Accounting and Finance Studies
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Cracking the Book Value Mystery: Understanding Earning Per Share, Price Earning Ratio, and Operational Efficiency in IDX80 Enterprises Indonesia

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ARTICLE INFO

ISSN: 2774-4256

ABSTRACT

Research Aims: This study aims to elucidate the determinants of book value by investigating the effects of earnings per share (EPS), price-to-earnings (PER) ratios, and operational efficiency among companies listed in the IDX80 index from 2021 to 2023.
Design/methodology/approach: The research utilizes a quantitative approach with an explanatory design, analyzing secondary data from the financial reports of 80 companies. Variables like EPS, PER, BV, and NPM are assessed using the Partial Least Squares (PLS) method via SmartPLS to uncover their relationships in the Indonesian capital market.
Research Findings: Key findings highlight the significant impact of EPS on share valuation reflected in book value (BV) and the mediating role of NPM in this relationship. The study underscores the complexity of using PER alone to evaluate company worth within the IDX80 index, emphasizing the need for further exploration to enhance investment strategies and financial decision-making.
Theoretical Contribution/Originality: This study enhances understanding of equity valuation in Indonesia's capital market by analyzing how EPS, PER ratios, and operational efficiency influence companies in the IDX80 index from 2021 to 2023. It integrates theoretical frameworks like signalling theory and mediation via NPM, showing that EPS significantly impacts share valuation through NPM. The research underscores limitations of using PER exclusively to evaluate company worth, emphasizing the intricate nature of stock valuation in the IDX80 index. Future studies should delve deeper into these factors to improve investment strategies and financial decision-making.

Keywords*:* book value, earning per share, price earning ratio, net profit margin

Introduction

Companies compete to increase their value to remain competitive in the capital market. One of the strategies that is often considered is growing earnings per share (EPS) [1] and price-to-earnings ratio (PER) [2]. EPS is a measure of profitability per share that indicates a company's ability to generate profits for shareholders [3]–[5]. Meanwhile, PER reflects the valuation of the stock relative to its earnings per share [6], which is an essential indicator for investors in evaluating their investment potential.

DOI: https://doi.org/10.47153/afs44.11202024
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While important, the relationship between EPS, PER, and book value per share (BVPS) is not simple and often requires a more profound understanding to reveal the actual dynamics. However, these dynamics necessitate a more profound exploration to grasp their implications fully.

Research on the influence of earnings per share (EPS) and price-to-earnings ratio (PER) on firm values is a topic that has attracted attention in academic literature and capital markets, for example, in several studies [1], [2], [7], [8]. EPS, which measures profitability per share, and PER, which shows the valuation of a stock relative to its earnings per share, are the main focus of a company's valuation analysis. According to Jensen and Meckling [9], EPS plays a crucial role in determining a company's value by reflecting the company's ability to generate profitable revenue. Likewise, PER, according to Damodaran [10], is an essential indicator in evaluating investment potential, as it shows how high or cheap the stock price is relative to the profit generated.

High EPS indicates a company's robust profitability and can positively impact its valuation by reflecting stability and potential growth [11]. Conversely, a high PER may suggest investor optimism about prospects but can also be influenced by various factors, including market sentiment and industry-specific conditions [1]. These relationships underscore the complex interplay between financial metrics and market dynamics in determining firm value.

Exploring these dynamics within the Indonesian capital markets, particularly among IDX80-listed companies, offers a compelling context. The IDX80 index includes significant firms that play critical roles in Indonesia's economic landscape, each characterized by unique operational and financial profiles. The study of companies listed in the IDX80 index of the Indonesia Stock Exchange holds significant urgency in the context of current global economic and financial research [12]. This research is relevant because the IDX80 comprises companies considered market leaders in Indonesia, playing a crucial role in shaping the country's capital market's direction and strength [13]. According to Kaluge and Kinesti [13], the IDX80 provides a comprehensive overview of Indonesia's capital market performance, encompassing key sectors such as finance, consumer goods, and natural resources, representing potential economic growth and market stability at the national level.

Understanding the operational efficiency within these companies becomes crucial, as it sheds light on how EPS and PERs influence their valuation amidst diverse market conditions. For instance, studies like those by Islam et al. [8] on banking sectors in similar emerging markets have highlighted the nuanced relationships between EPS, stock prices, and firm value. Their findings emphasize the varied impact of economic and industry-specific factors on equity valuation metrics, showcasing the intricate nature of capital market dynamics.

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Moreover, recent research by Jihadi et al. [14] underscores the multifaceted influences on firm value, incorporating variables like liquidity, activity, debt, profitability, and corporate social responsibility (CSR) disclosure. Their study, focusing on Indonesian companies, reveals how these factors shape market perceptions and investor decisions, influencing stock prices and overall firm value. In addition to local insights, studies like Salisu & Shika's [7] examination of IFRS adoption in Nigeria's manufacturing sector provide broader perspectives on how regulatory changes can impact the relevance of financial metrics like EPS and book value. Such insights are crucial for understanding how international standards and local market conditions intersect to shape financial reporting practices and investor perceptions.

The capital market is an arena where companies compete to enhance their value to remain competitive, with one frequently considered strategy being the improvement of Earnings per Share (EPS) and Price-to-Earnings Ratio (PER). EPS is a measure of profitability per share, indicating a company's ability to generate profits for its shareholders. At the same time, PER reflects the stock's valuation relative to its earnings per share, serving as a crucial indicator for investors to evaluate investment potential. Despite its importance, the relationship between EPS, PER, and Book Value per Share (BVPS) is not straightforward and often requires a more in-depth understanding to reveal the underlying dynamics. Research on the impact of EPS and PER on firm value has garnered significant attention in academic literature and capital markets, particularly within the context of the Indonesian capital market, specifically among companies listed on the IDX80 index. This index includes firms deemed market leaders in Indonesia, playing a pivotal role in shaping the direction and strength of the country's capital market.

