



Investment Decisions and Firm Value: The Moderating Role of Profitability

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ABSTRACT

Firm value (FV) describes the performance of management in carrying out the work entrusted to them by shareholders related to company management. Shareholders expect increasing FV because it can achieve the company's goal of maximizing its welfare. The study investigates the influence of investment decision factors and asset turnover (TATO) and the role of Profitability (ROA) as a moderator variable on FV. The research sample includes 32 property and real estate sector companies listed on the Indonesia Stock Exchange (IDX) for 2018-2022. The estimation method applied is a panel data regression model that includes common, random, and fixed effects to test the research hypothesis. Fixed effect model (FEM) estimation based on selected diagnostic tests to test the research hypothesis. Investment decisions proxied by the price-earnings ratio (PER) in the model with ROA moderator, directly without interaction, have a negative impact on FV. Still, the interaction between PER and ROA has a positive but insignificant effect. Conversely, PER does not affect FV without the role of the ROA moderator. TATO, which measures efficiency, positively impacts FV in both models without and with the role of the ROA moderator. On the other hand, TATO has a negative impact on FV if it interacts with ROA. ROA directly without interaction is negatively related to FV. ROA, which acts as a moderator variable, can only moderate TATO negatively on FV.

Keywords: Firm Value, Investment Decisions, Asset Turnover, Profitability, Property and Real Estate Sector

JEL Classifications: G11, G32, L85

1. INTRODUCTION

Indonesia's property and real estate sector is essential for economic growth. The contribution of the property and real estate sector to the national economy in 2021 was IDR 468.22 trillion (USD 29.85 trillion) (BPS-Statistics Indonesia, 2022). On the other hand, in the past 3 years, companies in the property and real estate sectors have performed poorly. During 2020-2023, the property and real estate sector experienced an average decline in company value from 2.46% in 2020 to 1.47% in 2023. The decrease in company value is certainly not expected by shareholders. Firm Value (FV) describes the performance of management in carrying out the work entrusted to them by shareholders regarding company management (Park and Byun, 2022). An increase in FV is something that shareholders expect because it impacts their welfare. Maximizing FV is a trade-off

from the maximum value of the company received by shareholders in the long term (Jensen, 2010).

Investment decisions (PER), asset turnover (TATO), and Profitability (ROA) are essential factors that determine FV (Mills et al., 1995). PER is an investment with the hope of making a profit in the future. The PER made by the company depends on the expenditures set by management in the future, which are investment choices that are expected to generate greater profits (Hasanuddin et al., 2021). In addition to investment decisions, asset turnover, or the asset turnover ratio (TATO), is a factor in FV. As one of the activity ratio indicators, TATO measures the turnover of all company assets and calculates them by dividing sales by total assets. TATO reflects the company's ability to manage its assets efficiently to support sales activities (Gunadi et al., 2020; Kurniani, 2021). Investors are interested in buying company

shares because faster asset turnover supports net sales activities and increases profits. Profit is a measure of profitability that also has an impact on FV. Profitability is the company's ability to generate profits using capital during a specific period (Voulgaris et al., 2002). Based on signal theory, the higher the company's profit, the better the signal for investors so that it can increase FV. Harahap et al. (2020) stated that increasing profit means better company prospects, thus motivating investors to invest.

Studies related to the influence of PER on FV have been a topic of debate for the past few decades. Research patterns conducted in the 1990s showed that PER could increase FV (Bajo et al., 1998; Dos Santos et al., 1993). Furthermore, research in the 2000s showed that PER tended to suppress the increase in FV (Del Brio et al., 2003; Lin and Kulatilaka, 2007). In the 2010s, a pattern was found indicating that the rise in FV was caused by PER (Schoenmaker and Schramade, 2019; Efni, 2017). Based on the observed pattern, it is concluded that FV can be increased through PER. Signaling theory is the theoretical basis for PER (Alghifari et al., 2022). This theory explains that investment spending is a positive signal that results in future company growth, which impacts profits and increased FV (Sun and Chen, 2017).

