Research Horizon

ISSN: 2808-0696 (p), 2807-9531 (e)

Research Horizon
Volume: 05
Issue: 05
Year: 2025
Page: 1829-1842

Citation:
Supriyatna, Y., & Akbar, T. (2025). The effect of liquidity, leverage, and firm size on firm value with profitability as a moderating variable. *Research Horizon*, *5*(5), 1829-1842.

Article History:
Received: August 24, 2025
Revised: September 28, 2025
Accepted: October 6, 2025
Online since: October 30, 2025

The Effect of Liquidity, Leverage, and Firm Size on Firm Value with Profitability as a Moderating Variable

Yoga Supriyatna[1*], Taufik Akbar[1]

[1] Universitas Mercu Buana, Jakarta, Indonesia

[*] *Corresponding Author: Yoga Supriyatna (yogasupriyatna23@gmail.com)*

Abstract

In recent years, the Indonesian food and beverage sector has faced significant challenges, including rising raw material costs, declining purchasing power, and upcoming excise taxes, which have impacted stock prices and investor confidence. This study examines the effects of liquidity, leverage, and firm size on firm value, with profitability as a moderating variable. Employing a quantitative associative design, the research utilized a purposive sampling technique to select 28 companies from a population of 129 firms, observed over a three-year period (2021-2023). Data were analyzed using panel data regression in EViews 13. The results indicate that both liquidity and leverage have a significant positive impact on firm value. In contrast, firm size was found to have no significant effect. A key finding is the moderating role of profitability: it effectively strengthens the relationships between both liquidity and leverage with firm value. However, profitability was not a significant moderator for the relationship between firm size and firm value. These findings underscore the critical roles of financial structure and profitability in enhancing firm value, while suggesting that the influence of sheer size may be more nuanced or contingent on other factors not captured in this model.

Keywords

Firm Size, Firm Value, Leverage, Liquidity, Profitability.

1. Introduction

The primary consumer sector, particularly food and beverage companies, has faced significant challenges due to a decline in stock prices driven by rising raw material costs, weakened purchasing power, and the impending excise tax on packaged sweetened beverages set for implementation in the second half of 2025. For instance, shares of PT Indofood CBP Sukses Makmur Tbk (ICBP) dropped by 7.28% to Rp10,500 per share, as reported by the Indonesia Stock Exchange on February 26, 2025 (Fadli, 2025). This negative trend highlights the need to understand the factors influencing firm value in this sector, yet existing research has not fully explored how financial metrics interact with profitability to drive value creation in this context.

The stock price performance of primary consumer companies in Indonesia shows a widespread decline across the sector. The sharpest drop was recorded by PT Indofood CBP Sukses Makmur Tbk, whose stock price decreased from IDR 11.325 to IDR 10.500 (–7.28%), followed closely by PT Sumber Alfaria Trijaya Tbk (from IDR 2.410 to IDR 2.240, –7.05%) and PT Diamond Food Indonesia Tbk (from IDR 800 to IDR 750, –6.25%).

PT Mayora Indah Tbk also saw a decline from IDR 2.270 to IDR 2.150 (–5.28%), while PT Supra Boga Lestari Tbk and PT Mulia Boga Raya Tbk dropped from IDR 494 to IDR 470 (–4.86%) and IDR 685 to IDR 655 (–4.38%), respectively. Moderate price contractions were observed in PT Cisarua Mountain Dairy Tbk and PT Ultrajaya Milk Industry Tbk, both falling 3.08%, followed by smaller decreases in PT Campina Ice Cream Industry Tbk (–2.38%), PT Japfa Comfeed Indonesia Tbk (–2.28%), and PT Malindo Feedmill Tbk (–2.08%). The smallest decline occurred in PT Indofood Sukses Makmur Tbk, whose price slipped from IDR 7.825 to IDR 7,725 (–1.28%), indicating relative resilience amid sector-wide pressure.

The stock performance of PT Mayora Indah Tbk (MYOR) on February 26, 2025, showed a decline of 5.29%, closing at IDR 2,150 (Bloomberg, 2025). This movement reflects broader weakness in the primary consumer sector, largely driven by rising excise tax exposure. Companies such as MYOR (~40%), SIDO (~35%), CMRY (~44%), and ULTJ (~77%) face higher tax burdens, while ICBP and UNVR remain less affected (<10%). Despite this, positive sentiment ahead of the 2025 Ramadan and Eid al-Fitr festive season, along with government populist programs, is expected to support consumer stocks. Panin Sekuritas thus maintains an Overweight outlook for consumer staples, particularly ICBP and MYOR. These developments highlight the importance of analyzing key financial determinants such as liquidity, leverage, and profitability in understanding firm value dynamics within the sector (Fadli, 2025).

Corporate value is critical as it reflects a company's performance and shapes investor perceptions (Anggraini et al., 2020). A higher firm value signals strong performance, attracting investors, while a decline may deter investment. However, prior studies show mixed results on the factors affecting firm value, creating a research gap. For example, according to Kasmir (2019), liquidity significantly influences a company's ability to meet short-term obligations, yet its impact on firm value varies across studies. Similarly, Brigham and Ehrhardt (1982) suggest that leverage affects financial risk and firm value, but findings differ on whether this effect is positive or negative.

