROA.

The profitability indicators used in this study are comparable to those used in Bintara's (2020) study. Bintara has used ROA as the profitability indicator when determining the effect of leverage (DER) and liquidity (CR) on profitability. Bintara (2020), found a significant negative relationship between leverage and profitability, while liquidity has no significant relationship with profitability. These findings, along with those of Mohammed et al (2020), and Zaitoun and Alqudah (2020), underscore the relevance and applicability of our research in the context of firm profitability and its determinants.

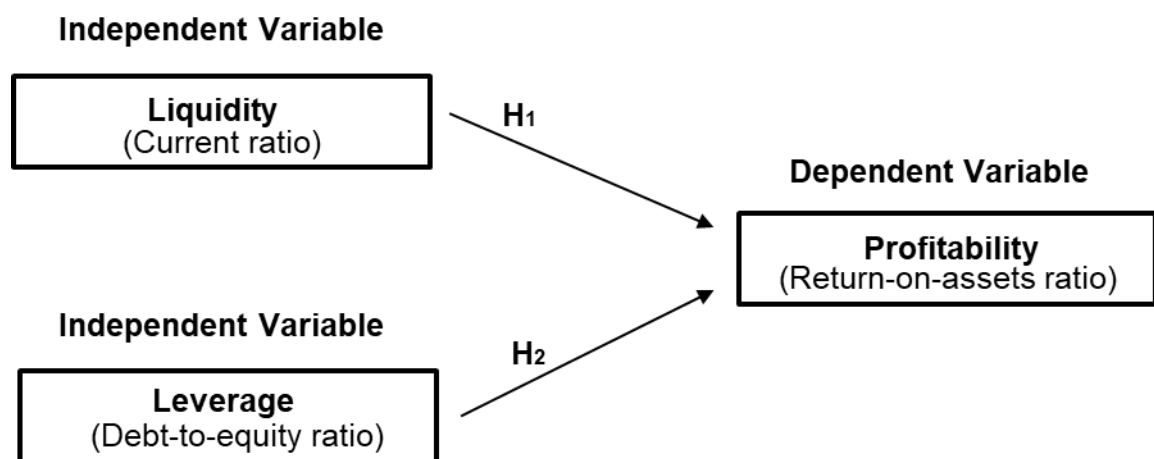


Figure 1: Conceptual framework

Methodology

Sample and Data Collection

The study is focused on the timber trading sector among the various industries in Bursa Malaysia. As of 2023, Bursa Malaysia has approximately 998 listed companies operating in different sectors. Among these, only ten firms were found to have equal to or more than 50% of their revenue from the timber trading business. The study collected financial data from the

annual reports of these ten identified timber trading firms, which were obtained from their websites. The compiled data includes total liabilities, total shareholder equity, current assets, current liabilities, earnings after tax, and total assets. The data was then organized and recorded in Microsoft Office Excel accordingly.

Data Analysis

Ratio Analysis

The study used the debt-to-equity ratio (DER) as a proxy for leverage, the current ratio (CR) for liquidity, and the return-on-assets ratio (ROA) for profitability. The measures of leverage (DER) was calculated using Equation 1.

$$\text{Debt to Equity ratio} = \frac{\text{Total Liabilities}}{\text{Total shareholder equity}} \quad \text{Equation 1}$$

Liquidity measures, specifically the CR, was determined using Equation 2.

$$\text{Current Ratio} = \frac{\text{Current Assets}}{\text{Current Liabilities}} \quad \text{Equation 2}$$

The profitability measurement, ROA, was determined using Equation 3.

$$\text{Return on Assets} = \frac{\text{Earning after Tax}}{\text{Total Assets}} \quad \text{Equation 3}$$

Descriptive Analysis

Descriptive statistics were generated from organized raw data. Descriptive statistics were used to describe the characteristics of the research variable to calculate the central tendency: mode, mean, and median. In addition, descriptive statistics such as standard deviation, variance, and range were utilized to measure dispersion. Minimum and maximum were additional descriptive statistics used to characterize the data.

Regression Analysis

A Multiple regression analysis using the enter method was used to determine which metric of the independent variable impacts profitability the most. The multiple linear regression to examine the relationship between liquidity (CR) and leverage (DER) with profitability (ROA) was expressed using Equation 4.