Different empirical findings are proven in several studies conducted in Indonesia. Resti et al. (2019) and Syamsudin et al. (2021) show that PER positively affects FV. Different research results were presented by Triani and Tarmidi (2019) and Attarie et al. (2018), showing that PER does not affect FV. Empirical evidence of the influence of TATO is also contradictory. Research conducted by Bon and Hartoko (2022) and Firdaus (2023) found that TATO affects FV. Meanwhile, research by Nissim and Penman (2021), Borhan et al. (2014), and Martani et al. (2009) found that TATO does not affect FV. ROA directly affects FV and acts as a moderator variable of PER, and TATO can strengthen its impact on FV. Research by Suteja et al. (2023) revealed that the moderating role of ROA has a negative effect on PER on FV; on the other hand, Budiharjo (2021) and Rahmantari et al. (2019) proved that ROA was unable to moderate the effect of PER on FV. Based on the gap in empirical studies, this study is novel in developing a model that includes the moderator variable ROA. Several previous studies used moderator variables to test the effect of PER on FV, such as corporate governance (Ardini and Adhitya, 2022; Juwinta et al., 2021) and dividend policy (Akhmadi and Januarsi, 2021). This study adds ROA as a moderator variable, a novelty and differentiator from previous empirical studies. Another contribution is that most related studies are conducted in developed countries, so the findings cannot necessarily be applied in developing countries, including Indonesia.

2. LITERATURE REVIEW AND HYPOTHESES

2.1. Investment Decisions and Firm Value

Investment decisions are related to decisions to allocate capital to various asset purchase activities to increase production and thus gain profits as expected in the future (Yanti and Endri, 2024). Therefore, investment decisions are essential for companies

to ensure sustainability and achieve the best performance in increasing FV. The Price and Earnings Ratio (PER) is widely used to indicate investment decisions because it provides investors with guidelines for assessing the company's future profit prospects. Saif Ul Islam et al. (2022) found that a company's PER significantly affects FV. Tubastuvi et al. (2024) proved that an increase in PER increases FV. Signaling theory confirms that the company's decision to increase investment gives a positive signal to the market and investors. Company management conveys a signal regarding the company's confidence in the company's future growth prospects with investments made that can increase stock prices and FV. Salehi et al. (2022) confirmed a positive relationship between investment efficiency and FV. Endri (2019) revealed that investment opportunities positively impact FV. Bon and Hartoko (2022) confirmed a significant positive relationship between PER and FV. Thus, the research hypothesis is:

H1: PER has a positive impact on FV

2.2. Profitability and Firm Value

Profitability is an essential indicator for shareholders to assess management performance in managing company assets to generate high profits and increase FV. Therefore, companies must be able to optimize the use of resources efficiently to generate maximum profits. Return on assets (ROA) is a proxy that is widely used to measure profitability, and it is also used as an indicator of financial performance. According to signaling theory, the achievement of a company's financial performance provides investors with a sign of a better prospect for the company, which impacts increasing stock prices and ultimately increasing FV. Berggrun et al. (2020) revealed that companies with higher ROA will likely invest in many assets to increase FV. Endri et al. (2019) confirmed the effect of ROA on the company's market value. Hutaauruk (2024), Bon and Hartoko (2022), Jihadi et al. (2021), Sudiyatno et al. (2020), Fathony et al. (2020), and Iswajuni et al. (2018) proved that ROA has a positive and significant effect on FV. Keter et al. (2024) found that financial performance (ROA) positively and significantly impacts FV. Thus, the research hypothesis is:

H2: ROA positive impact on FV

2.3. Asset Turnover and Firm Value

Asset turnover, also called total asset turnover ratio (TATO), is an important indicator to measure the company's ability to generate income with available assets. If the TATO value is high, it indicates optimal utilization of resources so that the company can generate marginal income from a more significant asset value per unit of rupiah. TATO also reflects the company's efficiency in utilizing existing assets to increase sales and generate high profits and the implications of an increase in FV. High TATO is also a positive signal for the market, attracting investors to increase their investment. Ni et al. (2021) stated that high TATO has a better FV. Hasangapon et al. (2021), Harahap et al. (2020), and Kausar et al. (2014) found a positive relationship between TATO and FV. Thus, the research hypothesis is:

H3: TATO has a positive impact on FV

2.4. Moderating Role of ROA

Companies with high ROA result from efficiently using assets in production activities to generate profits. High profit is

undoubtedly a concern for investors when making investment decisions to increase capital in the company. High demand for shares causes an increase in FV. Suteja et al. (2023) proved the negative effect of PER on FV, and the role of CSR and ROA further strengthened the relationship. Saif Ul Islam et al. (2022) revealed that cash flow negatively moderates the relationship between PER and FV. Aimomani et al. (2022) proved that ROA plays a moderating role in the relationship between the influence of debt in the capital structure on the company's market value. Fatima et al. (2023) revealed the negative effect of ROA on FV after moderation by capital structure. Sudiyatno et al. (2020) revealed that ROA is an intervening variable mediating the relationship between total assets and FV. Natsir and Yusbardini (2020) found that ROA can mediate the effect of company size and capital structure on FV. Mangku et al. (2024) found that ROA affects FV, which is moderated by free cash flow. Almahadin and Oroud (2020) revealed that the interaction effect of ROA with the debt ratio as a combined factor strengthens its effect on FV. Thus, the research hypothesis is:

H4: ROA positively moderates the relationship between PER and FV.