The role of profitability as a moderating factor in these relationships remains underexplored, particularly in the Indonesian food and beverage sector. Firm value, often measured by stock prices for publicly traded companies or sale value for private firms, is influenced by factors like profitability, which reflects management's ability to generate returns (Anggraini et al., 2020). This study aims to investigate the effects of liquidity, leverage, and firm size on firm value, with profitability as a moderating

variable, to address these inconsistencies and provide clarity on their interactions in the context of Indonesian food and beverage companies.

Liquidity measures a company's ability to cover short-term obligations (<1 year) using current assets, typically assessed through the current ratio (current assets divided by current liabilities). This ratio is vital for creditors, indicating financial health and the capacity to settle debts when due (Kasmir, 2019). Leverage reflects the balance between debt and capital, showing how much a company relies on external financing. Excessive leverage can create financial burdens, as noted by Harahap (2011).

Profitability, often measured by Return on Assets (ROA), may strengthen the impact of liquidity and leverage on firm value by signaling efficient resource use, aligning with agency theory's focus on reducing conflicts between managers and shareholders (Jensen & Meckling, 2019). Firm size, measured by total assets, indicates a company's financial resources and access to capital (Gitman & Zutter, 2012; Azzahra et al., 2024). Larger firms often secure funding more easily, but size alone may not guarantee higher value. This study fills the research gap by examining how profitability moderates the relationships between liquidity, leverage, firm size, and firm value, offering insights into optimizing financial strategies for value creation in the food and beverage sector.

2. Literature Review and Hypothesis Development

2.1. Theoretical Foundational

Agency theory, first developed by Jensen and Meckling (2019), defines an agency relationship as a contract in which one or more principals engage an agent to perform some service on their behalf, delegating decision-making authority in the process. This framework arises from the observed divergence in interests between principals (such as shareholders) and agents (company managers). Managers, acting as agents, may not always run the company to maximize shareholder wealth. Instead, they might prioritize personal objectives, such as increasing their own wealth, prestige, or expanding the size of the firm, often by spending available free cash flow on these pursuits rather than distributing it to shareholders.

The theory is crucial for understanding firm value because it highlights the inherent conflict within corporate management and decision-making (Lubis, 2022). Investors, as principals, expect management actions to lead to share price appreciation, which enhances the company's returns and overall value, frequently measured by Tobin's Q. In contrast, company management may have competing interests focused on profitability, growth in firm size, or personal benefits (Indana & Pangestuti, 2024). This divergence is further intensified when management holds shares in the company (managerial ownership), strengthening their influence and enabling them to more openly advocate for their own interests at shareholder meetings. This dynamic creates a clear misalignment of goals between investors seeking value appreciation and managers pursuing alternative objectives, underscoring the central role of agency theory in corporate governance and valuation.

Firm value signifies a company's long-term achievement and reflects public trust, ultimately aiming to maximize shareholder wealth (Saifi et al. 2025). This value is represented by the stock market price, which captures the outcomes of investment, financing, and asset management decisions (Hery, 2017). This study employs the Tobin's Q ratio to measure firm value, as it effectively indicates investor perception and market confidence in the company's performance and future prospects. This metric is deemed highly suitable for the research context.

2.2. Factor Affecting of Firm Value

The Liquidity Ratio measures a company's ability to meet its short-term obligations using cash and other current assets. According to Kasmir (2019), this ratio functions to assess a firm's capacity to finance its maturing debts, both externally and internally. Gitman and Zutter (2012) define liquidity as a key indicator of financial performance, reflecting whether a company remains liquid. The primary measure, the current ratio, is calculated by dividing current assets by current liabilities. It is particularly important to short-term creditors and investors, as it signals financial health and the ability to honor immediate commitments. For investors, a strong liquidity ratio suggests that their capital is less likely to be used to cover existing debts, thereby supporting firm value. In this study, liquidity is operationalized using the current ratio to evaluate its role in financial stability and value creation.

According to Brigham and Ehrhardt (1982), leverage refers to the extent a firm uses debt financing and its associated default risk. It reflects a company's capacity to meet both short and long-term obligations, often measured by the Debt-to-Asset Ratio (DAR), which is highly relevant for assessing financial structure. Firm size, as noted by Gitman and Zutter (2012), influences capital accessibility, with larger firms typically possessing greater financial resources. Size can be quantified using metrics such as total assets, sales, or profits (Brigham & Houston, 2006). Larger companies often find it easier to raise capital and may demonstrate stronger long-term commitment to social performance.

According to Financial Services Authority Regulation Number 53/POJK.04/2017 states that small companies are characterized by a total asset value of less than fifty billion rupiah (≤ Rp50.000.000.000), medium companies are characterized by a total asset value of more than fifty billion rupiah up to two hundred billion rupiah (Rp50.000.000.000 – Rp250.000.000.000), and large companies are characterized by a total asset value of more than two hundred billion rupiah (≥Rp250.000.000.000). Firm size is considered to be one of the factors that can influence the value of the company, this is because the larger the firm size, the easier it will be for the company to obtain capital or funding sources both internally and externally. Companies categorized as large companies are said to have a lower level of risk compared to small companies, this is because large companies are able to have better control over market conditions so they are better able to face economic competition. Investors tend to respond more favorably to large companies, which is why large companies are said to be able to increase their value. Furthermore, companies categorized as large also have sufficient resources to increase their value, as they have better access to external funding sources than smaller companies.