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \varepsilon \quad \text{Equation 4}$$

Where:

Y = Profitability (ROA)

α = constant Y if X = 0

β = parameters

X_1 = Liquidity (CR)

X_2 = Leverage (DER)

ε = level of error

A significance level of 0.05 was employed in this study. The simultaneous significance test (F statistic test), which aims to explain the influence of the independent variable on the dependent variable, is simultaneously tested to determine whether the given hypothesis is accepted or rejected. T-test was used to examine the effect of independent variables, partly DER and CR, on the dependent variable (ROA), respectively, where the decision of the hypothesis test was based on the result of the analysis.

Ordinary Least Squares (OLS) assumptions were used to examine the relationship between leverage and liquidity on profitability. In OLS regression, the estimated equation was determined by identifying the equation that minimizes the sum of the squared distances between the sample's data points and the values predicted by the equation (Farahani et al., 2010). All analyses were performed using IBM SPSS Statistics (Version 27).

Results and Discussion

Descriptive Statistics

Table 1 shows the descriptive statistics of dependent and independent variables from this study. The mean value of profitability measures (ROA) is 1.86%, and the mean values of CR and DER are 385.06% and 49.86%, respectively.

Table 1

Summary Statistics of the Variables

VARIABLE	N	Range	Minimum	Maximum	Mean	Std. Deviation
ROA	100	0.5762	-0.377	0.1992	0.01860807	0.0798408
CR	100	60.775	0.175	60.95	3.8505654	8.57155
DER	100	1.2739	0.0361	1.31	0.498557	0.320247
Valid N (listwise)	100					

OLS Assumption Assessment

A scatterplot of residual versus predicted values was used to test linearity. Figure 2 shows that the model is linearly related as the points were symmetrically distributed around the horizontal line.

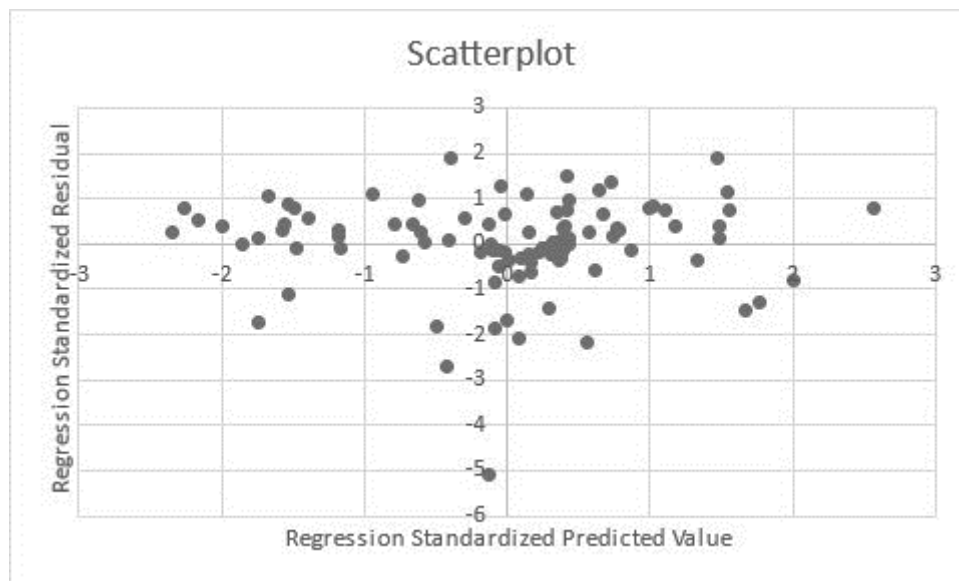


Figure 2: Scatterplot of Predicted Value versus Standardized Residual

The second assumption test was homoscedasticity. It can be observed that the distribution of predicted versus residual did not follow any pattern or form a cone shape. Based on the diagnostic test conducted, model 1 satisfied the OLS regression assumptions, which justifies the purpose of the prediction.

Then, a multicollinearity test between VIF value and tolerance was used to test whether multicollinearity existed between the variables. High multicollinearity ($VIF > 10$) increases the probability that a theoretically valid predictor will be omitted from the regression model as a non-significant variable (Neas & Martens, 1986). Table 2 shows the VIF value for CR and DER is 1.067. This concludes that there is no multicollinearity between the two independent variables.

