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Do Profitability and Investment Opportunities Signal Firm Value? Evidence From Indonesia's Consumer Non-Cyclicals Sector

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Abstract

This research investigates how Profitability, measured through Return on Assets (ROA), and Investment Opportunity Set, assessed via Market Value to Book Value of Equity (MVBVE), influence Firm Value as indicated by Price to Book Value (PBV). The study addresses fluctuations in Firm Value driven by Profitability metrics and Investment Opportunity Set. Employing a quantitative methodology with causal-comparative design, the research utilized secondary data from 125 consumer non-cyclicals enterprises listed on the Indonesia Stock Exchange between 2019 and 2023. Through purposive sampling, 36 companies were selected, and analysis was conducted using PLS-SEM methodology via WarpPLS 8.0 software. Results demonstrate that both Profitability and Investment Opportunity Set exert positive and statistically significant impacts on Firm Value. This study enhances signaling theory understanding within Indonesia's capital market framework.

Keywords: Financial Performance and Firm Value

Introduction

Indonesia's consumer non-cyclicals sector serves as a cornerstone for economic stability by manufacturing essential products including food items, beverages, household necessities, and daily consumables. These products maintain consistent demand across varying economic cycles, rendering the sector particularly resistant to economic volatility and attractive for long-term investment strategies. Firm Value within this sector responds to multiple internal and external variables, encompassing asset expansion, ownership composition, and Profitability metrics.

Nevertheless, existing empirical research reveals contradictory results concerning the connections between Profitability, Investment Opportunity Set (IOS), and Firm Value. These inconsistencies generate uncertainty regarding the degree to which individual factors impact Firm Value, especially within the consumer non-cyclicals sector that substantially contributes to national economic development.

This research seeks to empirically investigate the influence of Profitability and IOS on Firm Value. The outcomes are anticipated to advance academic understanding of financial theories, particularly signaling theory, while providing practical guidance for investors and corporate leadership in strategic decision-making and establishing groundwork for subsequent research endeavors.

Literature Review

Signaling Theory Framework

The signaling theory, originally conceptualized by Spence (1973) and subsequently expanded by Ross (1977), elucidates how organizations communicate information reflecting their genuine condition to investors amid information asymmetry between stakeholders and management. According to Purba (2023), this theory emphasizes that superior companies deliberately transmit reliable signals to the marketplace to distinguish themselves from inferior competitors, contingent upon market acceptance and imitation difficulty of these signals.

Corporate Value Conceptualization

Corporate value embodies the market's evaluation of an organization's performance and future potential. Sujoko and Soebiantoro (referenced in Ningrum, 2022:20) characterize firm value as investors' perception regarding a company's success level as manifested in stock pricing. This study employs Price to Book Value (PBV) ratio as the firm value proxy, measuring the correlation between market price per share and book value per share.

$$PBV = \frac{Market\ Price\ per\ Share}{Book\ Value\ per\ Share}$$

Profitability Assessment

Profitability encompasses an organization's capacity to generate earnings through operational activities. Ermaini et al. (2021) conceptualize profitability as a financial metric demonstrating organizational effectiveness in profit generation utilizing available assets or capital. Enhanced profitability ratios signify superior organizational performance through increased profit creation. This research utilizes Return on Assets (ROA) as the profitability indicator, comparing net income against total assets to demonstrate asset utilization efficiency in profit generation.

$$ROA = \frac{Net\ Income}{Total\ Assets}$$

Investment Opportunity Set (IOS) Framework

The Investment Opportunity Set encompasses the array of future investment possibilities available to an organization. IOS represents the integration of current assets (existing assets) and future investment alternatives. Malik and Kadarningsih (2023:24) describe IOS as the amalgamation of a company's present assets and prospective investment options. Organizations demonstrating robust performance typically attract investor attention for investment purposes, consequently, firms exhibiting elevated IOS indicate promising investment potential.

This study measures IOS using Market Value to Book Value of Equity (MVBVE) ratio:

$$MVBVE = \frac{((Total\ Assets - Total\ Equity) + (Outstanding\ Shares\ x\ Share\ Price))}{Total\ Equity}$$

Theoretical Relationships and Hypothesis Development

Signaling theory suggests that firms possessing superior internal information compared to investors will issue specific signals to minimize information asymmetry. These signals may encompass positive financial indicators, including elevated profitability or robust investment decisions. Investors interpret these signals as company quality and growth prospect indicators, subsequently influencing investment decisions and market valuation.

Elevated profitability signals robust financial performance and efficient asset management. This perspective receives support from Mei Diah (2020), who discovered ROA's positive and significant impact on firm value. Such performance demonstrates organizational capability to generate consistent and sustainable profits, enhancing investor confidence and resulting in increased share demand, rising stock prices, and enhanced firm value. However, this finding contrasts with Boen and Sudirgo (2023), who reported profitability's negative and significant influence on firm value.