H1: Liquidity has a significant and positive effect on firm value.
H2: Leverage has a significant and positive effect on firm value.
H3: Firm size has a significant and positive influence on firm value.

2.5 The Moderation of Profitability

According to Brigham and Ehrhardt (1982), profitability is a key ratio that influences critical company decisions, reflecting the combined impact of liquidity, asset management, and operational liabilities. As Brigham and Ehrhardt (1982) note, profitability, measured by Return on Assets (ROA) in this study, signals a firm's efficiency in generating returns, which can enhance or weaken the effects of liquidity, leverage, and firm size on firm value. According to Kasmir (2019), the profitability ratio measures a company's ability to generate profits, indicating management effectiveness through income from sales and investments. High profitability strengthens the relationship between liquidity and firm value, as Kasmir (2019) suggests, because efficient use of current assets builds investor confidence, making

the firm more attractive and boosting its market value. Conversely, low profitability may reduce liquidity's positive impact if cash is not used productively, potentially signaling mismanagement. This aligns with agency theory, which emphasizes reducing wasteful spending to maximize shareholder value (Jensen & Meckling, 2019). ROA is chosen for this study due to its relevance in capturing asset efficiency.

Profitability also moderates the leverage–firm value relationship, as high ROA can mitigate debt-related risks, according to Brigham and Ehrhardt (1982). Leverage can enhance firm value by disciplining managers to make efficient investments, but high debt increases financial risk (Jensen & Meckling, 2019). When profitability is strong, it signals effective debt management, strengthening leverage's positive effect on firm value, while low profitability may amplify debt's negative impact, eroding investor trust. However, profitability's role in moderating the firm size–firm value relationship is less clear. Kasmir (2019) suggests that larger firms may face inefficiencies or bureaucratic challenges, which can limit profitability's ability to enhance the size–value link, even with high ROA. Thus, profitability, as a moderator, is critical for liquidity and leverage but less effective for firm size, highlighting the need for efficient resource management to drive value creation.

H4: Profitability moderates the relationship between liquidity and firm value
H5: Profitability moderates the relationship between leverage and firm value.
H6: Profitability moderates the relationship between firm size and firm value.

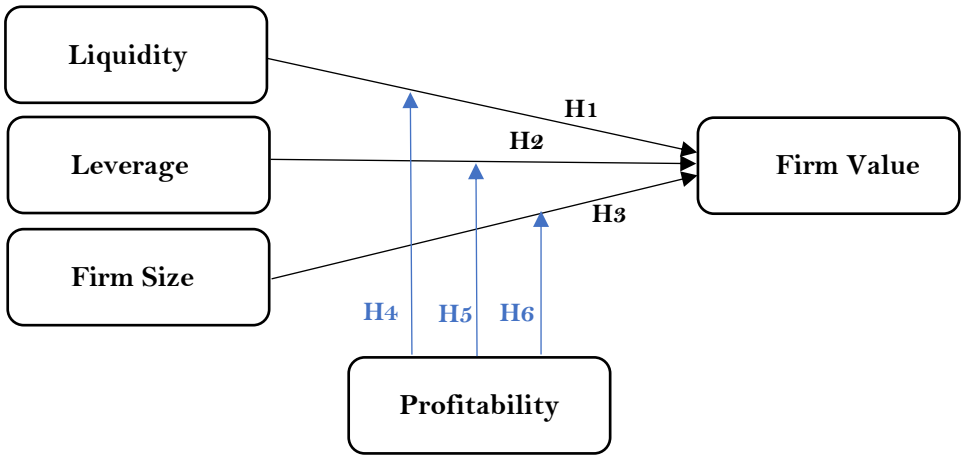

Figure 1. Research Framework

Figure 1 shows, presents the research model depicting the hypothesized relationships between the variables. Liquidity, Leverage, and Firm Size are the independent variables that are theorized to have a direct effect on the dependent variable. Furthermore, Profitability is positioned as a moderating variable. This means it is hypothesized to influence or alter the strength of the relationships between the independent variables (Liquidity and Leverage) and Firm Value. The model visually represents these proposed direct and moderating effects using connecting arrows.

3. Methods

This research is a causality study using a quantitative approach. Causal research aims to test hypotheses about the influence of one or more independent variables on other dependent variables. In this study, researchers analyzed whether liquidity, leverage, and firm size, as independent variables, influence firm value as the dependent variable, with profitability as a moderating variable. This study was

conducted on food and beverage companies listed on the Indonesia Stock Exchange (IDX) in 2021–2023.The population in this study is the primary consumption sector companies in the food and beverage sub-sector that have been listed on the Indonesia Stock Exchange (IDX) in 2021-2023.

The sampling process for this study began with 129 companies categorized under the primary consumer sector in the food and beverage sub-sector listed on the Indonesia Stock Exchange (IDX) for the 2021–2023 period. From this population, 101 companies were excluded because they operated outside the food and beverage sub-sector or did not meet the inclusion criteria. The remaining 28 companies within the food and beverage sub-sector consistently presented their annual financial reports during the 2021–2023 period and were therefore selected as the final research samples. The study covered three consecutive observation years (2021–2023), resulting in a total of 84 firm-year observations used for analysis.