Table 2

Result of Collinearity Test

Indicators of Independent Variable	Model	
	Tolerance	VIF
CR	0.937	1.067
DER	0.937	1.067

The final assumption tested was normality. A normal P-P plot and a histogram were used to assess the normality of the residuals for model 1. The results indicated a linear trend on the P-P plot (Figure 3), and the histogram (Figure 4) confirmed that the residuals were normally distributed.

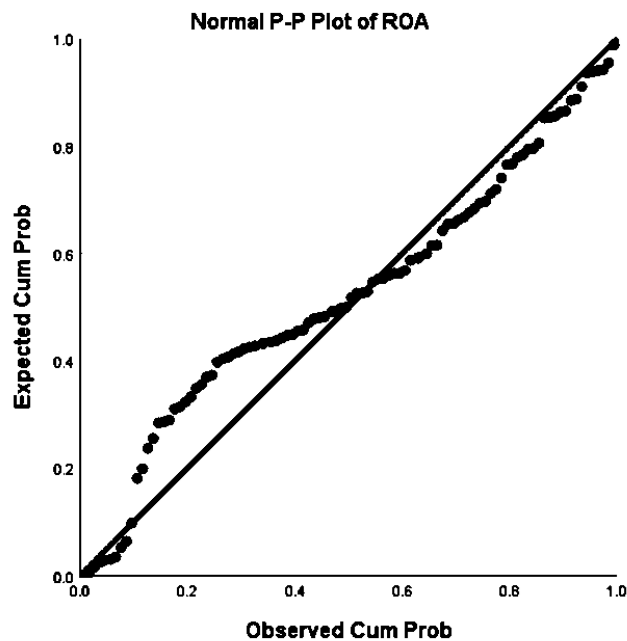


Figure 1: P-P Plot of Model

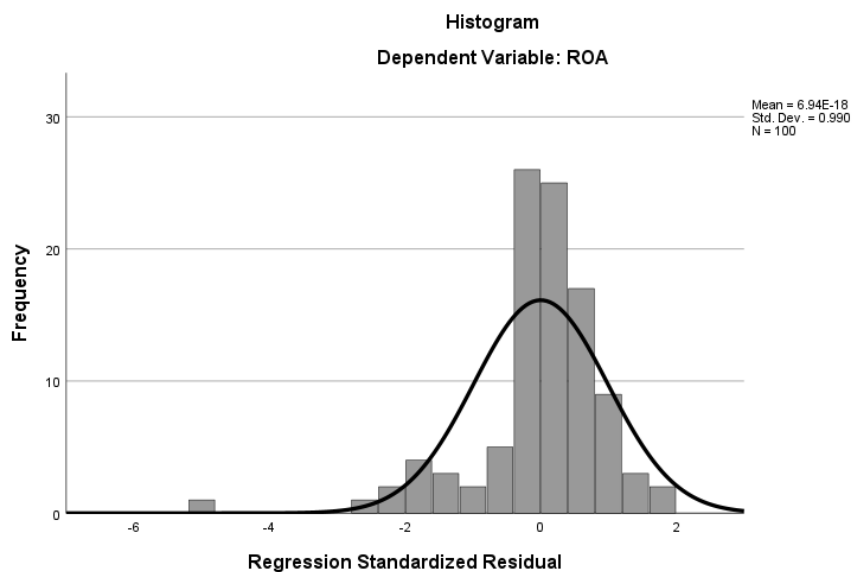


Figure 5: Histogram of ROA

Based on the assessment of OLS regression assumptions, all assumptions are satisfied or not violated. Therefore, a multiple regression was conducted to evaluate the relationship between financial leverage and liquidity with the profitability performance of Malaysian timber trading firms.

