

Review of Intervening Variables in Increasing Earnings Per Share

*Increasing
Earnings Per Share*

Hasanuddin

Universitas Gorontalo; Gorontalo, Indonesia
E-mail: hasanuddinbagu@unigo.ac.id

1731

Deby Rita Karundeng

Universitas Gorontalo; Gorontalo, Indonesia
E-mail: deby.rk21@gmail.com

Mohamad Taufik Hiola

Universitas Gorontalo; Gorontalo, Indonesia
E-mail: forgivemyfault@gmail.com

Submitted:
FEBRUARY 2025

Accepted:
APRIL 2025

Novaliastuti Masiaga

Universitas Gorontalo; Gorontalo, Indonesia
E-mail: novamasiaga01@gmail.com

Idrus Usu

Universitas Gorontalo; Gorontalo, Indonesia
E-mail: idrusug@gmail.com

Badaruddin

Institut Teknologi dan Bisnis Nobel Indonesia; Makassar, Indonesia
E-mail: badar@stienobel-indonesia.ac.id

Mulyana Machmud

Institut Ilmu Sosial & Bisnis Andi Sapada; Parepare, Indonesia
E-mail: mulyanamahmud.pare@gmail.com

ABSTRACT

The COVID-19 pandemic disrupted global economies, impacting financial performance and investor confidence in the Indonesian property and real estate sector. This study aims to evaluate the influence of Net Profit Margin (NPM), Total Asset Turnover (TATO), and Equity Multiplier (EM) on Earnings Per Share (EPS), with Return on Equity (ROE) as an intervening variable. Using path analysis via SmartPLS 3, the study analyzes secondary data from financial statements of 90 property and real estate companies listed on the Indonesia Stock Exchange from 2019 to 2021. The findings reveal that NPM, TATO, and EM significantly affect ROE, with EM showing the strongest impact due to high leverage. However, NPM and TATO have insignificant direct effects on EPS, while EM significantly influences EPS. ROE strongly mediates the effects of NPM, TATO, and EM on EPS, confirming its role as a critical mediator. These results underscore the importance of balanced leverage and efficient asset utilization for sustaining profitability, offering insights for investors and managers navigating volatile markets.

Keywords: *Equity Multiplier, Net Profit Margin, Return on Equity, Return on Asset, Total Asset Turnover.*

JIMKES

Jurnal Ilmiah Manajemen
Kesatuan
Vol. 13 No. 3, 2025
pp. 1731-1742
IBI Kesatuan
ISSN 2337 – 7860
E-ISSN 2721 – 169X
DOI: 10.37641/jimkes.v13i3.3245

ABSTRAK

Pandemi COVID-19 mengganggu perekonomian global, memengaruhi kinerja keuangan dan kepercayaan investor di sektor properti dan real estat Indonesia. Penelitian ini bertujuan untuk mengevaluasi pengaruh Net Profit Margin (NPM), Total Asset Turnover (TATO), dan Equity Multiplier (EM) terhadap Earnings Per Share (EPS) dengan Return on Equity (ROE) sebagai variabel intervening. Menggunakan analisis jalur melalui perangkat lunak SmartPLS 3, penelitian ini menganalisis data sekunder dari laporan keuangan 90 perusahaan properti dan real estat yang terdaftar di Bursa Efek Indonesia dari tahun 2019 hingga 2021. Hasil penelitian menunjukkan bahwa NPM, TATO, dan EM secara signifikan memengaruhi ROE, dengan EM memiliki dampak terkuat karena tingginya penggunaan leverage. Namun, NPM dan TATO tidak memiliki pengaruh langsung yang signifikan terhadap EPS, sedangkan EM berpengaruh signifikan terhadap EPS. ROE secara kuat memediasi pengaruh NPM, TATO, dan EM terhadap EPS, mengukuhkan perannya sebagai mediator penting. Hasil ini menegaskan pentingnya keseimbangan leverage dan pemanfaatan aset yang efisien untuk menjaga profitabilitas, memberikan wawasan bagi investor dan manajer dalam menghadapi pasar yang volatil.

Kata kunci: Equity Multiplier, Net Profit Margin, Return on Equity, Return on Asset, Total Asset Turnover.

INTRODUCTION

The capital market serves as a vital platform for trading securities, facilitating connections between companies seeking funds and investors with available capital (Fauzi et al., 2021; Ahmad, 2023). It encompasses a range of long-term financial instruments, including bonds, equities, and derivatives, which are traded to meet the financial needs of issuers and investors (Havemann et al., 2022). The COVID-19 pandemic significantly disrupted global economies, impacting investor confidence and causing sharp declines in market indices, such as the Jakarta Composite Stock Price Index (JCI), which fell from 6300 to 3900 in early 2020 (Park et al., 2023). Despite these challenges, the capital market in Indonesia witnessed a surge in retail investor participation, driven by increased accessibility and low borrowing rates, particularly in sectors like property and real estate (Wicaksono et al., 2022; Tambunan et al., 2023). However, transaction volumes remained lower than pre-pandemic levels, reflecting cautious investor behavior amid economic uncertainties (Oktavia & Susanto, 2022; Putra & Wayan, 2023).