Similarly, elevated Investment Opportunity Set (IOS) signals numerous promising investment prospects, suggesting organizational growth phase with strong return potential. Dewi and Purnamawati (2024) provided evidence of IOS's positive effect on firm value. Investors perceive such signals as long-term potential indicators, leading to increased market expectations and share prices, consequently elevating firm value. These findings contradict Kolibu et al. (2020), who concluded IOS's negative effect on firm value.

Research Hypotheses

Profitability Demonstrates on Firm Value

Profitability reflects a company's efficiency in generating earnings relative to its resources, which directly impacts market perception and valuation. Higher profitability signals strong operational performance, greater cash flow generation, and enhanced ability to deliver returns to shareholders, thereby increasing firm value. Empirical evidence supports that profitability significantly contributes to firm value across various industries, as it reduces financial risk and enhances investor confidence (Alarussi & Alhaderi, 2021; Sholihin et al., 2022).
H_1: Profitability demonstrates a positive and significant relationship with firm value.

Investment Opportunity Set on Firm Value

The Investment Opportunity Set (IOS) represents the range of profitable projects and growth options available to a firm, reflecting its potential for future expansion. Firms with a higher IOS are perceived as having stronger growth prospects, which positively influences market valuation. Studies have found that a higher IOS correlates with increased firm value because it signals sustainable growth potential and efficient capital allocation (Rahmawati et al., 2020; Zhang & Chen, 2023).
H_2: Investment Opportunity Set (IOS) exhibits a positive and significant relationship with firm value.

Research Methodology

Research Design

This investigation employed a quantitative approach, commonly utilized in financial and economic research to analyze independent variables' effects on firm value. This methodology was selected for its capability to provide objective and statistical perspectives on examined variable relationships. A causal-comparative research design was implemented to identify cause-and-effect relationships between variables.

Population and Sample

The study population comprised all food and beverage manufacturing companies listed on the Indonesia Stock Exchange (IDX) during 2019-2023, totaling 125 firms. Utilizing purposive sampling methodology, 36 companies meeting specific criteria were selected as the research sample.

Data Collection and Variables

Secondary data were obtained from company annual reports accessed through the official IDX website. The data collection process was conducted systematically and verified to ensure validity.
The study examined two independent variables:

1. Profitability: Proxied by Return on Assets (ROA)
2. Investment Opportunity Set (IOS): Proxied by Market Value to Book Value of Equity (MVBVE)

The dependent variable was:

1. Firm Value: Proxied by Price to Book Value (PBV)

Data Analysis Technique

Data analysis was conducted using Partial Least Squares Structural Equation Modeling (PLS-SEM) with WarpPLS 8.0 software. The analytical procedures included measurement model evaluation, reliability and validity testing, and hypothesis examination. PLS-SEM was chosen due to its strong relevance in analyzing complex relationships among latent variables and suitability for studies with medium sample sizes, particularly effective in handling non-normal data distributions.

Results and Discussion

This study analyzes the influence of Profitability (ROA) and Investment Opportunity Set (MVBVE) on Firm Value (PBV) using

Model Goodness of Fit (GoF)

Table 1. Goodness of Fit (GoF)

Criterion	Parameter	Rule of Thumb	Conclusion
Average Path Coefficient (APC)	P < 0,001	Acceptable P< 0.05	Accepted
Average R-squared (ARS)	P < 0,001	Acceptable P< 0.05	Accepted
Average Adjusted RSquared (AARS)	P < 0,001	Acceptable P< 0.05	Accepted
Average Block VIF (AVIF)	1,011	Acceptable if ≤ 5, ideally ≤ 3.3	Accepted, Ideal
Average Full Collinearity VIF (AFVIF)	2,229	Acceptable if ≤ 5, ideally ≤ 3.3	Accepted, Ideal
Tenenhaus GoF (GoF)	0,833	Small ≥ 0.1, medium ≥ 0.25, large ≥ 0.36	Accepted, Large
Sympson's Paradox Ratio (SPR)	1,000	Acceptable if ≥ 0.7, ideally = 1	Accepted, Ideal
R-Squared Contribution Ratio (RSCR)	1,000	Acceptable if ≥0.9, ideally = 1	Accepted, Ideal
Statistical Suppression Ratio (SSR)	1,000	Acceptable if ≥ 0.7	Accepted

Source: Author's analysis using WarpPLS 8.0 output (2025)

The results indicate excellent model fit with empirical data. All APC, ARS, and AARS values demonstrate statistical significance ($p < 0.001$), while the Tenenhaus GoF value of 0.833 confirms robust model predictive capability. Multicollinearity and suppression effects are absent, as evidenced by acceptable AVIF (1.011), AFVIF (2.229), SSR (1.000), and RSCR (1.000) values.