Relationship of Financial Leverage and Liquidity on Profitability Performance

Table 3 reveals that the multiple regression analysis resulted in an F statistic value of 4.850 with a p-value of 0.01. Since the p-value is below the 0.05 threshold, this indicates that the overall model is statistically significant. This means there is a significant linear relationship

between profitability, as measured by ROA, and the combined effects of leverage (measured by DER) and liquidity (measured by CR). This finding aligns with previous studies by Heryati and Kurniawan (2023) and Bintara (2020), which also reported a significant relationship between profitability and the financial metrics of leverage and liquidity. The findings of this study are further supported by the research conducted by Zaitoun and Alqudah (2020), who explored the impact of liquidity and financial leverage on profitability in the context of listed Jordanian industrial firms. Their study revealed that both liquidity and financial leverage play significant roles in influencing profitability, echoing the results observed in the current analysis. The significant relationship observed in this study between profitability, leverage, and liquidity reinforces the previous findings. It is important to note that these findings are not only applicable to the wood industry but also to broader industrial contexts, highlighting the critical role these financial factors play in determining firms' financial success.

Table 3

Multiple Linear Regression Model Results

Model	Unstandardized Coefficients		Standardized Coefficients	t-test	Sig.
	Beta	Std. Error	Beta		
Constant	0.048	0.016		3.049	0.003*
CR	0.001	0.001	0.093	0.934	0.353
DER	-0.066	0.025	-0.264	-2.642	0.01*
R-squared	0.091				
Adjusted R-square	0.072				
F-statistics	4.850				
Sig.	0.01*				

Note: * statistically significant at p-value < 0.05

According to Table 3, an equation model can be formed as follows:

$$Y = 0.048 + 0.001X_1 - 0.066X_2 + \varepsilon$$

As shown in Table 3, the adjusted R-squared value is 0.072. This means that the independent variables (CR and DER) variations can account for 7.2% of the variability in the profitability variable, which ROA measures. The remaining 92.8% of the variability is explained by other factors or variables outside of the model. The relatively low adjusted R-squared value indicates that other factors also significantly contribute to profitability.

Table 3 reveals that the first partial T-test result, with a standardized coefficient value of CR at 0.934 and a non-statistically significant p-value (> 0.05), confirms that liquidity has no discernible impact on profitability. The findings are consistent with previous studies by Yulianita and Isynuwardhana (2019), and Bintara (2020), which also reported that liquidity does not significantly affect profitability. The result contrasts with studies by Wijaya and Isnani (2019) and Ramlan (2020), which found that liquidity (CR) does have an impact on profitability. This discrepancy suggests that while liquidity may be significant in other

contexts, it does not appear to influence profitability for wood-based firms listed on Bursa Malaysia in this study. This implies that other factors might be more influential in determining profitability for these firms. Although liquidity (CR) does not significantly impact profitability in this study, maintaining an optimal level of liquidity is still important for overall financial health and operational efficiency (Brigham & Ehrhardt, 2021).

The second partial T-test reveals that leverage, as measured by DER, significantly impacts profitability. The test results show a DER value of 0.934 with a significance level of 0.01. This suggests a statistically significant relationship between leverage and profitability. The coefficient for leverage (DER) is negative, indicating a negative correlation with profitability. This means that higher leverage is associated with lower profitability, reinforcing that increased leverage can diminish profitability, assuming other factors remain constant. The results of this study are consistent with other studies by Yulianita and Isyuardhana (2019), Bintara (2020), and Ramlan (2020). In summary, the study corroborates the view that an increase in leverage typically leads to lower profitability, as reflected by the negative DER coefficient. Companies exhibiting high DER will show lower ROA, while those with lower leverage tend to have higher ROA. Financial managers in wood-based firms should consider adopting lower DER levels to fund their operations to achieve higher profitability and efficiency.

Conclusion

The study reveals that leverage and liquidity collectively influence wood-based firms' profitability performance in Bursa Malaysia. Effective leverage management is crucial for enhancing profitability, while liquidity, although part of the model, did not show a significant individual impact. The study found a negative relationship between leverage and profitability, suggesting that increased leverage generally results in lower profitability. This underscores the importance of managing leverage to enhance profitability. It is crucial to effectively control debt levels to maintain financial health and improve profit margins. Although liquidity did not significantly affect this study, it is still an essential aspect of financial management and should be monitored as part of a broader financial strategy.