For testing purposes, the independent and dependent variables need to be broken down into specific indicators so they can be measured and analyzed according to the research objectives.

Firm Value (Y) $Tobins'Q = \frac{(EMV+Debt)}{(Total\ Asset)}$ Ratio

Liquidity (X1) $CR = \frac{Current\ Asset}{Current\ Liabilities}$ Ratio

Firm Size (X3) $DAR = \frac{Total\ Liabilities}{Total\ Asset}$ Ratio

Profitability (Moderating Variables) $ROA = \frac{Profit\ After\ Tax}{Total\ Asset}$ Ratio

Firm value, reflected in shareholder wealth and stock price, is measured by Tobin's Q. Liquidity, indicating the ability to meet short-term obligations, is measured by the current ratio (Hery, 2017; Kasmir, 2019). Leverage, the extent of debt financing, is gauged by the Debt to Asset Ratio (Brigham & Ehrhardt, 1982). These metrics are deemed most relevant for this research. The data analysis technique used in this study was panel data regression analysis, aimed at examining the influence of liquidity, leverage, and firm size on firm value, with profitability as a moderating variable. The analytical process included model selection and hypothesis testing to determine the significance of each variable's effect. All data processing and statistical analyses were conducted using EViews 13, which provides accurate and reliable tools for handling panel data and moderation analysis.

4. Results

Descriptive statistics for all variables in Table 1 show that the lowest Tobin's Q value (dependent variable) as an indicator of firm value is 0.44, owned by PT. Sekar Bumi Tbk., with company code SKBM in 2023. While the highest value of 7.88 is owned by PT. Mulia Boga Raya Tbk., with code KEJU in 2022. On average, the firm value is 1.75, quite far from the highest firm value of 7.88. This explains that the value of companies in the food and beverage sector is quite good, because in general, Tobin's Q values close to 1 or more than 1 are considered attractive by investors. The higher the firm value, the better it reflects the goodness of a company and is an indicator of the health and success of the company, which provides benefits both for the company itself and for stakeholders. The mean value of the Y variable in this study is 1.75, which is greater than the standard deviation of 1.15, indicating an even distribution of data.

Table 1. Descriptive Statistical Analysis

Analysis	Tobin's Q (Y)	CR (X1)	DAR (X2)	Ln Total Aset (X3)	ROA (X4)
Mean	1.750428	2.697875	0.411406	28.57370	0.065837
Median	1.397614	1.794221	0.422364	28.24340	0.062120
Maximum	7.886980	13.30950	0.944558	32.85992	0.943569
Minimum	0.445441	0.202230	0.097914	24.65497	-0.399674
Std. Dev.	1.153232	2.383143	0.201074	1.762952	0.139272
Skewness	2.278300	2.146742	0.298923	0.501226	2.631198
Kurtosis	11.72733	8.610646	2.486789	3.501804	22.86383
Observations	78	78	78	78	78

The liquidity of companies in the food and beverage sector, as measured by the Current Ratio, shows significant variation. In 2023, PT Bumi Teknokultura Unggul Tbk (BTEK) recorded the lowest Current Ratio at 20%, whereas PT Campina Ice Cream Industry Tbk (CAMP) achieved the highest value at an exceptional 1,330% in 2021. The sector's average liquidity of 269% is considered strong, as it significantly exceeds the common benchmark of 100%, indicating a general ability to comfortably meet short-term obligations. This high liquidity enhances financial health, boosts investor confidence, and reduces default risk. However, it can also suggest inefficient use of assets, where excess cash might be sitting idle instead of being invested for growth. The data distribution is even, as the mean (269%) is greater than the standard deviation (238%).

The leverage ratio in the food and beverage sector, as measured by the debt-to-asset ratio, also exhibits considerable variation. In 2022, PT Wilmar Cahaya Indonesia Tbk (CEKA) recorded the lowest leverage ratio at 9%, whereas PT Prasidha Aneka Niaga Tbk (PSDN) reported the highest ratio at 94%. With an industry average of 41%, well below the 100% threshold, the sector demonstrates generally healthy and manageable leverage levels. This indicates most companies are not excessively reliant on debt. Well-managed leverage sends positive signals to investors, boosting confidence and potentially increasing firm value. It supports an optimal capital structure, facilitating business expansion and improved financial performance. However, high leverage increases default risk and can strain cash flow due to heavy interest and repayment burdens. The data is evenly distributed, as the mean (41%) exceeds the standard deviation (20%).

Firm size within the food and beverage sector in Table 1, measured by total assets, displays a notable range. The smallest company was PT. Sentra Food Indonesia Tbk. (FOOF) with a value of 24.65 in 2023, while the largest was PT. Indofood Sukses Makmur Tbk. (INDF) at 32.85 the same year. The sector's average size of 28.57 indicates robust company stature. Larger firms generally benefit from greater financial stability, easier access to funding, and a stronger reputation among investors, all of which can significantly enhance firm value. However, large size also presents challenges, including bureaucratic complexity, slower adaptation to market changes, and potential stakeholder conflicts. Consequently, growth must be managed effectively and sustainably to truly contribute to long-term value creation. The data is evenly distributed, as the mean value of 28.57 is substantially greater than the standard deviation of 1.76.