Model Feasibility Test (Collinearity, R-Squared, Q-Squared)

Table 2. Model Feasibility Test

	ROA	MVBVE	PBV
Full Collin. VIF	1,265	2,561	2,861
Adj. R-squared			0,690
Q-squared			0,699

Source: Author's analysis using WarpPLS 8.0 output (2025)

Multicollinearity testing reveals the research model lacks serious multicollinearity concerns. Full Collinearity VIF values for all variables remain below the 5.0 threshold, with ROA demonstrating 1.265, MVBVE showing 2.561, and PBV exhibiting 2.861. These low VIF values indicate minimal correlation among independent variables, ensuring accurate and reliable model estimates.

The model fit demonstrates exceptional results with an Adjusted R-squared value of 0.690, indicating that 69% of dependent variable variation can be explained by independent variables after adjusting for predictor quantity. The Q-squared value of 0.699 demonstrates strong model predictive capability, indicating high predictive relevance and effective prediction of unobserved values.

Effect Size

Table 3. Effect Size

Description	Effect Size	VIF
ROA → PBV	0,338	1,265
MVBVE → PBV	0,727	2,561

Source: Author's analysis using WarpPLS 8.0 output (2025)

The analysis reveals Investment Opportunity Set (IOS), proxied by MVBVE, demonstrates the most substantial influence on Firm Value with an effect size of 0.727, categorized as a strong effect. This finding indicates that organizational future investment opportunities significantly impact investor perceptions of firm value. Conversely, profitability measured through ROA exhibits moderate firm value impact with an effect size of 0.338.

Significance Test and Path Coefficients

Table 4. Significance Test and Path Coefficients

Path Description	Path Coefficient	P-Value
ROA → PBV	0.338	P< 0.001
MVBVE → PBV	0,727	P< 0.001

Source: Author's analysis using WarpPLS 8.0 output (2025)

Path analysis demonstrates that both independent variables exert positive and significant effects on Firm Value (PBV). The profitability variable (ROA) exhibits a path coefficient of 0.338 with p-value < 0.001, indicating positive and statistically significant effect on PBV at 99.9% confidence level. This implies that one-unit ROA increase results in 0.338-unit PBV increase.

Investment Opportunity Set (MVBVE) demonstrates substantially higher path coefficient of 0.727 with p-value < 0.001, indicating positive and highly significant firm value effect. This coefficient suggests one-unit MVBVE increase leads to 0.727-unit PBV increase.

Discussion

Profitability's Impact on Firm Value

Analysis results show ROA demonstrates statistical significance at $p < 0.001$ with path coefficient 0.338. These findings indicate H_1 acceptance while H_0 rejection. This signifies that profitability, measured through ROA, exerts positive and statistically significant effect on firm value among consumer non-cyclical sector companies listed on IDX.

Research findings align with signaling theory proposed by Spence (1973), positing that elevated profitability serves as positive signal to investors regarding organizational financial health and future prospects. Superior profitability demonstrates strong organizational performance and favorable future growth opportunities, attracting investor interest in capital allocation. As more investors allocate capital to firms, corporate value subsequently increases. These findings align with prior research by Ayerza (2019), demonstrating profitability's positive and significant firm value effect.

Investment Opportunity Set's Impact on Firm Value

Research findings demonstrate MVBVE exhibits significance value <0.001 and path coefficient 0.727. These results indicate H_2 acceptance and H_0 rejection. This signifies investment opportunity set, measured through MVBVE, has positive and statistically significant effect on firm value among consumer non-cyclical sector companies listed on IDX.

These findings align with signaling theory, positing that organizations possessing numerous favorable investment opportunities tend to convey positive signals to potential investors. When companies demonstrate promising investment opportunities, investors perceive such firms as having strong growth prospects, ultimately enhancing firm value. Study findings align with previous research by Dewi and Purnamawati (2024), who found Investment Opportunity Set's positive and significant firm value effect.

Empirical evidence supports theoretical propositions that market participants interpret organizational Investment Opportunity Set as credible future performance and growth potential signals. This signaling mechanism enables companies with superior investment opportunities to distinguish themselves from competitors, commanding higher market valuations.

Conclusion

This research reveals that Profitability (ROA) and Investment Opportunity Set (IOS), proxied by MVBVE, both demonstrate significant positive impact on Firm Value (PBV). The most significant finding indicates IOS exerts stronger influence than ROA on firm value, highlighting market expectations' role regarding future investment prospects as key firm valuation drivers.

The research contributes to signaling theory strengthening, where financial indicators such as ROA and MVBVE serve as positive investor signals about organizational performance and growth potential. However, this study has limitations, including restricted data scope focusing exclusively on Consumer Non-Cyclicals sector firms during 2019-2023, and purposive sampling usage, potentially limiting result generalizability.

Future researchers are encouraged to expand industrial scope and time periods, including additional variables such as ownership structure, leverage, and corporate governance quality to achieve comprehensive understanding of firm value affecting factors. Subsequent studies could apply longitudinal or mixed-method approaches to achieve deeper variable relationship insights.

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