H5: ROA positively moderates the relationship between TATO and FV.

3. METHODOLOGY

3.1. Samples and Data

The study investigates the impact of the role of the moderator variable ROA interacting with PER and TATO on FV in 32 property and real estate sector companies listed on the Indonesia Stock Exchange (IDX) for 2018-2022. The sampling method uses a purposive sampling technique based on three established criteria: (1) the company is still listed until 2022, (2) conducting an IPO before 2018, and (3) complete data is available according to the research variables. The research data were collected from the company's annual financial reports, *the Indonesian Capital Market Directory* (ICMD), and BEI. Based on the three sample selection criteria from 79 companies listed on BEI until 2022, 32 property and real estate sector companies were selected as research samples. Thus, because the study uses panel data, where there are 5 years of observation period and 32 companies, there are 160 observations.

3.2. Measurement of Variables

3.2.1. Firm values

The study uses Firm Value (FV) as the dependent variable. Based on the objectives, the study empirically proves the influence of PER and TATO moderated by ROA. Maximizing FV is the company's primary goal, impacting the welfare of its owners and investors. The measurement of FV in the empirical study literature uses various proxies. This study uses a market-based indicator, namely the ratio of stock price to book value of equity (PBV). PBV can help investors assess company performance and stock prices. PBV is also used to determine the fair value of a stock. A PBV with one value indicates that the stock price is traded based on the company's book value and is also considered fair. Companies with high PBV indicate high stock prices. Otherwise, they are considered cheap.

3.2.2. Investment decisions

Investment decisions are related to decisions involving an investment of various company resources by providing maximum profit for its investors. Investors are interested in investing their capital in a company if its financial performance is healthy and offers high returns on investment. As a guideline for investors to assess the company's future profit prospects, one widely used measurement is the Price and Earnings Ratio (PER). PER is the relationship between a company's stock price and earnings per share. PER reflects market expectations and is the price investors must pay per unit of profit (Pietrovito, 2016). A high PER is believed to motivate companies to increase their investment, attracting investors to increase stock purchases in the hope of profit from future profit growth.

3.2.3. Asset turnover ratio

The asset turnover ratio, often referred to as the total asset turnover ratio (TATO), shows a company's efficiency in allocating its assets to generate sales. TATO is calculated by dividing total sales by the total or average assets of the company. A company with a high TATO means that it is operating more efficiently and can increase sales. TATO is a calculation of overall asset turnover because of its broad scope and can be used in various business sectors.

3.2.4. Profitability

Return on assets (ROA) as a proxy for profitability. In addition to being an independent variable that directly determines FV, it also acts as a moderator variable for PER and TATO. ROA is also often used as an indicator of financial performance, which is measured as the company's net operating profit divided by total assets. High ROA, when viewed from the management's perspective, means that the company has efficiently used assets and increased its sales. For investors, a high ROA is a positive signal for making investment decisions so that stock prices increase. The increase in the company's stock price increases FV and the welfare of the company's owners.

3.3. Estimation Model Specification

It tests the relationship between PER, TATO, and FV moderated by ROA specified in two-panel regression model estimation equations. The dependent variable is FV, and the explanatory variables consist of PER, TATO, and ROA. ROA also acts as a moderator variable that interacts with PER and TATO, respectively. Therefore, the study considers two models without and with moderation. Model 1 tests the effect of PER, TATO, and ROA on FV.

$$FV_{it} = \beta_0 + \beta_1 PER_{it} + \beta_2 TATO_{it} + \beta_3 ROA_{it} + \text{Industry dummies} + \text{Year dummies} + \epsilon_{it} \quad (1)$$

Model 2 tests the influence of PER and TATO both directly and interacting with the moderator ROA on FV.

$$FV_{it} = \beta_0 + \beta_1 PER_{it} + \beta_2 TATO_{it} + \beta_3 PER_{it} \times ROA_{it} + \beta_4 TATO_{it} \times ROA_{it} + \text{Industry dummies} + \text{Year dummies} + \epsilon_{it} \quad (2)$$

FV is measured using the price-to-book value (PBV) ratio, which is calculated by dividing the stock's market price by the company's book value. PER is measured by dividing the company's stock

price by earnings per share. TATO is measured by dividing total sales by the total or average assets of the company. ROA is a proxy for profitability calculated by dividing profit after tax by the company's total assets. $PER \times ROA$ and $SIZE \times ROA$ are interactions with ROA as moderators that moderate the effect of PER and TATO on FV. Finally, industry and year dummies express unobserved industry-fixed and time-specific effects that vary over time and are expected for all companies in the study sample.

