

The Effect of Liquidity, Profitability, and Sustainability Reporting on Firm Value with Investment Opportunity as A Moderating Variable in Food and Beverage Companies Listed on The Indonesia Stock Exchange for The Period 2021–2023

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ABSTRACT

The objective of this study is to evaluate how liquidity, profitability, and sustainability reporting influence firm value, while also exploring the role of investment opportunities as a moderating factor. The focus is on food and beverage companies listed on the IDX during 2021–2023. A quantitative method was employed, utilizing multiple regression analysis along with moderated regression analysis (MRA). The results indicate that liquidity has a notable negative effect on firm value, suggesting that excessive liquidity might result in inefficiency and diminish firm value. However, profitability and sustainability reporting do not exhibit a significant direct impact. Notably, investment opportunity amplifies the effect of profitability on firm value, indicating that profits hold more worth when aligned with clear growth opportunities. Conversely, investment opportunity does not effectively moderate the impacts of liquidity and sustainability reporting. The study's low R Square value implies that other elements outside the model also affect firm value. These findings highlight the need for businesses to optimize liquidity management and improve investment strategies and sustainability reporting quality to garner a better market response. Future research should consider incorporating additional variables like ownership structure, innovation, or external conditions.

KEYWORDS: Firm Value; Liquidity; Profitability; Sustainability Reporting; Investment Opportunity

INTRODUCTION

A. Background

In Indonesia, the food and beverage sector has experienced significant growth, contributing about 6.5% to the national GDP (BPS, 2023), positioning it as a highly attractive area for investments. Nevertheless, not all companies in this sector have optimal market value, as reflected in fluctuating stock prices and low market valuation ratios compared to book value (IDX, 2023).

Liquidity, which is the capability of a business to fulfill its short-term liabilities, is believed to be one of the factors that affect firm value. Brigham & Houston (2021) state that high liquidity reduces financial risk and is attractive to investors. However, McGowan et al. (2024) emphasize that excessive liquidity can signal inefficient asset allocation. This is supported by IDX data (2023), which shows that several companies with a Current Ratio above 2 have experienced stagnant firm value.

In addition, profitability is also considered to affect firm value. Febriyanti (2021) asserts that high ROA and ROE correlate with good market valuation. However, Ismayadi et al. (2024) emphasize that factors such as market perception and growth strategies also play a role.

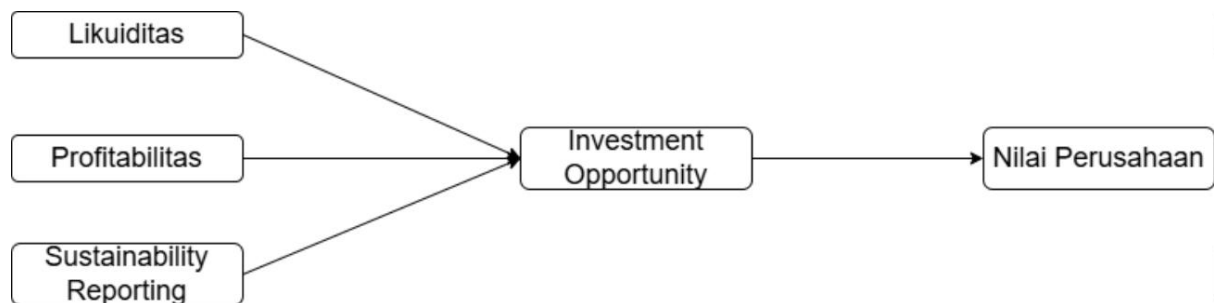
Attention to sustainability reporting has also increased along with regulations such as Law No. 40/2007 and OJK Regulation No. 51/2017. Studies by Putri & Miftah (2021) and Nugroho et al. (2022) show that good sustainability reporting increases investor trust, although its impact on firm value still varies across sectors.

Finally, investment opportunity is a potential variable that could strengthen or weaken the influence of these variables. Jensen (2016) states that greater investment opportunities enhance a firm's appeal, but if not managed properly, they can also pose risks (Valentinov, 2024).