This study contributes to the broader theoretical framework of financial management by highlighting the nuanced relationship between leverage, liquidity, and profitability within the context of wood-based firms in Bursa Malaysia. Theoretically, it supports and extends existing capital structure theories, such as the Trade-Off Theory, by demonstrating that while leverage plays a critical role in influencing profitability, its impact is not uniformly positive. The negative relationship observed between leverage and profitability challenges traditional views that higher leverage necessarily leads to higher returns, emphasizing the need for a more nuanced approach to leverage management.

It is worth noting that this study focuses only on wood-based industries, so the results may not be applicable to other sectors. Future studies could use this model to analyze other sectors to see if the observed relationships hold across various contexts. Additionally, future research could explore the interaction between variables within the regression model. Specifically, examine the impact of leverage on profitability, considering the potential moderating effects of liquidity or the joint effects of leverage and liquidity on profitability to

understand their combined influence on financial performance. Future studies could also investigate other factors or interactions influencing profitability beyond leverage and liquidity, providing a more comprehensive view of financial performance determinants.

Acknowledgement

The authors would like to acknowledge Universiti Putra Malaysia for providing the essential resources needed to conduct this study. We extend our sincere gratitude and appreciation to everyone who contributed to the completion of this research.

References

- Alshatti, A. S. (2015). The effect of credit risk management on financial performance of the Jordanian commercial banks. *Investment Management and Financial Innovations*, 12(1-2), 338-345
- Altman, E. I. (1968). Financial ratios, discriminant analysis, and the prediction of corporate bankruptcy. *Journal of Finance*, 23(4), 589-609.
- Banafa, A., Muturi, W., & Ngugi, K. (2015). The impact of leverage on financial performance of listed non-financial firm in Kenya. *International Journal of Finance and Accounting*, 4(7), 1-20.
- Bintara, R. (2020). The effect of working capital, liquidity and leverage on profitability. *Saudi Journal of Economics and Finance Abbreviated*, 4(1), 28-35.
- Bonin, J. P., & Schaffer, M. E. (1995). Banks, firms, bad debts and bankruptcy in Hungary 1991-94, CEP Discussion Paper No. 234. London: London School of Economics.
- Brigham, E. F., & Ehrhardt, M. C. (2021). *Financial management: Theory & practice* (16th ed.). Cengage Learning.
- Bursa Malaysia. (n.d.). Corporate History. Retrieved from <http://www.bursamalaysia.com/corporate/about-us/corporate-history/>
- Damodaran, A. (2018). *Corporate finance: Theory and practice* (2nd ed.). Wiley.
- Fama, E. F., & French, K. R. (2002). Testing trade-off and pecking order predictions about dividends and debt. *The Review of Financial Studies*, 15(1), 1-33.
- Farahani, H. A., Rahiminezhad, A., & Same, L. (2010). A comparison of partial least squares (PLS) and ordinary least squares (OLS) regressions in predicting of couples mental health based on their communicational patterns. *Procedia-Social and Behavioral Sciences*, 5, 1459-1463.
- Gill, A., Biger, N., & Mathur, N. (2010). The relationship between working capital management and profitability: Evidence from the United States. *Business and Economics Journal*, 2010(1), 1-9.
- Hasan, M. B., Ahsan, A. M., Rahaman, M. A., & Alam, M. N. (2014). Influence of capital structure on firm performance: Evidence from Bangladesh. *International Journal of Business and Management*, 9(5), 184.
- Heryati, D. S., & Kurniawan, D. (2023). The effect of liquidity and leverage ratios on profitability in automotive and component sub-sector companies on the IDX 2016-2020. *IJESM International Journal of Economics and Strategic Management*, 1(01), 36-50.
- Hongli, J., Ajorsu, E. S., & Bakpa, E. K. (2019). The effect of liquidity and financial leverage on firm performance: Evidence from listed manufacturing firms on the Ghana Stock Exchange. *Research Journal of Finance and Accounting*, 10(8), 91-100.