This study uses panel data regression methods, including *Pooled Ordinary Least Squares* (Pooled OLS), *Fixed Effect Model* (FEM), and *Random Effect Model* (REM). Panel data analysis is a form of longitudinal data that is very popular in finance for investigating corporate behavior and reactions. Diagnostic testing is carried out to determine the most appropriate method to investigate the effects of PER, TATO, and ROA in models 1 and 2 on FV. On this basis, three tests are carried out: First, the Breusch–Pagan multiplier test (LM test) is carried out to choose between Pooled OLS estimation and REM. Second, if there is a panel effect, the Hausman test is selected between the FEM and REM models. The test determines whether there is a significant correlation between the specific unobserved random effects and the regression. Third, the *Chow Test* to determine whether the model used is OLS or FEM Aminda et al. (2024).

4. RESULTS AND DISCUSSION

4.1. Descriptive Statistics

Table 1 presents a statistical summary based on the indicators of average, maximum, minimum, standard deviation, skewness, and kurtosis values for the variables analyzed for the impact of PER and TATO on FV of the property and real estate sector in Indonesia for the period 2018–2022 which is moderated by the ROA variable. FV measured by price book value (PBV) shows an average value of 0.451 times, a maximum value of 1.413, and a minimum of -0.97 . The average PBV value below one indicates *undervalued*, where the stock price is traded below the company's book value. ROA has an average value of 0.0096, a maximum value of 0.108, and a minimum of -0.120 . The ROA range (-0.120 - 0.108) indicates that many property and real estate sector companies are making low profits, and some are even making losses. Only a few companies are making a profit. TATO has an average value of 0.144, with a range of values of 0.003-0.520. The relatively low average TATO value reflects that most companies in the property and real estate sector in Indonesia are still inefficient in using their assets, which impacts the low average ROA.

PER has an average value of 5,678 times, with a range of values from $-84,404$ to 10,120. The wide range of the lowest and highest values indicates a high inequality in market value and company profits. This indication is also shown by the highest standard

deviation figure of PER, which means it is more volatile than other variables. ROA has the most diminutive standard deviation figure, which means its volatility is relatively low. The slope results show a positive value for TATO, indicating that upward movements occur more often than downward movements. Conversely, FV, PER, and ROA show negative slope coefficients, implying that downward movements occur more often than upward movements. Kurtosis statistics show that all research variables display a leptokurtic distribution with a value >3 , which means a normal data distribution.

4.2. Correlation Analysis

Table 2 presents the correlation matrix between variables in pairs. Based on the correlation analysis of six pairs of variables, it shows a weak relationship between variables. The highest positive correlation between PER and ROA is 0.3604, while the lowest positive correlation between FV and PER is 0.092. The correlation results also reveal positive coefficients for the six pairs of relationships between variables in the research model estimation.

4.3. Results Estimation

4.3.1. Impact of PER, TATO, and ROA on firm value

Panel data regression estimation on FV is conducted on two research models: Model one without moderation and model two with moderation. The panel data regression model uses three methods, namely OLS, FEM, and REM. Table 3 presents the diagnostic results of model selection based on the LM test, F-test, and Hausman, which conclude that FEM is the most appropriate method. Thus, the interpretation and Analysis of the study are based on the results of the FEM estimation. Table 4 presents the estimation of the panel data regression model for the OLS, FEM, and REM methods with different results.

The proper FEM method chosen for analysis proves that the ROA estimation coefficient has a negative effect on FV, which means that FV increases if ROA decreases. The TATO estimation coefficient positively affects FV, which indicates that the more efficiently the company uses its assets, the more it can increase FV. The PER estimation coefficient does not affect FV, meaning that investment decisions are independent of FV.