Financial performance analysis is critical for investors aiming to assess a company's profitability and sustainability. Key metrics such as Net Profit Margin (NPM), Total Asset Turnover (TATO), Equity Multiplier (EM), and Return on Equity (ROE) provide insights into operational efficiency, asset utilization, and financial leverage (Suhadak et al., 2019; Tudose et al., 2022). Earnings Per Share (EPS) is a pivotal indicator for investors, reflecting the profit attributable to each share and influencing stock valuation and dividend expectations (Ferniawan et al., 2024). The DuPont analysis framework, which decomposes ROE into NPM, TATO, and EM, offers a comprehensive approach to understanding how these factors drive profitability (Burja & Mărginean, 2014). During the COVID-19 pandemic, EPS became a focal point for investors seeking to gauge long-term investment viability amid market fluctuations (Fauzi et al., 2022; Dharmawan et al., 2023). The property sector, heavily affected by reduced demand and falling prices, presents a unique context for studying these financial metrics, as investors continued to view real estate as a fundamental need despite economic challenges (Wang, 2022; Zhao & Liu, 2023; Muzaki et al., 2024).

Despite extensive research on financial performance, significant gaps remain in understanding the interplay of NPM, TATO, and EM on EPS, particularly with ROE as an intervening variable in the context of the COVID-19 pandemic. According to Anwar et al. (2024), TATO significantly influences ROA but lacks clarity on its direct impact on EPS in volatile markets. Similarly, Choiriyah et al. (2021) highlight the role of ROE in profitability but do not explore its mediating effect on the relationship between financial

ratios and EPS in crisis periods. Anggraini and Febrianty (2022) note that EM affects financial structure, yet its indirect influence on EPS through ROE remains underexplored in the property sector. These gaps indicate a need for a nuanced analysis of how these variables interact under economic stress, particularly in industries like property and real estate, which faced unique challenges during the pandemic.

This study aims to address these research gaps by investigating the direct and indirect effects of NPM, TATO, and EM on EPS, using ROE as an intervening variable, within property and real estate companies listed on the Indonesia Stock Exchange (IDX) from 2019 to 2021. The focus on the COVID-19 period provides a timely context to understand how financial strategies influenced investor outcomes during a global crisis. This study contributes to the literature by offering empirical evidence on the mediating role of ROE and providing practical insights for investors and managers navigating economic uncertainties in the capital market.

LITERATURE REVIEW & HYPOTHESIS DEVELOPMENT

Net Profit Margin, Return on Equity and Earnings Per Share

According to Burja and Mărginean (2014), DuPont analysis is a comprehensive framework for evaluating financial performance by decomposing Return on Equity (ROE) into Net Profit Margin (NPM), Total Asset Turnover (TATO), and Equity Multiplier (EM). Developed by F. Donaldson Brown in 1914 at DuPont Corporation, it initially measured Return on Investment (ROI) by integrating capital, investment, and profit (Flesher & Previts, 2013). The framework assesses operational efficiency through NPM, asset utilization via TATO, and financial leverage with EM, providing a holistic view of profitability drivers (Nikmah et al., 2021; Syahid et al., 2024). This is particularly relevant for property and real estate firms during the COVID-19 pandemic, when economic disruptions challenged financial stability.

NPM reflects a company's ability to control costs, TATO indicates how effectively assets generate sales, and EM reveals reliance on debt financing (Hak-Seon Kim, 2016). For managers, it highlights areas for improvement, such as optimizing asset use or balancing leverage (Sathyamoorthi et al., 2019). In the context of this study, DuPont analysis serves as the foundation for examining how NPM, TATO, and EM influence ROE and Earnings Per Share (EPS) in Indonesian property firms, offering insights into financial strategies that sustained profitability during a global crisis.

Fajaria and Isnalita (2018) highlight that Net Profit Margin (NPM) is a key profitability metric, measuring the profit generated per unit of sales, which directly impacts Return on Equity (ROE). A high NPM enhances ROE by signaling efficient cost management, a critical factor for property firms facing reduced demand during the COVID-19 pandemic (Choiriyah et al., 2021). NPM's direct effect on Earnings Per Share (EPS) is less certain, as EPS depends on profit distribution across outstanding shares and overall financial performance (FERNIAWAN et al., 2024). Investors relied heavily on EPS to assess investment viability amid pandemic-induced market volatility, making NPM's role a focal point (Fauzi et al., 2022).

Prior studies, such as Hasanah and Suryani (2022), suggest that NPM's direct impact on EPS may be inconsistent due to sector-specific challenges, like declining property sales (Wang, 2022). For instance, property firms struggled with lower revenues, which could weaken NPM's influence on EPS. This study tests NPM's direct effects on ROE and EPS in the Indonesian property sector, addressing gaps in understanding how profitability metrics perform under economic stress. By focusing on the 2019–2021 period, the research captures the unique challenges faced by firms during a global crisis, contributing to the literature on financial performance in volatile markets.

H1: Net profit margin has a positive and significant on return on equity.

H2: Net profit margin has a positive and significant on earnings per share.