This research aims to empirically assess how liquidity, profitability, and sustainability reporting affect the value of companies in the food and beverage sector listed on the Indonesia Stock Exchange (IDX) from 2021 to 2023.

RESEARCH FRAMEWORK AND HYPOTHESES

Employing investment opportunity as a moderating factor, the study adopts a quantitative methodology to investigate the effects of sustainability reporting, profitability, and liquidity on business value. The conceptual framework is designed based on relevant theories, forming a model that illustrates the relationships between the variables involved.



The research framework of this study refers to Signalling Theory (Spence, 1973), which states that financial statements and sustainability reporting serve as signals for investors. The more transparent the information disclosed, the greater its influence on firm value (Brigham & Houston, 2021). In addition, this study is also based on Agency Theory (Jensen & Meckling, 1976), which highlights the role of disclosure in reducing conflicts between management and shareholders.

Liquidity, which is the capability of a business to fulfill its short-term liabilities, is believed to be one of the factors that affect firm value. Within this framework, liquidity, profitability, and sustainability reporting serve as independent variables, while firm value is the dependent variable. Investment opportunity acts as a moderating variable, potentially amplifying or reducing the connections among these variables.

Based on theoretical frameworks and prior studies, this research proposes the following hypotheses:

- H1: Liquidity positively impacts a firm's value.
- H2: Profitability positively influences firm value.
- H3: Sustainability reporting enhances firm value.
- H4: Investment opportunities modify the connection between liquidity and firm value.
- H5: Investment opportunities influence the relationship between profitability and firm valuation.
- H6: Investment opportunities mediate the connection between sustainability reporting and firm value.

METHODOLOGY

A. Research Design

The study's research design is quantitative in nature, focusing on assessing the impact of liquidity, profitability, and sustainability reporting on firm value, with investment opportunity serving as a moderating element. Analytical processes rely on secondary data obtained from the financial statements of food and beverage companies listed on the IDX during the 2021-2023 period.

B. Population and sample

The focus population includes all food and beverage companies that were listed on the IDX from 2021-2023. This sector was chosen to observe the dynamics of financial performance and sustainability reporting practices amid intense industry competition.

Companies that regularly publish annual reports and sustainability reports for the years 2021-2023 and have comprehensive data on liquidity, profitability, firm value, and investment opportunity indicators are among the companies in the population that make up the research sample.

C. Sampling Technique

A purposive sampling technique is applied, which entails selecting samples based on specific criteria pertinent to the research aims. Consequently, only companies with data meeting the analytical requirements are included in the sample.

D. Data Collection Technique

The study is based on secondary data from the annual financial reports of food and beverage businesses listed on the Indonesian Stock Exchange (IDX) during 2021-2023. The data is collected from the official IDX website, company financial reports, and other pertinent documents. Various indicators measure the variables: liquidity is assessed with the Current Ratio (CR) and Quick Ratio (QR); profitability is evaluated using Return on Assets (ROA), Return on Equity (ROE), and Net Profit Margin (NPM); sustainability reporting is indicated by Market Value of Equity (MVE); investment opportunity is assessed via Market to Book Value of Equity (MBVE) and Capital Expenditure to Total Assets (CapEx Ratio); and firm value is quantified using Tobin's Q.

E. Data Source

The research makes use of secondary data obtained from annual reports, sustainability reports, and official financial documents available via the Indonesia Stock Exchange, ensuring the data's validity and reliability.

F. Data Analysis Technique

For the purpose of data analysis, moderated regression analysis (MRA) is employed to investigate both the direct effects of independent variables on firm value and the potential moderating influence of investment opportunities on these relationships. The analysis techniques encompass:

1. Descriptive Analysis, which offers statistical summaries of the research data, including the mean, standard deviation, maximum, and minimum for each variable.
2. Classical Assumption Tests, covering assessments for normality, multicollinearity, heteroscedasticity, and autocorrelation, to confirm that the data fulfill regression analysis criteria.
3. Multiple Regression Analysis, aimed at evaluating the direct impacts of liquidity, profitability, and sustainability reporting on firm value.
4. Moderation Analysis through Moderated Regression Analysis (MRA) to assess if investment opportunity amplifies or diminishes the associations between the independent variables and firm value.