4.3.2. Analysis of the moderating effect

Tables 5 and 6 present the results of the estimated impact of PER and TATO on FV by making ROA a moderator variable. The results of the diagnostic test of the selection of the panel data regression model, then FEM is the proper method to analyze. The results of statistical testing with a 99% confidence level prove that PER directly without interaction has a negative and significant effect on FV. These results indicate that if PER increases, it will impact decreasing FV. Different test results show that if PER interacts

Table 1: Description statistics

Variables	Mean	Median	Max.	Min.	Std. Dev.	Skewness	Kurtosis
FV	0.4507	0.3915	1.4129	-0.9700	0.3684	-0.7836	6.1150
PER	0.3422	5.6780	20.1200	-84.4036	17.2992	-1.8153	7.3363
ROA	0.0096	0.0097	0.1083	-0.1195	0.0453	-0.2935	3.1073
TATTOO	0.1392	0.1437	0.5200	0.0025	0.0952	0.8589	3.9189

Table 2: Correlation matrix

	FV	PER	ROA	TATO
F V	1			
PER	0.0929	1		
ROA	0.1103	0.3604	1	
TATTOO	0.2346	0.2205	0.3119	1

Table 3: Diagnostic test results without moderation

Effects test	Statistics	Prob	Results
LM test	70.0186	0.0000	Random>pooled
F test	7.4588	0.0000	Fixed>pooled
Houseman	15.7197	0.0013	Fixed>random

Table 4: Comparison of three OLS panel models, FEM, and REM without moderation

Variable	OLS	FEM	REM
PER	0.0007 (0.4047)	-9.43E-05 (-0.0693)	3.26E-05 (0.0245)
ROA	0.2454 (0.3506)	-3.9881*** (-4.6034)	-2.2710* (-3.1724)
TATO	0.8417** (2.6405)	1.9344 * ** (3.7897)	1.2697 (3.2984)
Constant	0.3308*** (6.4044)	0.2197*** (3.1791)	0.2957*** (4.2074)
Observations	160	160	160
R-squared	0.0576	0.6692	0.0785
Adjusted R-squared	0.0394	0.5793	0.0607
F-test	3.1746**	7.4403***	4.4301

***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively

Table 5: Diagnostic test results with moderation effects

Effects test	Statistics	Prob	Results
LM test	53.2457	0.0000	Random > pooled
F test	14.5625	0.0057	Fixed > pooled
Houseman	5.7419	0.0000	Fixed > random

Table 6: Comparison of three OLS panel models, FEM, and REM with moderation effect

Variable	OLS	FEM	REM
PER	-0.0007 (-0.4437)	-0.00176*** (-3.0195)	-0.0017 (-1.2691)
TATO	0.4258 (1.3840)	1.2537 * ** (3.0419)	0.8989** (2.2496)
PER*ROA	0.5160*** (4.8360)	0.3949 (6.0002)	0.3892*** (3.6544)
TATO*ROA	1.7671 (0.6859)	-9.4091*** (-3.01234)	-5.0056 (-1.6158)
Constant	0.2404*** (4,649)	0.1890*** (3.3167)	0.2288*** (3.1563)
Observations	160	160	160
R-squared	0.1821	0.8559	0.1085
Adjusted R-squared	0.1610	0.8152	0.0855
F-test	8.6262***	21.0364***	4.7156***

***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively

with ROA, it does not affect FV. The estimation results of the TATO coefficient directly and without interaction have a positive and significant effect on FV. These results indicate that FV will increase if the company is more efficient in allocating its assets. The estimation results are different if TATO interacts with ROA, which has a negative impact on FV.

4.4. Discussion

Investment decisions proxied by PER with the moderating role of ROA, directly and without interaction, have a negative impact on FV. Conversely, PER does not affect FV without the moderating role of ROA. The interaction of PER and ROA also does not affect FV. Essential findings from testing these two models indicate that PER, which is expected to increase FV, has yet to be proven. Inappropriate investment decisions can result in high investment costs and risks, which impact decreasing FV. In addition, the uncertainty of future returns increases investment risk, so companies become more selective in making investment decisions, which impacts FV. The study's results align with the findings of Suteja et al. (2023), which prove that PER has a negative effect on FV. Suleman (2021) stated that PER does not impact FV in Indonesia's property and real estate sector. Bon and Hartoko (2022) also proved that PER does not affect FV.