Total Asset Turnover, Return on Equity and Earnings Per Share

Karim et al. (2023) emphasize that Total Asset Turnover (TATO) measures a company's efficiency in using assets to generate sales, a critical driver of Return on Equity (ROE). High TATO strengthens ROE by maximizing revenue from assets, which is vital for asset-heavy property firms, especially during the COVID-19 pandemic when sales declined (Anwar et al., 2024). TATO's direct impact on Earnings Per Share (EPS) is less straightforward, as EPS depends on profitability and share structure (Tirtosetianto & Nasri, 2023). Low TATO may reduce EPS by limiting revenue, particularly in sectors reliant on large asset bases (Wiliem & Widiyanto, 2022).

Studies like Herman and Sufiyati (2023) suggest TATO's effect on EPS varies by industry and economic context, highlighting a research gap in crisis periods. During the pandemic, property firms faced challenges in asset utilization due to market restrictions, which likely impacted their financial outcomes (Wicaksono et al., 2022). This study examines TATO's direct effects on ROE and EPS in Indonesian property firms, exploring how asset efficiency influences financial performance under economic strain. By analyzing data from 2019 to 2021, the research provides insights into how firms navigated asset management challenges during a global economic downturn.

H3: Total asset turnover has a positive and significant on return on equity.

H4: Total asset turnover has a positive and significant on earnings per share.

Equity Multiplier, Return on Equity and Earnings Per Share

Arhinful and Radmehr (2023b) note that the Equity Multiplier (EM) measures the proportion of assets financed by debt relative to equity, significantly influencing Return on Equity (ROE). A higher EM amplifies ROE by leveraging debt, but it increases financial risk, particularly during economic downturns like the COVID-19 pandemic (Nemati et al., 2021). In the property sector, where capital-intensive projects are common, EM is a critical strategic factor (Anggraini & Febrianty, 2022).

EM's direct effect on Earnings Per Share (EPS) is less explored, though leverage can enhance EPS by boosting returns on equity-financed assets (Natalya et al., 2022). However, excessive debt may depress EPS during crises due to heightened financial obligations (Dharmawan et al., 2023). The pandemic highlighted the need for balanced leverage to maintain investor confidence amid declining property demand (Supriyadi et al., 2024). This study tests EM's direct effects on ROE and EPS in Indonesian property firms, addressing gaps in understanding leverage's role in volatile markets. By focusing on the 2019–2021 period, the research captures the challenges of managing debt in a crisis, offering insights into financial strategies that influenced shareholder value.

H5: Equity multiplier has a positive and significant on return on equity.

H6: Equity multiplier has a positive and significant on earnings per share.

Return on Equity and Earnings Per Share

Efendi et al. (2019) assert that Return on Equity (ROE) is a pivotal metric for assessing a company's ability to generate profits from shareholders' equity, directly influencing Earnings Per Share (EPS). ROE reflects management's effectiveness in utilizing equity, making it a key indicator for investors evaluating stock value (Choiriyah et al., 2021). Higher ROE typically increases EPS by signaling stronger profitability per share, which was crucial during the COVID-19 pandemic when investors sought stable returns (Syahputra & Imronudin, 2024). By dissecting ROE, DuPont analysis enables investors

to identify operational strengths and weaknesses, guiding investment decisions (Haskins, 2013).

In the property sector, firms with high ROE were better positioned to maintain EPS, supporting dividends and stock prices despite reduced demand (Tirtosetianto & Nasri, 2023). Additionally, ROE may mediate the effects of Net Profit Margin (NPM), Total Asset Turnover (TATO), and Equity Multiplier (EM) on EPS, as these factors influence equity returns before impacting per-share earnings (Chabachib et al., 2020). For instance, NPM's effect on EPS may be channeled through ROE, as profitability enhances equity returns (Hasanah & Suryani, 2022). Similarly, TATO and EM affect EPS indirectly by shaping ROE through asset efficiency and leverage (Wicaksono et al., 2022). This study tests ROE's direct effect on EPS and its mediating role, addressing gaps in understanding profitability dynamics in crisis contexts.

H7: Return on equity has a positive and significant on earnings per share.

H8: Net profit margin has a positive and significant on earnings per share through return on equity.

H9: Total asset turnover has a positive and significant on earnings per share through return on equity.

H10: Equity multiplier has a positive and significant on earnings per share through return on equity.