RESEARCH RESULTS AND DISCUSSION

Research Results

A. Results of Moderated Regression Analysis (MRA)

This research employs two distinct regression models: (Model 1) without the moderating variable and (Model 2), which incorporates the moderating variable of investment opportunity. The results of each model test can be seen in the following table:

1. Regression Equation 1

Table 1
Persamaan Regresi

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-1.363	.836		-1.631	.105
	sustainability	.089	.057	.113	1.559	.121
	likuiditas	-.180	.044	-.291	-4.053	.000
	profitabilitas	-.025	.024	-.076	-1.064	.289

a. Dependent Variable: nilai perusahaan

Source: SPSS Output

In Table 1, the regression analysis reveals that among the three independent variables, only liquidity significantly affects firm value. With a liquidity coefficient of -0.180 and a significance level of 0.000, it indicates that as liquidity increases, there is a tendency for firm value to decrease. Meanwhile, the significance levels for sustainability reporting and profitability are 0.121 and 0.289, respectively, showing they do not have a significant impact on firm value.

Table 2

Model Summary

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.306 ^a	.094	.079	.38572

a. Predictors: (Constant), profitabilitas, likuiditas, sustainability

Source: SPSS Output

The first model overall strength is indicated by an R Square value of 0.094, revealing that approximately 9.4% of the variation in firm value can be attributed to the three variables, while the remaining 90.6% is due to other factors.

Table

Persamaan Regresi 2

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-1.870	1.549		-1.207	.229
	sustainability	.125	.106	.159	1.181	.239
	likuiditas	-.302	.093	-.489	-3.235	.001
	profitabilitas	.069	.053	.209	1.289	.199
	investment	-.268	.730	-.635	-.367	.714
	likuiditas*investment	-.074	.046	-.247	-1.601	.111
	profitabilitas*investment	.055	.027	.364	2.023	.045
	sustainability*investment	.019	.051	.649	.379	.705

a. Dependent Variable: nilai perusahaan

Source: SPSS Output

The results presented in Table 3 show that the liquidity variable continues to have a markedly negative influence on firm value, maintaining a significance level of 0.001. Notably,

in this particular model, the interaction between profitability and investment opportunity yields a significant result ($p = 0.045$). Conversely, the interactions between investment opportunity with both liquidity and sustainability reporting do not demonstrate significant effects, as their significance levels exceed 0.05.

Table 3
Model Summary

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.367 ^a	.135	.101	.38101

a. Predictors: (Constant), sustainability*investment, profitabilitas, likuiditas, sustainability, likuiditas*investment, profitabilitas*investment, investment

Source: SPSS Output

The R Square value in the second model rose to 0.135, suggesting that the addition of the moderating variable, investment opportunity, enhances the model's ability to account for variations in firm value, albeit slightly, when compared to the initial model.

B. Classical Assumption Test

Prior to the regression analysis, classical assumption tests were conducted to ensure the model meets statistical validity criteria. The following tests were performed:

1. Normality Test

Table 4
Uji Normalitas

One-Sample Kolmogorov-Smirnov Test

		Unstandardized Residual
N		189
Normal Parameters ^{a,b}	Mean	-.0063395
	Std. Deviation	.37965461
Most Extreme Differences	Absolute	.064
	Positive	.064
	Negative	-.059
Test Statistic		.064
Asymp. Sig. (2-tailed)		.056 ^c

a. Test distribution is Normal.

b. Calculated from data.

c. Lilliefors Significance Correction.

Source: SPSS Output

The results of the One-Sample Kolmogorov-Smirnov Test show that the residuals have an Asymp. Sig. (p-value) of 0.056, which is higher than 0.05. Therefore, there is insufficient evidence to reject the null hypothesis (H_0) that the residuals follow a normal distribution.