The Return on Assets (ROA) in the food and beverage sector shows considerable disparity, ranging from a low of –39% recorded by PT Sentra Food Indonesia Tbk (FOOD) in 2023, to a high of 94% achieved by PT Prasidha Aneka Niaga Tbk (PSDN) in the same year. The sector's average ROA of 6% is generally considered acceptable for established companies, as it exceeds the common 5% benchmark. This indicates a reasonable level of profitability and efficiency in generating net income from asset utilization. A strong ROA signals effective asset management and attracts

investor interest due to its indication of higher profit potential. However, the data distribution is heterogeneous, as the standard deviation (13%) is more than double the mean value (6%). This wide variation highlights substantial differences in profitability and operational efficiency among the sampled companies, suggesting that while the sector average is positive, many firms may be underperforming.

Next, a model selection analysis was conducted, as described in Table 1. This analysis involved using the Chow test to compare the Fixed Effect Model with the Common Effect Model, and the Hausman test to compare the Fixed Effect Model with the Random Effect Model. The results showed that the Chow test favored the Fixed Effect Model, and the Hausman test favored the Fixed Effect Model. The LM test was not performed because the results of the Fixed Effect Model were already determined in the Chow and Hausman tests. Based on these findings, it was concluded that the Fixed Effect Model was the most appropriate for the data.

Table 2. Model Selection Test

Test	Comparison	Criteria	Results	Selected
Chow	FEM vs CEM	Prob less than 0.005	Prob = 0.0000	FEM
Houseman	FEM vs REM	Prob less than 0.005	Prob = 0.0267	FEM
Multicollinearity	-	VIF < 10	Range 1.62-5.07	OK
Heteroscedasticity	-	ProbChi2 > 0.050	Prob = 0.8200	OK
Autocorrelation	-	4-DL <DW < 4	2.44 < 2.50 < 4	Negative

Table 2 presents the Fixed Effect Model, which was identified as the best model, and classical assumption tests were performed. The classical assumption tests for this Fixed Effect Model include assessment of multicollinearity, heteroscedasticity, and autocorrelation. However, a normality test is not necessary because, according to Gujarati and Porter (2012), the assumption of normality of errors is not an absolute requirement for valid regression parameter estimates. This assumption is only necessary if researchers want to perform statistical inference (t-test, f-test, and others) on small samples.

Classical assumption tests were conducted to ensure the validity of the regression model. The multicollinearity test, assessed using the Variance Inflation Factor (VIF), confirmed no high correlation between independent variables, as all VIF values ranged from 1.62 to 5.07, well below the threshold of 10 Ratmono (2017). Subsequently, the heteroscedasticity test indicated that the residual variance was constant, with a ProbChi2 value of 0.82, exceeding the 0.05 significance level. This confirms the absence of heteroscedasticity. Finally, the autocorrelation test, evaluated using the Durbin-Watson (DW) statistic, yielded a value of 2.50. Since this fall within the range of 4-DL < DW < 4, it indicates the presence of negative autocorrelation. All tests were passed, supporting the robustness of the model.

Table 3. Coefficient of Determination and F Test (Goodness of Fit)

Analysis	Value
R-squared	0.994946
Adjusted R-squared	0.991352
F-Statistics	0.000000

** Significant 99 per cent, ** Significant 100 per cent*

Table 3 shows that the t-test, F-test, and coefficient of determination were used to test the hypotheses and discuss the findings in this study. The Fixed Effect Model (FEM) was used to test model selection. Table 5 shows that the study has an R-

squared value of 0.994946, indicating that liquidity, leverage, and firm size explain 99.49% of the variability in firm value. Based on the results of the F-test, it has a significance value of 0.00000. This significance value indicates that the variables used in this Fixed Effect Model are considered appropriate and suitable for practical use.

Based on the Table 4 with regression equation (TOBINSQ = 10.015 + 0.047CR + 0.038DAR − 0.291SIZE + 0.016CR*ROA + 6.241DAR*ROA + 0.117SIZE*ROA), the analysis reveals distinct influences on firm value. Liquidity (CR) and leverage (DAR) demonstrate significant positive effects, with coefficients of 0.047 and 0.038 respectively. Conversely, firm size (SIZE) shows an insignificant negative relationship. Critically, the moderating role of profitability (ROA) is confirmed through the significant interaction terms CR*ROA (0.016, p=0.035) and DAR*ROA (6.241, p=0.022), indicating that higher profitability strengthens the positive impact of both liquidity and leverage on value. However, the insignificant SIZE*ROA term (0.117, p=0.631) confirms that profitability cannot mitigate the negative aspects of firm size, a finding consistent with Hirdinis (2019). This underscores that investors prioritize profitable firms with efficient resource management over organizational size alone.