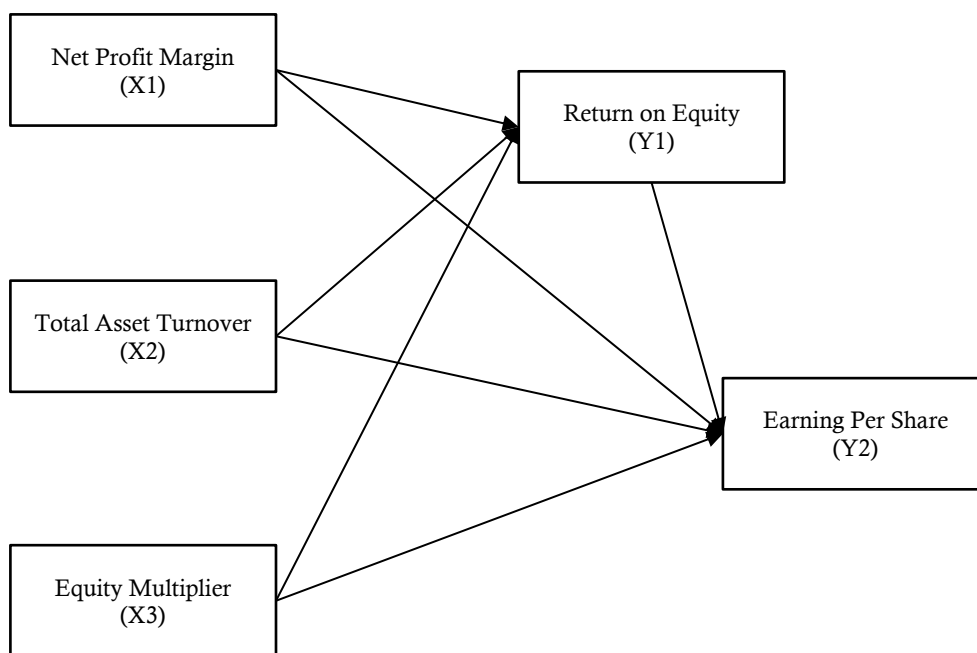


Figure 1. Research Framework

Suhadak et al. (2019) emphasize that a research framework provides a theoretical and visual guide for understanding variable relationships. This study adopts the DuPont analysis framework to examine the effects of NPM, TATO, and EM on EPS, with ROE as an intervening variable. The framework hypothesizes that NPM, TATO, and EM directly influence ROE (H1, H3, H5) and EPS (H2, H4, H6). ROE directly affects EPS (H7) and mediates the effects of NPM, TATO, and EM on EPS (H8, H9, H10). This model is particularly relevant for the property sector during the COVID-19 pandemic, where financial strategies were critical for sustaining profitability amid economic disruptions (Wicaksono et al., 2022). By analyzing data from 2019 to 2021, the study captures how firms navigated challenges like declining demand and market volatility (Figure 1).

RESEARCH METHOD

This study employs a quantitative approach to analyze the influence of Net Profit Margin (NPM), Total Asset Turnover (TATO), and Equity Multiplier (EM) on Earnings Per Share (EPS), with Return on Equity (ROE) as an intervening variable. The research focuses on 90 property and real estate companies listed on the Indonesia Stock Exchange (IDX) from 2019 to 2021. A purposive sampling method, a form of non-probability sampling, was used to select companies based on specific criteria, such as availability of complete financial statements during the study period (Memon et al., 2020). Wohnung data, comprising balance sheets and profit-and-loss statements, were collected from the IDX website (<http://www.idx.co.id>) using documentation techniques.

Data analysis in this study employed path analysis using SmartPLS 3, consistent with the research objectives to test causal relationships and mediation effects. This technique evaluates whether independent variables—Net Profit Margin (NPM), Total Asset Turnover (TATO), and Equity Multiplier (EM)—influence the dependent variable, Earnings Per Share (EPS), directly and indirectly through Return on Equity (ROE) as a mediating variable. The model was specified based on the DuPont analysis framework and included ten hypotheses (H1–H10). Secondary data from financial reports were processed, with variables calculated as follows: $NPM = \text{Net Profit}/\text{Sales}$, $TATO = \text{Sales}/\text{Total Assets}$, $EM = \text{Total Assets}/\text{Equity}$, $ROE = \text{Net Profit}/\text{Equity}$, and $EPS = \text{Net Profit}/\text{Outstanding Shares}$. Outliers were removed, and normality was verified using the Kolmogorov-Smirnov test. Model estimation in SmartPLS 3 provided path coefficients for direct (e.g., $NPM \rightarrow ROE$) and indirect (e.g., $NPM \rightarrow ROE \rightarrow EPS$) effects. The model's fit was evaluated using R-squared, t-statistics, and p-values. Durbin-Watson value of 1.889 confirmed no autocorrelation. Hypothesis testing used a 0.05 significance level to determine support for both direct and indirect effects, emphasizing ROE's mediating role.

Based on the path above, it shows that each H value describes the path coefficient between variables. Thus, two structural equations can be created, as follows:

- a) Structural Equation 1:

$$Y_1 = \alpha + \rho_1 X + \rho_2 X + \rho_3 X + e_1$$

- b) Structural Equation 2:

$$Y_2 = \alpha + \rho_8 Z + \rho_9 Z + \rho_{10} Z + \rho_4 X + \rho_5 X + \rho_6 X + \rho_7 X + e_2$$

In this study, α is a constant used in the regression model. Variable X consists of independent variables, namely Net Profit Margin, Total Asset Turnover, and Equity Multiplier. Variable Y1 acts as an intervening variable, namely Return on Equity (ROE), while variable Y2 is a dependent variable measured by Earning Per Share (EPS). The regression coefficients in this model are denoted by ρ_1 to ρ_{10} , where each coefficient represents the research hypothesis, namely ρ_1 for H1, ρ_2 for H2, and so on up to ρ_{10} for H10. Meanwhile, e_1 and e_2 indicate the error or residual that describes the deviation between the predicted value and the actual value in the regression model.