2. Multicollinearity Test

Table 5
Uji Multikolinearitas

Coefficients ^a	
Model	Collinearity Statistics

		Tolerance	VIF
1	sustainability	.925	1.081
	investment	.977	1.024
	likuiditas	.941	1.063
	profitabilitas	.952	1.051

a. Dependent Variable: nilai perusahaan

Source: SPSS Output

According to the multicollinearity test results in Table 6, all independent variables (sustainability, investment, liquidity, and profitability) present Tolerance values above 0.10 and VIF values below 10 (Tolerance ranges between 0.925 and 0.977, and VIF ranges from 1.024 to 1.081). This indicates the absence of multicollinearity issues within the model.

3. Heteroscedasticity Test

Table 6
Uji Heteroskedastisitas

		Coefficients ^a				
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.036	.546		-.067	.947
	sustainability	.021	.037	.042	.556	.579
	investment	-.017	.019	-.064	-.874	.383
	likuiditas	.055	.029	.144	1.918	.057
	profitabilitas	.001	.015	.007	.091	.928

a. Dependent Variable: ABSRES

Source: SPSS Output

Further analysis of the regression involving the dependent variable ABSRES (absolute residual) shows that all independent variables (sustainability, investment, liquidity, and profitability) have p-values greater than 0.05. This signifies the lack of a significant connection between the independent variables and absolute residuals, thus indicating no presence of heteroscedasticity in the regression model and satisfying the homoscedasticity assumption.

4. Autocorrelation Test

Table 7
Uji Autokorelasi

Model Summary ^b					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.329 ^a	.108	.089	.38366	1.816

a. Predictors: (Constant), profitabilitas, investment, likuiditas, sustainability

b. Dependent Variable: nilai perusahaan

Source: SPSS Output

The Durbin-Watson statistic of 1.816 falls within the acceptable range of 1.5 to 2.5, suggesting there is no autocorrelation in the regression model residuals, thus meeting the assumption of independent residuals.

5. t-Test

Table 8
Uji T

		Coefficients^a			t	Sig.
Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta		
1	(Constant)	-1.607	.843		-1.905	.058
	sustainability	.099	.057	.126	1.745	.083
	investment	-.051	.030	-.122	-1.731	.085
	likuiditas	-.173	.044	-.280	-3.907	.000
	profitabilitas	-.027	.023	-.081	-1.139	.256

a. Dependent Variable: nilai perusahaan

Source: SPSS Output

According to the t-test outcomes, liquidity demonstrates a significant negative impact on firm value ($p = 0.000$), aligning with the prior MRA findings. Both sustainability and investment exhibit t-values near significance but remain within the 0.05–0.1 threshold. However, profitability shows no significant influence.

6. F-Test

Table 9
Uji F

		ANOVA^a				
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3.289	4	.822	5.586	.000 ^b
	Residual	27.083	184	.147		
	Total	30.372	188			

a. Dependent Variable: nilai perusahaan

b. Predictors: (Constant), profitabilitas, investment, likuiditas, sustainability

Source: SPSS Output

The overall significance of the regression model is affirmed by an F-value of 5.586, surpassing the F-table value of 2.65, with a significance level of 0.000 (< 0.05). This indicates that all four variables collectively affect firm value.

Discussion

The research is focused on assessing how sustainability reporting, profitability, and liquidity influence the value of firms, and whether investment opportunities can enhance or weaken these effects. Key conclusions from previous analyses deserve further investigation.

1. Liquidity and Its Effect on Firm Value

The regression analysis indicates that liquidity significantly negatively influences firm value. This means that companies with higher liquidity ratios tend to have lower firm value. This may seem counterintuitive—commonly, the more liquid a company is, the safer and more attractive it should be. However, in this context, the result aligns with the view of Wiranda & Rahim (2020), who argue that excessively high liquidity may signal that the company is holding too many current assets without utilizing them productively.