Table 4. Hypothesis Test Results

Variable	Coefficient	t-Statistic	Prob.
TOBIN'S Q	10.01586	2.911425	0.0056
CR	0.047265	2.081365	0.0231
DAR	0.038106	3.127352	0.0192
SIZE	-0.290840	-2.400547	0.3206
ROA	0.443390	0.071645	0.0432
CR*ROA	0.016350	2.081641	0.0353
DAR*ROA	6.241792	2.356713	0.0229
SIZE*ROA	0.117808	0.484069	0.6307

** Significant 99 per cent, ** Significant 100 per cent*

5. Discussion

The study found that liquidity significantly and positively affects firm value. Good liquidity reflects management's ability to manage cash and current assets effectively, enabling smooth operations and allowing firms to seize short-term opportunities without external funding. High liquidity indicates sufficient current assets to meet short-term obligations, reducing default risk, strengthening investor and creditor confidence, and ultimately increasing firm value. These results align with Agency Theory (Jensen & Meckling, 2019), which suggests that high liquidity mitigates agency conflicts by reflecting prudent fund management and preventing misuse for personal or unproductive purposes. Similar findings were reported by Reschiwati et al. (2020), Markonah et al. (2020), Hapsoro and Falih (2020), Putri and Wiksuana (2021), Dotulong et al. (2023), and William and Tanusdjaja (2023), who found that liquidity significantly influences firm value. However, these results contradict Khasbulloh et al. (2023), Sihombing et al. (2023), Ferdila et al. (2023), and Mayangsari et al. (2024), who found no significant effect of liquidity on firm value.

The study also found that leverage has a significant and positive effect on firm value. Debt usage can reduce agency conflicts and enhance firm value by disciplining management through regular interest and principal payments, leading to more efficient investment decisions and operational improvements. This finding supports Agency Theory, which posits that leverage aligns managerial actions with shareholder interests. Similar results were found by Hirdinis (2019), Markonah et al. (2020), Reschiwati et al. (2020), Syamsudin et al. (2020), Sihombing et al. (2023), Tandrio and Handoyo (2023), Astrela and Putu (2023), Luis Kasibi et al. (2023),

Isyarifah and Nahda (2024), Carolin and Susilawati (2024), Cindy et al. (2024), and Rasyid and Suwarno (2024), who confirmed leverage's significant impact on firm value. Conversely, this study contradicts Wijayaningsih and Yulianto (2021), Sudrajat and Setiyawati (2021), Khasbulloh et al. (2023), Ferdila et al. (2023), Munzir et al. (2023), Agustina and Malau (2023), Kusumasari et al. (2023), William and Tanusdjaja (2023), and Mayangsari et al. (2024), which found no significant relationship.

The study revealed that firm size does not significantly affect firm value. Although larger firms generally possess more assets, employees, and networks, these do not necessarily translate to superior financial performance or efficiency. Large firms may face inefficiencies or lack innovation, thus failing to enhance investor value. Similar findings were reported by Salimah and Herliansyah (2019), Dotulong et al. (2023), Ferdila et al. (2023), Isyarifah and Nahda (2024), Carolin and Susilawati (2024), Mayangsari et al. (2024), and Cindy et al. (2024). However, the results contrast with Hirdinis (2019), Reschiwati et al. (2020), Hapsoro and Falih (2020), Wijayaningsih and Yulianto (2021), Sudrajat and Setiyawati (2021), and Luis Kasibi et al. (2023), who found a significant effect of firm size on firm value.

The study further indicates that profitability moderates the effect of both liquidity and leverage on firm value. The profitability variable (X4) significantly affects firm value (Prob. < 0.05), indicating a quasi-moderating role in the relationships among the variables. According to Jensen and Meckling (2019), agency conflicts arise because managers possess greater control and information than shareholders, potentially leading to opportunistic behavior. High liquidity without oversight may increase agency risks, but when managed efficiently and generating profits, profitability strengthens the positive effect of liquidity on firm value. Thus, high liquidity coupled with profitability provides real added value for shareholders. These results align with William and Tanusdjaja (2023), who found profitability moderates the relationship between liquidity and firm value. Similarly, profitability moderates the effect of leverage on firm value. Jensen and Meckling (2019) argue that leverage disciplines managers through debt obligations, while high profitability reflects effective debt management, enhancing leverage's positive effect by reducing agency costs. Conversely, low profitability amplifies financial risks and diminishes investor confidence. These findings are consistent, confirming profitability's moderating role in leverage firm value dynamics.

However, the study shows that profitability cannot moderate the effect of firm size on firm value. Although profitability itself significantly affects firm value (Prob. < 0.05), it acts more as a predictor than a moderator. Large firms often face inefficiency and bureaucracy, increasing agency conflicts as shareholders find it harder to monitor management. Even with high profitability, large firms may obscure information or pursue unproductive strategies, weakening the firm size value relationship. Investors tend to value efficiency, innovation, and adaptability over size. These results are consistent with Hirdinis (2019), confirming that profitability does not moderate the relationship between firm size and firm value, especially in large, less agile firms.

6. Conclusion

This study empirically demonstrates that both liquidity and leverage exert significant positive influences on firm value, as evidenced by their positive coefficients in the regression analysis. These findings indicate that efficient management of short-term assets and the strategic deployment of debt are highly valued by financial markets. In contrast, firm size shows no statistically significant relationship with firm value, suggesting that organizational scale alone does not automatically enhance valuation. Most notably, profitability emerges as a crucial

moderating variable: it significantly amplifies the positive effects of both liquidity and leverage on firm value.

From a practical perspective, these findings offer valuable guidance for corporate managers and investors. Management should prioritize developing policies that optimize liquidity buffers and employ leverage judiciously, recognizing these as direct drivers of shareholder value. Importantly, enhancing profitability must remain a central objective, as it serves as a catalytic factor that magnifies the benefits of sound financial management. For investors, this research provides a clear framework for valuation, emphasizing that investment decisions should favor firms demonstrating strong profitability alongside efficient asset and liability management, rather than merely targeting larger enterprises with potentially inferior financial discipline.