RESULTS

Table 1 presents descriptive statistics of the variables used in this study, namely Net Profit Margin, Total Asset Turnover, Equity Multiplier, Return on Equity, and Earning Per Share. These statistics include the number of observations (N), minimum and maximum values, average values (mean), and standard deviation. The purpose is to provide an overview of the distribution of data and the characteristics of each variable in the research sample consisting of 90 companies.

Table 1. Descriptive Statistics

Variables	N	Minimum	Maximum	Mean	Std. Deviation
Net Profit Margin	90	-4.39	1.44	-0.1842	0.77751
Total Asset Turn Over	90	0.00	0.38	0.1076	0.08324
Equity Multiplier	90	0.89	28.89	5.4129	5.38897
Return On Equity	90	-0.27	0.73	0.0510	0.16721
Earning Per Share	90	-22.04	64.49	4.0891	15.87379
Valid N (listwise)	90				

Table 1 show descriptive statistical analysis of 90 property and real estate companies listed on the Indonesia Stock Exchange from 2019 to 2021 reveals key financial metrics. The average Net Profit Margin (NPM) is -0.1842 (-18%), indicating that companies generally failed to generate profits from sales, with DMS Propertindo Tbk (KOTA) recording the lowest NPM at -4.39 (-439%), reflecting poor operational efficiency during the period. The average Total Asset Turnover (TATO) is 0.1076, suggesting inefficient asset utilization for sales generation, with Greenwood Sejahtera Tbk (GWSA) and KOTA at 0.00 and Metro Realty Tbk (MTSM) at 0.38. The average Equity Multiplier (EM) is 5.4129, equivalent to 18.47% ($1/EM \times 100\%$), indicating reliance on debt financing. Bumi Serpong Damai Tbk (BSDE) has the lowest EM at 3.46% (28.89), while Capri Nusa Satu Properti Tbk (CPRI) has the highest at 112.36% (0.89), highlighting varied financing strategies.

The average Return on Equity value is 0.510, or 51%, indicating that the average company can use its share capital to generate profit. Bliss Properti Indonesia Tbk (POSA) has the lowest value of -0.27, or -27%, and Bumi Serpong Damai Tbk (BSDE) has the highest value of 0.73, or 73%. This demonstrates that most companies can still use their share capital to produce profits. The average value of Earnings Per Share is 4.0891, with Mega Manunggal Property Tbk (MMLP) having the lowest value of -22.04 and Bumi Serpong Damai Tbk (BSDE) having the highest value of 64.49, indicating that the average company can still increase its earnings per share (EPS) of 4.0891 between 2019 and 2021.

Table 2. One-Sample Kolmogorov-Smirnov Test

Parameter	Unstandardized Residual	
N		90
Normal Parameters ^{a,b}	Mean	0.0000000
	Std. Deviation	2.36343312
Most Extreme Differences	Absolute	0.092
	Positive	0.064
	Negative	-0.092
Test Statistic		0.092
Asymp. Sig. (2-tailed)		0.060 ^c

A decent regression model has a normal distribution of data. The normality test results after removing outliers using the Kolmogorov-Smirnov test are shown on Table 2, along with the Asymp value. Sig. (2-tailed): 0.060. Based on the data normality test, it is concluded that the residual data in this regression model was distributed normally due to the Asymp parameter. In Table 2, the significance level (2-tailed) is more than 0.05.

Table 3. Model Summary

Model	Value
R	0.989
R Square	0.978
Adjusted R Square	0.977
Std. Error of the Estimate	2.41840
Durbin-Watson	1.889

The autocorrelation test on Table 3 was performed to evaluate whether there was a relationship between the bully's fault in the t period and the error in the t-1 period (the prior period). A decent regression model is one with no autocorrelation issues. Durbin-Watson value testing is used to discover autocorrelation problems. A multiple regression model is considered met if the value is between -2 and +2, or $-2 < DW < +2$. The Durbin-Watson test findings in this study revealed that the Durbin-Watson value from the autocorrelation test was 1.889, while the Du value with 90 samples and four independent variables was 1.7508. A score of $1.7508 < 1.889 < (4 - 1.7508)$ was achieved, indicating that the autocorrelation test conditions were met or H0 was approved. It can be stated that the data used in this investigation are devoid of the autocorrelation.

Table 4. Total Effects

Hypothesis	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Values
X1 -> Y1	0.270	0.288	0.094	2.879	0.004
X1 -> Y2	0.286	0.302	0.093	3.063	0.002
X2 -> Y1	0.322	0.325	0.083	3.881	0
X2 -> Y2	0.303	0.307	0.099	3.067	0.002
X3 -> Y1	0.461	0.437	0.107	4.312	0
X3 -> Y2	0.386	0.363	0.116	3.318	0.001
Y1 -> Y2	1.059	1.054	0.024	43.714	0.000

The regression equations derived from the path analysis provide insights into the relationships between the variables. A one-unit increase in Net Profit Margin results in a 0.270 rise in Return on Equity, while a one-unit increase in Total Asset Turnover improves Return on Equity by 0.322. Similarly, a one-unit increase in Equity Multiplier enhances Return on Equity by 0.461. For Earnings Per Share, a one-unit increase in Net Profit Margin through Return on Equity leads to a 0.286 increase, a one-unit increase in Total Asset Turnover through Return on Equity raises Earnings Per Share by 0.341, and a one-unit increase in Equity Multiplier through Return on Equity boosts Earnings Per Share by 0.489.