From the perspective of Signaling Theory, investors respond to signals sent by the company (Sapuan et al., 2021). If a company is overly cautious and retains funds instead of using them for productive activities such as expansion or innovation, investors may interpret this as a lack of aggressiveness in pursuing growth. This may explain why firm value tends to decrease when liquidity is too high.

2. The Insignificance of Profitability in Determining Firm Value

Surprisingly, profitability does not significantly affect firm value within this model. Theoretically, profitability indicates a company's ability to generate profit, which is a crucial indicator for investors. Research by Wirayanti & Wirianata (2024) also states that companies with high ROA and ROE are usually valued higher by the market.

However, this result can be explained by several possibilities. First, investors may not only look at the amount of profit generated but also at how that profit is managed and used to support long-term growth. Second, profitability in the food and beverage industry may not always be stable due to seasonal factors, raw material prices, or intense market competition.

3. Sustainability Reporting That Has Yet to Show a Significant Effect

In this study, it appears that sustainability reporting does not significantly impact the value of a firm. This indicates that although companies are beginning to be transparent in disclosing sustainability aspects, the market does not yet fully respond to this information as a strong signal in determining firm value.

Yet, according to Adi (2023) and Ramadhani & Pranoto (2023), a company's transparency regarding ESG (Environmental, Social, and Governance) aspects should add value. However, this result may reflect that the quality of sustainability reporting among companies is still inconsistent, or that investors in Indonesia still regard sustainability issues as secondary considerations after core financial factors.

4. Investment Opportunity as a Moderating Variable

Notably, investment opportunity emerges as a significant moderating variable. It shows that investment opportunity effectively moderates the link between profitability and firm value. Thus, investors react more positively to firms that not only show high profits but also possess promising investment prospects, enhancing firm value.

This finding aligns with Financial Performance Theory, suggesting that financial performance is more impactful when coupled with clear growth prospects (Ahmad et al., 2022). A profitable yet stagnant company might be less appealing, while a profitable company with expansion plans is more highly valued.

However, investment opportunity does not amplify the impact of liquidity or sustainability reporting on firm value. This suggests that even with investment opportunities, inadequate liquidity management or poor sustainability reporting does not boost market valuation.

5. General Overview of the Research Model

The classical assumption tests show that all models meet statistical criteria, so the regression results can be considered valid. The F-test also confirms that the overall model is significant, meaning the four variables in this study collectively do affect firm value.

However, the relatively low R Square values, both in the first model (9.4%) and the second model (13.5%), indicate that many other factors outside this model contribute to firm value. This paves the way for future research to investigate additional factors such as firm size, capital structure, innovation intensity, or macroeconomic circumstances.

CONCLUSION AND IMPLICATIONS

This study shows that liquidity has a significant negative effect on firm value. This means that companies with excessively high liquidity levels tend to have lower market value. This outcome underscores the importance of balancing the management of current assets to avoid hindering the company's value growth. Profitability and sustainability reporting have not been proven to have a significant direct effect on firm value in the context of the food and beverage sector in Indonesia during the 2021–2023 period.

When the investment opportunity variable is introduced as a moderator, the link between profitability and company value becomes significant. This suggests that the market values a company's earnings more when they are paired with optimistic investment prospects. On the other hand, the combination of investment opportunity with either liquidity or sustainability reporting does not yield significant outcomes, meaning investment opportunities by themselves aren't strong enough to change how these two factors affect firm value.

Based on these findings, several implications can be noted. Companies need to not only keep their liquidity at a secure level but also ensure that available resources are allocated efficiently to enhance long-term growth. Increased profitability should align with well-defined strategies for business growth to enhance perceived value for investors. For companies engaged in sustainability reporting, maintaining consistency and comprehensive reporting practices is crucial for it to serve as an effective positive market signal.

Future research should consider additional variables, such as company size, ownership structure, business strategy, or macroeconomic factors. This is crucial to deepen the understanding of elements impacting firm value, especially in navigating the constantly changing industry environment.

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