Several limitations must be acknowledged when interpreting these results. The study's focus on a specific sector and time period may restrict the generalizability of findings across diverse industries and varying economic conditions. The reliance on specific proxy variables, such as a particular liquidity or leverage ratio, may not fully capture the multidimensional nature of these financial constructs. Additionally, the analysis does not control for other potential determinants of firm value, including corporate governance quality, competitive positioning, or macroeconomic factors, which might influence the observed relationships.

To advance this line of inquiry, several promising research avenues emerge. Future studies should expand the sample to include multiple industries and extend the observation period to enhance external validity and capture cross-cycle dynamics. Methodological enhancements could include employing alternative variable measurements, such as the Quick Ratio for liquidity assessment or Tobin's Q for firm valuation, to provide more nuanced insights. Furthermore, incorporating additional moderating variables, such as growth opportunities, dividend policies, or ownership structures, could yield a more comprehensive understanding of the complex mechanisms driving firm value creation in contemporary financial markets.

References

Agustina, E., & Malau, M. (2023). Financial distress, earnings management, and leverage effect on firm value with firm size as a moderation variable. *International Journal of Social Service and Research (IJSSR), 3*(3), 856-868.

Anggraini, F., Seprijon, Y. P., & Rahmi, S. (2020). Pengaruh intellectual capital terhadap nilai perusahaan dengan financial distress sebagai variabel intervening. *Jurnal Informasi, Perpajakan, Akuntansi, dan Keuangan Publik, 15*(2), 169-190.

Astrela, W. M., & Putu, W. N. L. (2023). The effect tax avoidance, profitability, and leverage on firm value with dividend policy as a moderating variable. *AT-TAWASSUTH: Journal of Islamic Economics, 8*(1), 1-19.

Azzahra, W. N., Wafdayanti, H., & Hersugondo, H. (2024). The impact of CSR on company financial performance using company size as a moderator. *Research Horizon, 4*(4), 321–328.

Brigham, E. F. (1982). *Financial management: Theory and practice.* London: Atlantic Publishers & Distri.

Brigham, E. F., & Houston, J. F. (2006). *Dasar-dasar manajemen keuangan.* Jakarta: Salemba Empat.

Carolin, J. Y., & Susilawati, C. (2024). Pengaruh ukuran perusahaan, profitabilitas, dan leverage terhadap nilai perusahaan. *Jesya (Jurnal Ekonomi dan Ekonomi Syariah), 7*(1), 588-597.

Cindy, C., Saerang, I. S., & Sumarauw, J. S. (2024). Pengaruh ukuran perusahaan, return on equity dan debt to equity ratio terhadap nilai perusahaan pada indeks saham infobank-15 Bursa Efek Indonesia periode 2018-2022. *Jurnal EMBA: Jurnal Riset Ekonomi, Manajemen, Bisnis dan Akuntansi, 12*(1), 374-385.

Dotulong, F., Murni, S., & Ogi, I. W. (2023). Analisis pengaruh likuiditas, profitabilitas dan ukuran perusahaan terhadap nilai perusahaan sub sektor transportasi di Bursa Efek Indonesia. *Jurnal EMBA: Jurnal Riset Ekonomi, Manajemen, Bisnis dan Akuntansi, 11*(1), 953-963.

Fadli, M. J. (2025). Saham konsumen berguguran, cek prospeknya jelang Ramadan. *Bloomberg Technoz*. Retrieved April 30, 2025, from https://www.bloombergtechnoz.com/detail-news/64161/saham-konsumen-berguguran-cek-prospeknya-jelang-ramadan

Ferdila, F., Mustika, I., & Martina, S. (2023). Pengaruh firm size, likuiditas, leverage dan profitabilitas terhadap nilai perusahaan pada perusahaan manufaktur sub sektor barang konsumsi yang terdaftar di Bursa Efek Indonesia. *Owner: Riset dan Jurnal Akuntansi, 7*(4), 3274-3284.

Gitman, L. J., & Zutter, C. J. (2012). *Principles of managerial finance* (13th ed.). Massachusetts: Addison-Wesley Publishing Company.

Gujarati, D. N., & Porter, D. C. (2012). *Dasar-dasar ekonometrika* (5th ed.). Jakarta: Salemba Empat.

Hapsoro, D., & Falih, Z. N. (2020). The effect of firm size, profitability, and liquidity on the firm value moderated by carbon emission disclosure. *Journal of Accounting and Investment, 21*(2), 240-257.

Harahap, S. S. (2011). *Analisis kritis atas laporan keuangan*. Bali: Rajawali Pers.

Hery, S. E. (2023). *Kajian riset akuntansi mengulas berbagai hasil penelitian terkini dalam bidang akuntansi dan keuangan*. Jakarta: Gramedia Widiasarana Indonesia.

Hirdinis, M. (2019). Capital structure and firm size on firm value moderated by profitability. *International Journal of Economics and Business Administration, 7*(1), 50-60.

Indana, D., & Pangestuti, I. R. D. (2024). Analysis of financial characteristics of sustainability report: Company size as moderating variable. *Research Horizon, 4*(4), 197–204.