Table 4 presents the total effects of the path analysis conducted using SmartPLS 3, showing the direct and indirect relationships between Net Profit Margin (X1), Total Asset Turnover (X2), Equity Multiplier (X3), Return on Equity (Y1), and Earnings Per Share (Y2). The results indicate significant effects for most paths, with p-values below 0.05. Specifically, X1→Y1 (t=2.879, p=0.004), X2→Y1 (t=3.881, p=0.000), and X3→Y1 (t=4.312, p=0.000) show strong influences on ROE. For EPS, X1→Y2 (t=3.063, p=0.002), X2→Y2 (t=3.067, p=0.002), and X3→Y2 (t=3.318, p=0.001) are significant, with Y1→Y2 (t=43.714, p=0.000) indicating a substantial effect of ROE on EPS, supporting the mediating role of ROE.

DISCUSSION

The path analysis results reveal nuanced relationships between financial metrics and profitability in the Indonesian property and real estate sector from 2019 to 2021, a period marked by the COVID-19 pandemic's economic disruptions. NPM, TATO, and EM significantly influence ROE, supporting hypotheses H1, H3, and H5. With t-values of 2.879, 3.881, and 4.312 respectively, these findings align with Amalia and Hariyono (2024), who found that NPM, alongside other financial ratios, drives ROE by reflecting operational efficiency. The strong effect of EM on ROE underscores the sector's reliance on debt financing, as high leverage amplifies equity returns but introduces risk, particularly during economic downturns. TATO's impact highlights the importance of asset utilization, though the low average TATO (0.1076) suggests inefficiencies in generating sales from assets, likely due to reduced property demand during the pandemic.

However, the direct effects of NPM and TATO on EPS are insignificant, leading to the rejection of hypotheses H2 and H4 (p-values of 0.980 and 0.176). This contradicts

Satria (2021), who reported a significant NPM-EPS relationship, but aligns with Hasanah and Suryani (2022), who found no significant effect due to sector-specific challenges like declining sales. The property sector's negative average NPM (-18%) likely weakened its direct influence on EPS, as firms struggled with profitability. Similarly, TATO's lack of direct impact on EPS, consistent with Wiliem and Widiyanto (2022), reflects low asset turnover ratios, limiting revenue generation. In contrast, EM significantly affects EPS (H6 accepted, $t=3.686$), supporting Natalya et al. (2022), as leverage enhances per-share earnings when managed effectively, despite heightened risks in volatile markets.

ROE's substantial effect on EPS (H7 accepted, $t=43.714$) underscores its role as a critical driver of shareholder value, aligning with Syahid et al. (2024), who noted ROE's influence on EPS in stable firms. The mediating role of ROE is particularly evident in hypotheses H8, H9, and H10, where NPM, TATO, and EM significantly affect EPS through ROE (t -values of 3.063, 3.067, and 3.318). Chabachib et al. (2020) similarly found that ROE mediates financial ratios' impact on firm value, suggesting that operational efficiency, asset utilization, and leverage indirectly enhance EPS by improving equity returns. This mediation is crucial in the pandemic context, where direct effects were inconsistent due to economic uncertainty.

These findings have significant implications for investors, managers, and policymakers. For investors, prioritizing firms with strong ROE and balanced leverage can enhance returns, as EM's direct and indirect effects on EPS highlight the benefits of strategic debt use. Managers should focus on improving NPM and TATO through cost control and asset optimization to bolster ROE, indirectly supporting EPS growth. Policymakers can encourage financial literacy and regulatory frameworks that promote sustainable leverage in the property sector, mitigating risks during crises. Theoretically, this study advances the DuPont framework by demonstrating ROE's mediating role in volatile markets, offering a model for future research in crisis contexts. By analyzing the 2019–2021 period, the study provides a benchmark for understanding financial performance under economic stress, guiding stakeholders in navigating similar challenges.

CONCLUSION

This study investigates the influence NPM, TATO, and EM on ROE and EPS in Indonesian property and real estate firms listed on the Indonesia Stock Exchange from 2019 to 2021, a period marked by the COVID-19 pandemic. The findings confirm that NPM, TATO, and EM significantly enhance ROE, supporting hypotheses H1, H3, and H5, with EM showing the strongest effect due to the sector's reliance on debt financing. However, NPM and TATO do not directly impact EPS (H2 and H4 rejected), likely due to negative profitability and low asset utilization during the crisis. In contrast, EM significantly affects EPS (H6 accepted), highlighting leverage's role in boosting per-share earnings. ROE strongly influences EPS (H7 accepted) and mediates the effects of NPM, TATO, and EM on EPS (H8, H9, H10 accepted), underscoring its pivotal role in channeling financial performance to shareholder value. These results align with the DuPont framework, revealing how operational efficiency, asset productivity, and leverage interact under economic stress.