- Jemali, N., Muhammad, M., & Yahya, J. (2020). Wood-based industry in Kelantan. *IOP Conference Series: Earth and Environmental Science*, 596(1), 012068.
- Khan, M. N., & Khokhar, I. (2015). The effect of selected financial ratios on profitability: an empirical analysis of listed firms of cement sector in Saudi Arabia. *Quarterly Journal of Econometrics Research*, 1(1), 1-12.
- Kraus, A., & Litzenberger, R. H. (1973). A state-preference model of optimal financial leverage. *The Journal of Finance*, 28(4), 911-922.
- Lartey, V. C., Antwi, S., & Boadi, E. K. (2013). The relationship between liquidity and profitability of listed banks in Ghana. *International journal of business and social science*, 4(3), 48-56.
- Ministry of Plantation Industries and Commodities Malaysia (MPIC). (2023). Data statistics on Commodities 2022. Retrieved from https://www.mpic.gov.my/kpk/images/mpic_statistik/2023_statistik_on_commodity/Kayu_2023.pdf
- Modigliani, F., & Miller, M. H. (1958). The cost of capital, corporation finance and the theory of investment. *The American Economic Review*, 48(3), 261-297.
- Mohammed, N. F., Puat, S. A., Amirrudin, M. S., & Hashim, A. (2020). Leverage, liquidity and profitability ratios: Accountability of Malaysian listed oil and gas firms. *Humanities & Social Sciences Reviews*, 8(2), 941-947.
- Putranto, P. (2019). Pengaruh strategi diversifikasi, leverage, dan inflasi terhadap profitabilitas perusahaan food & beverage. *Jurnal online insan akuntan*, 4(2), 185-198.
- Ramlan, H. (2020). The effect of leverage and liquidity on the companies' performance. *Global Business & Management Research*, 12(4), 691-721.
- Ratnasingam, J., Latib, H. A., Paramjothy, N., NADARAJAH, M., & IORAS, F. (2020). Plantation forestry in Malaysia: an evaluation of its successes and failures since the 1970. *Notulae Botanicae Horti Agrobotanici Cluj-Napoca*, 48(4), 1789-1801.
- Raza, M. W. (2013). Affect of financial leverage on firm performance. Empirical evidence from Karachi Stock Exchange. *Canadian Journal of Regional Science*, 50383, 1-20.
- Robinson, T. R., Henry, E., Pirie, W. L., Broihahn, M. A., & Cope, A. T. (2015). *International financial statement analysis*. New Jersey: CFA Institute Investment Series.
- Saadun, N., Khamurudin, M. N., Azhar, B., Omar, H., & Hariz, M. H. (2019). Export performance of tropical timber products certified by the Malaysian timber certification scheme. *Journal of Sustainability Science and Management*, 14(5), 115-127.
- Saadun, N., Tahir, P. M., Roseley, A., Lee, S. H., & Adnan, A. (2021). Awareness, knowledge and perception of formaldehyde emission from wood composite products among design professionals. *The Malaysian Forester*, 84, 120-136.
- Sartono, A. (2010). *Financial management (theory and applications)*, 4th edition. Yogyakarta: Bhakti Profesindo.
- Subramaniam, H., Saadun, N., Ali, Z. M., & Muhammad, A. S. (2023). Knowledge and perception of wood product manufacturing companies in Peninsular Malaysia on timber legality regulations. *The Malaysian Forester*, 86(2), 256-274.
- Vural, G., Sökmen, A. S., & Çetenak, A. (2012). Affects of working capital management on firm's performance: Evidence from Turkey. *International Journal of Economics and Financial Issues*, 2(4), 488-495.
- Wijaya, I., & Isnani, N. (2019). Pengaruh efisiensi modal kerja, likuiditas, dan solvabilitas terhadap profitabilitas perusahaan farmasi. *Jurnal online insan akuntan*, 4(2), 147-156.

- Yulianita, F. A., & Isynuwardhana, D. (2019). Pengaruh perputaran modal kerja, likuiditas dan leverage terhadap profitabilitas studi empiris pada perusahaan barang konsumsi yang terdaftar di Bursa Efek Indonesia Tahun 2015-2017. *eProceedings of Management*, 6(2), 3482.
- Zaitoun, M., & Alqudah, H. (2020). The impact of liquidity and financial leverage on profitability: The case of listed Jordanian industrial firm's. *International Journal of Business and Digital Economy*, 1(4), 29-35.
- Zulkipli, M. A., Nik Abdullah, N. A. I., & Kamaluddin, A. (2019). The relationship between financial leverage and liquidity, and firms' profitability of the agricultural industry: Evidence from Malaysian listed firms. *Asia-Pacific Management Accounting Journal (APMAJ)*, 14(3), 200-217.