Asset turnover (TATO), which measures efficiency, positively impacts FV in both models without and with moderation. Conversely, if it interacts with ROA, TATO has the opposite effect. This finding shows that if ROA moderates TATO, it actually has a negative effect on FV, but conversely, if it is directly without the interaction effect, it increases FV. High TATO indicates that the company is increasingly efficient in using its assets to generate more significant income from its total assets. Conversely, if not followed by an increase in ROA, high TATO can reduce stock prices and FV. The study's results are supported by the findings of Kristi and Yanto (2020), who prove that TATO positively impacts FV. Ahmad et al. (2023) proved that asset turnover has a negative effect on Tobin's q as an indicator of the company's financial performance. Suriawinata et al. (2023) and Ni et al. (2021) also reported a negative impact of TATO on FV, meaning that firms have to lower selling prices due to low gross margins. Therefore, firms with higher TATO may not have an increase in FV. Hutauruk (2024), Colline (2022), and Bama et al. (2021) confirmed that TATO did not affect FV.

Profitability proxied by ROA is directly negatively related to FV. ROA, which acts as a moderator variable, can only moderate TATO negatively on FV. High ROA decreases FV, according to the pecking order theory, which states that the increase in profit is mostly allocated to retained earnings. The large capital requirements for property and real estate companies are needed to finance investments, especially for new land, so retained earnings become an alternative source of cheap capital. Consequently, dividend payments to shareholders are small, creating a negative signal that can reduce the company's market value. In addition, asset management has not been carried out efficiently, so financial performance is considered unhealthy and impacts the company's stock price. Endri et al. (2021), Harahap et al. (2020), and Endri and Fathony (2020) support the research findings that ROA is negatively related to FV. Different findings that prove a positive relationship between ROA and FV are revealed by several studies, including Rheynaldi et al. (2023), Luthfiah and Suherman (2018), and Gharaibeh and Qader (2017). Razak et al. (2020), Sugianto et al. (2020), and Hakim and Sugianto (2018) did not prove that ROA has no relationship with the company's market value.

Gunadi et al. (2020) proved that stock prices can mediate the influence of ROA and TATO on FV. Sudyatno et al. (2020) revealed the role of ROA in mediating the impact of company size on FV. Bama et al. (2021) showed that good corporate governance can strengthen the influence of ROA on FV. Saif Ul Islam et al. (2022) revealed that cash flow moderates the negative relationship between corporate investment decisions and FV. Pramatha et al. (2020) showed that PER positively affects FV, and corporate governance does not moderate the relationship between PER and FV. Susanti et al. (2019) proved that PER directly affects FV but, as an intervening variable, does not mediate the relationship between ownership structure and FV. Febrianti and Malini (2024) found that capital structure mediates the relationship between ROA and FV. Sukesti et al. (2021) confirmed the positive relationship between ROA and FV, and DER mediated the relationship with FV. Nugroho and Halik (2021) revealed a positive relationship between ROA and FV, and ROA also mediated the effect of sales growth on FV.

5. CONCLUSION

The study aims to investigate the impact of investment decisions (PER) and asset turnover (TATO) and the role of the profitability moderator variable (ROA) on the company value (FV) of the property and real estate sector listed on the Indonesia Stock Exchange. The research findings reveal that PER, with the moderating role of ROA, has a negative impact on FV. Conversely, PER does not affect FV without the moderating role of ROA. The interaction of PER and ROA also does not determine FV. TATO positively affects FV in both models without and with moderator variables. Conversely, if interacting with ROA, TATO has the opposite effect. ROA directly and without interaction has a negative effect on FV, while the role of ROA as a moderating variable can only negatively moderate TATO on FV.

The study involving PER and TATO and the role of the moderator variable ROA contributes to the importance of increasing the FV of the property and real estate sector in Indonesia. Thus, this study provides new insights into the efficiency of company activities in utilizing assets, which is the main factor of FV. Therefore, this study contributes to the development of literature related to the importance of increasing more efficient asset turnover and the moderator role of ROA in influencing FV. The practical implications of the findings of this study recommend that company management improve the efficiency of asset allocation to increase profits. Investment decisions taken by company management are made appropriately so that the risk is low and impacts expanding the company's market value. The research conducted is not free from limitations and has become a suggestion for future work agendas. First, this study only involves property and real estate sector companies listed on the IDX. Therefore, future studies can use a larger sample size by covering companies from various sectors. Second, this study uses company data in Indonesia, so empirical findings cannot be generalized to other countries' capital markets. Therefore, future studies are also suggested to involve property and real estate sector companies from different countries, especially those classified as developing economies. In addition, it is also suggested that more factors, not only limited to

internal factors but also external factors that can determine FV, be investigated.

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