The findings offer practical implications for stakeholders. Investors should prioritize firms with high ROE and balanced leverage to maximize returns, while managers can improve profitability by enhancing cost efficiency and asset utilization. Policymakers may promote regulatory frameworks to support sustainable debt practices in crisis-prone sectors. However, the study's limitations include its focus on a single sector and a specific time frame (2019–2021), which may limit generalizability. Data quality, influenced by pandemic-related disruptions, also poses a constraint. Future research could explore other sectors, such as manufacturing or technology, to compare financial dynamics. Extending

the study period beyond the pandemic or incorporating qualitative factors, like management strategies, could provide deeper insights into sustaining profitability in volatile markets.

Acknowledgment

The researcher would like to thank the University of Gorontalo, the research location, the Nobel Indonesia Institute of Technology and Business, and the Andi Sapada Institute of Social Sciences & Business as well as all parties who have supported the completion of the research conducted by the author.

REFERENCES

- [1] Ahmad, H. (2023). several factors affecting interest in investing in the capital market. *Advances in Management & Financial Reporting*, 1(1), 25-34.
- [2] Amalia, A. I., & Haryono, H. (2024). Financial performance analysis of PT Indofood Sukses Makmur Tbk in period 2021-2023. *Jurnal Ilmiah Manajemen Kesatuan*, 12(5), 1883–1890.
- [3] Anggraini, P., & Febrianty, F. (2022). Analysis of the company's financial performance using the Du Pont system in the building construction sub-sector on the Indonesia Stock Exchange. *International Journal of Multidisciplinary Sciences and Arts*, 1(1), 48–69.
- [4] Anwar, M. F., Indah, D. P., & Muhsin, M. (2024). Analysis of the implementation of PSAK 73 on finance leases on financial performance. *Jurnal Ilmiah Manajemen Kesatuan*, 12(5), 1747–1756.
- [5] Arhinful, R., & Radmehr, M. (2023). The effect of financial leverage on financial performance: Evidence from non-financial institutions listed on the Tokyo Stock Market. *Journal of Capital Markets Studies*, 7(1), 53–71.
- [6] Burja, V., & Mărginean, R. (2014). The study of factors that may influence the performance by the Dupont analysis in the furniture industry. *Procedia Economics and Finance*, 16, 213–223.
- [7] Chabachib, M., Hersugondo, H., Ardiana, E., & Pamungkas, I. D. (2020). Analysis of company characteristics of firm values: Profitability as intervening variables. *International Journal of Financial Research*, 11(1), 60–70.
- [8] Choiriyah, C., Fatimah, F., Agustina, S., & Ulfa, U. (2021). The effect of return on assets, return on equity, net profit margin, earning per share, and operating profit margin on stock prices of banking companies in Indonesia Stock Exchange. *International Journal of Finance Research*, 1(2), 103–123.
- [9] Dharmawan, D., Karnadi, M. A., Ratnawita, R., Suratman, S., & Judijanto, L. (2023). Determinant factors of company share prices in financial sector companies on the IDX. *International Journal of Economics Development Research (IJEDR)*, 4(3), 1914-1928.
- [10] Efendi, A., Putri, L. P., & Dunga, S. (2019). The effect of debt to equity ratio and total asset turnover on return on equity in automotive companies and components in Indonesia. *Advances in Economics, Business and Management Research*, 92, 182–188.
- [11] Fajaria, A. Z., & Isnalita. (2018). The effect of profitability, liquidity, leverage and firm growth of firm value with its dividend policy as a moderating variable. *International Journal of Managerial Studies and Research*, 6(10), 55–69.
- [12] Fauzi, M., Asirwadana, E., & Milasari, M. P. (2021). Analysis of legal protection for capital market investors. *Jurnal Hukum To-Ra: Hukum Untuk Mengatur dan Melindungi Masyarakat*, 7(2), 215–226.
- [13] Ferial Ferniawan, M., Kusumawati, A., & Madein, A. (2024). The influence of earnings per share (EPS), price earnings ratio (PER), price to book value (PBV), and debt equity ratio (DER) on the stock return. *Akrual: Jurnal Bisnis dan Akuntansi Kontemporer*, 17(1), 114–130.
- [14] Flesher, D. L., & Previts, G. J. (2013). Donaldson Brown (1885-1965): The power of an individual and his ideas over time. *Accounting Historians Journal*, 40(1), 51–78.
- [15] Hario Tirtosetianto, R., & Nasri, M. (2023). Earning per share (EPS), dividends payout ratio (DPR) and debt to equity ratio (DER) and its effect on company share price. *Business and Accounting Research (IJEBA) Peer Reviewed-International Journal*, 3(4), 103–112.
- [16] Hasanah, M., & Suryani, E. (2022). Effect of ROA, EPS, and NPM on the stock price of property & real estate sub-sector companies in 2009-2018. *Management Science Research Journal*, 1(2), 6-29.
- [17] Haskins, M. E. (2013). A decade of DuPont ratio performance. *Management Accounting Quarterly*, 14(2), 24.
- [18] Havemann, T., Negra, C., & Werneck, F. (2022). Blended finance for agriculture: Exploring the constraints and possibilities of combining financial instruments for sustainable transitions. *Social Innovation and Sustainability Transition*, 37(4), 1281–1292.
- [19] Herman, V., & Sufiyati, S. (2023). Factors affecting eps on non-cyclicals consumer sector companies listed on the idx. *International Journal of Application on Economics and Business (IJAEB)*, 1(3), 2987-1972.