Isyarifah, S., & Nahda, K. (2024). Corporate size, leverage, and tax avoidance: Their roles in shaping firm value in Indonesia's manufacturing sector. *Asian Journal of Management, Entrepreneurship and Social Science, 4*(2), 540-556.

Jensen, M. C., & Meckling, W. H. (2019). Theory of the firm: Managerial behavior, agency costs and ownership structure. In *Corporate governance* (pp. 77-132). Gower.

Kasmir. (2019). *Analisis laporan keuangan*. Bali: Rajawali Pers.

Kasibi, G. L., Fauzan, M. F., Ibrahim, F. R., & Tarmidi, D. (2023). Firm value: Impact financial performance, leverage, firm size, and tax avoidance. *International Journal of Management Studies and Social Science Research, 5*(4), 451-458.

Khasbulloh, M. W., Khasanah, M. A., & Qusaeri, M. A. A. (2023). Analisis pengaruh likuiditas, leverage, dan profitabilitas terhadap nilai perusahaan dengan kebijakan dividen sebagai variabel intervening. *Jurnal Minfo Polgan, 12*(1), 1186-1200.

Kusumasari, A. P. S., Aisjah, S., & Ratnawati, K. (2023). Islamic social reporting mediates the effect of profitability and leverage on firm value. *International Journal of Research in Business & Social Science, 12*(3), 210-220.

Lubis, N. W. (2022). Resource based view (RBV) in improving company strategic capacity. *Research Horizon, 2*(6), 587-596.

Markonah, M., Salim, A., & Franciska, J. (2020). Effect of profitability, leverage, and liquidity to the firm value. *Dinasti International Journal of Economics, Finance & Accounting, 1*(1), 83-94.

Mayangsari, N. C., & Triyono, T. (2024). Pengaruh ukuran perusahaan, karakteristik keuangan dan Covid-19 terhadap nilai perusahaan dengan kinerja perusahaan sebagai variabel intervening. *SEIKO: Journal of Management & Business, 7*(2), 21-35.

Munzir, M., Andriyan, Y., & Hidayat, R. (2023). Consumer goods: Pengaruh profitabilitas dan leverage terhadap nilai perusahaan dimediasi oleh corporate social responsibility. *Jurnal Akuntansi dan Governance, 3*(2), 153-165.

Putri, M. O. D., & Wiksuana, I. G. B. (2021). The effect of liquidity and profitability on firm value mediated by dividend policy. *American Journal of Humanities and Social Sciences Research (AJHSSR), 5*(1), 204-212.

Rasyid, R. N., & Suwarno, A. E. (2024). The effect of liquidity, leverage, and audit committee on company value with profitability as a moderation variable. *Management Studies and Entrepreneurship Journal, 5*(1), 660-667.

Ratmono, D. (2017). *Analisis multivariat dan ekonometrika teori, konsep, dan aplikasi dengan EViews 10*. Semarang: BP UNDIP Semarang.

Reschiwati, R., Syahdina, A., & Handayani, S. (2020). Effect of liquidity, profitability, and size of companies on firm value. *Utopia y Praxis Latinoamericana*, *25*(6), 325-332.

Saifi, M., Putri, I. L. A., & Setyono, L. (2025). Determinants of firm performance based on investment opportunities and capital structure. *Research Horizon*, *5*(3), 479-492.

Salimah, S., & Herliansyah, Y. (2019). The effect of capital expenditure, company growth and company size on firm value through financial performance moderated by capital structure. *Corporate Ownership and Control*, *17*(1), 236-244.

Sihombing, P., Hutajalu, C. B. B., & Suparyati, A. (2023). Financial performance and capital structure on firm value with commodity prices as a moderating variable. *Research of Business and Management*, *1*(2), 57-66.

Sudrajat, J., & Setiyawati, H. (2021). Role of firm size and profitability on capital structures and its impact over firm value. *Dinasti International Journal of Economics, Finance & Accounting*, *2*(1), 13-27.

Syamsudin, S., Santoso, D., & Setiany, E. (2020). Capital structure and investment decisions on firm value with profitability as a moderator. *Riset Akuntansi dan Keuangan Indonesia*, *5*(3), 287-295.

Tandrio, G., & Handoyo, S. E. (2023). Pengaruh leverage, profitabilitas, dan kebijakan dividen terhadap nilai perusahaan. *Jurnal Manajerial dan Kewirausahaan*, *5*(1), 20-27.

Wijayaningsih, S., & Yulianto, A. (2021). The effect of capital structure, firm size, and profitability on firm value with investment decisions as moderating. *Accounting Analysis Journal*, *10*(3), 150-157.

William, W., & Tanusdjaja, H. (2023). Pengaruh likuiditas dan struktur modal terhadap nilai perusahaan dengan profitabilitas sebagai moderasi. *Jurnal Paradigma Akuntansi*, *5*(2), 859-868.

Acknowledgment
We gratefully acknowledge the contributions of individuals who supported the completion of this article.

Funding Information
This research did not receive any funding.

Conflict of Interest Statement
The authors declare that there is no conflict of interest.

Ethical Approval and Originality Statement
Ethical approval was obtained for this study. The manuscript represents original work and has not been previously published, nor is it under consideration by another journal.

Data Disclosure Statement
The data that support the findings of this study are available from the corresponding author upon reasonable request.