- [20] Karim, A., Widyarti, E. T., & Santoso, A. (2023). Effect of current ratio, total asset turnover, and size on profitability: Evidence from Indonesia manufacturing companies. *Diponegoro International Journal of Business*, 6(1), 57–63.
- [21] Kim, H.-S. (2016). A study of financial performance using DuPont analysis in food distribution market. *Culinary Science & Hospitality Research*, 22(6), 52–60.
- [22] Memon, M. A., Ting, H., Cheah, J. H., Thurasamy, R., Chuah, F., & Cham, T. H. (2020). Sample size for survey research: Review and recommendations. *Journal of applied structural equation modeling*, 4(2), i-xx.
- [23] Muzaki, R. A., Damayanti, F., & Espa, V. (2024). The effect of capital structure, liquidity and company size on profitability. *Jurnal Ilmiah Manajemen Kesatuan*, 12(5), 1857–1864.
- [24] Natalya, K., Viktor, G., & Marina, P. (2022). Fundamental factors of the p/e multiplier and their use in search for undervalued assets. *Московский экономический журнал*, (12), 598-604.
- [25] Nemati, A. R., Javed, T., & Sidiqi, M. U. (2021). Impact of asset growth and equity multiplier on the financial performance of microfinance banks of Pakistan. *International Journal of Management Research and Emerging Sciences*, 11(3), 123–136.
- [26] Nikmah, L. C., Hermuningsih, S., & Cahya, A. D. (2021). Pengaruh DER, NPM, ROA, Dan TATO Terhadap Return Saham (Study Pada Perusahaan Sektor Industri Otomotif dan Komponen). *Jurnal Ilmiah Manajemen Kesatuan*, 9(2), 21–30.
- [27] Oktavia, M., & Susanto, Y. K. (2022). The determinant factors of earnings persistence. *Jambura Equilibrium Journal*, 4(1), 34–38.
- [28] Park, M., Leahey, E., & Funk, R. J. (2023). Papers and patents are becoming less disruptive over time. *Nature*, 613(7942), 138–144.
- [29] Sathyamoorthi, C., Mapharing, M., Mphoeng, M., & Dzimiri, M. (2020). Impact of financial risk management practices on financial performance: Evidence from commercial banks in Botswana. *Applied Finance and Accounting*, 6(1), 25-39.
- [30] Satria, R. (2021). Pengaruh current ratio dan net profit margin terhadap earning per share pada PT Agung Podomoro Land Tbk periode 2010-2019. *Jurnal Ilmiah Feasible*, 3(1), 77.
- [31] Suhadak, Kurniaty, Handayani, S. R., & Rahayu, S. M. (2019). Stock return and financial performance as moderation variable in influence of good corporate governance towards corporate value. *Asian Journal of Accounting Research*, 4(1), 18–34.
- [32] Supriadi, Y., Standika, C., & Nurisnaini, N. (2024). The influence of liquidity, leverage, profitability, and inflation on stock prices: Case study of trading companies on the Indonesian stock exchange for the 2017 – 2021 Period. *Jurnal Ilmiah Manajemen Kesatuan*, 12(3), 629–636.
- [33] Syahid, A. M., Pitriana, I., & Lestari, H. S. (2024). Internal and external determinants of banking stock performance: Evidence from the Indonesia stock exchange. *Jurnal Ilmiah Manajemen Kesatuan*, 12(6), 2251–2260.
- [34] Syahputra, S. A. D., & Imronudin. (2024). The effect of liquidity ratio, capital structure and activity on company profitability. *Jurnal Ilmiah Manajemen Kesatuan*, 12(6), 2165–2172.
- [35] Tambunan, N., Gumilar, R. T. P., & Karimah, L. N. (2023). Post-pandemic economic system changes. *Journal of Social Research*, 2(2), 289–299.
- [36] Tudose, M. B., Rusu, V. D., & Avasilcai, S. (2022). Financial performance – Determinants and interdependencies between measurement indicators. *Business, Management and Economics Engineering*, 20(1), 119–138.
- [37] Wang, B. (2022). Housing market volatility under COVID-19: Diverging response of demand in luxury and low-end housing markets. *Land Use Policy*, 119, 106191.
- [38] Wicaksono, N. W. C., Aryani, Y. A., & Setiawan, D. (2022). Indonesian capital market reaction to Jakarta's large scale social restrictions. *The Indonesian Capital Market Review*, 14(2), 79–91.
- [39] Wiliem, E., & Widiyanto, G. (2022). The influence of DER, RTO, CR, TATO, and EPS on stock prices in wholesale sub sector companies. *eCo-Buss*, 5(1), 175-186.
- [40] Wisnu Putra, A., & Wayan, M. E. (2023). Financial literacy, risk perception, and investment preferences: A study on millennials in Jakarta. *BISNIS & BIROKRASI: Jurnal Ilmu Administrasi dan Organisasi*, 30(1), 52–63.
- [41] Zhao, C., & Liu, F. (2023). Impact of housing policies on the real estate market - Systematic literature review. *Heliyon*, 9(10), e20704.

*Increasing
Earnings Per Share*

1742