However, there remains a gap in understanding how these dynamics operate within the Indonesian capital market, mainly due to a lack of exploration into how operational efficiency, as reflected in Net Profit Margin (NPM), mediates the relationship between EPS, PER, and BVPS. Previous studies have often been limited to direct analyses without considering mediating factors such as operational efficiency, and the unique characteristics of the Indonesian capital market have yet to be thoroughly explored. This research aims to address this gap by elucidating how operational efficiency influences the impact of EPS and PER on BVPS among IDX80-listed companies in Indonesia, providing actionable insights for investors, corporate executives, and policymakers to better understand and optimize financial strategies within the Indonesian capital market.

Literature Review

This study examines the relationship between EPS, PER, and book value per share (BV) with the brokerage of net profit margin (NPM) in IDX80-indexed companies from 2021 to 2023. The relevant theoretical foundations in this study include several key concepts of corporate finance and stock valuation.

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Stock valuation theory states that stock valuation is reflected in market expectations for the company's financial performance and prospects [15], [16]. Earnings per share is used to measure profitability per share, while the PER indicates a stock's valuation relative to earnings per share [17]. BV provides an overview of a company's intrinsic value based on the value of its assets. This theory is critical because it provides a framework for evaluating a company's financial performance and stock valuation based on critical factors such as EPS, PER, and BV.

In this context, signal theory is also relevant, as it explains that financial information published by a company can be an essential signal to investors about its performance and prospects. These signals, including EPS, PER, BV, and NPM, help reduce information asymmetry between management and investors, allowing investors to make more informed and rational investment decisions. In addition, mediation theory is used to understand the role of NPM as a mediator in the relationship between EPS and PER to BV. NPM, which measures a company's efficiency in converting revenue into net profit, is identified as a factor that can mediate or strengthen the relationship between these critical variables. This theory is essential to describe the connection between a corporation's operational efficiency and firm value.

Investment decision theory provides a framework for analyzing how investors evaluate financial information to make effective investment decisions [18]. EPS, PER, BV, and NPM play a critical role in investment analysis, helping investors assess the stock valuation and potential return on investment of companies listed on the IDX80. By integrating this theoretical foundation, this study aims to provide deeper insights into the complex relationship between crucial financial factors and firm values in the Indonesian capital market and their implications for companies' financial strategies and investors' investment decisions.

In financial studies, understanding how various metrics influence market performance and stock value is crucial. The study on the relationship between market multiples and stock returns, demonstrates that the effectiveness of these valuation metrics differs between emerging and developed markets [2]. This research emphasizes the importance of adjusting valuation techniques according to specific market conditions, highlighting the need for tailored approaches for different markets. These findings support the concept that valuation techniques should account for varying market contexts to achieve more accurate results.

The impact of Earnings Per Share (EPS) on stock prices and firm value, underscoring that EPS is a key metric influencing investor perception and stock prices [8]. This aligns with Akhtar's emphasis on the importance of valuation metrics and supports the relevance of EPS in the valuation models. The study shows that EPS not only affects firm value but also plays a significant role in determining stock prices in the market.

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On the other hand, provide insights into economic management and the public sector, offering additional context on how economic policies can influence financial markets [7]. Although not directly discussing stock valuation, this study provides important background on how economic policy and public management can impact financial metrics such as EPS and market multiples.

Finally, the impact of earnings surprises on growth expectations and stock returns, highlighting how earnings surprises can affect investment strategies [1]. This research is relevant to the findings of Islam et al., as it explains how unexpected changes in EPS can influence stock prices and portfolio strategies. It underscores the importance of understanding and managing risks related to earnings fluctuations to maintain investment stability.

Overall, these studies provide a comprehensive view of how financial metrics like EPS and market multiples affect stock value and investment strategies. Their findings complement each other, forming a robust framework for understanding and managing the factors influencing financial market performance.

Research on the influence of earnings per share (EPS) on firm value has attracted much attention in academic and capital market literature, as various studies show [2][8][7] [1]. Earnings per share, which measures profitability per share, is central to a company's valuation analysis. According to Jensen and Meckling [9], earnings per share play an essential role in determining the value of the company by reflecting the company's ability to generate profitable revenue. High earnings per share are often associated with increased company value, which reflects the company's ability to generate stable profits [11]. Previous research has shown that the relationship between EPS and enterprise value is not simple. For example, Brealey et al. [5] found that high earnings per share can increase a company's valuation by reflecting stability and potential for earnings growth.

Research on the influence of the price-earnings ratio (PER) on firm value has also attracted much attention in the academic literature and capital markets [1], [2], [7], [8]. The PER, which indicates the valuation of a stock relative to its earnings, is critical in a company's valuation analysis. According to Damodaran [10], the PER is an essential indicator in assessing investment potential because it shows how expensive or cheap the stock price is relative to its earnings. A high PER shows investors' expectations for future earnings growth, which can increase the value of stocks [1].

Based on the theories put forward and supported by the results of empirical studies that have been uncovered, the research hypothesis is as follows:

H1: Earnings per share significantly impact the book value of IDX80-listed companies for 2021-2023.

H2: Earnings per share significantly impact the net profit margin of IDX80-listed companies for 2021-2023.

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H3: Net profit margin impacts the book value of IDX80-listed companies for 2021-2023.

H4: A significant impact exists between earnings per share and book value in IDX80-indexed companies for 2021-2023.

H5: Price earning ratio significantly impacts the net profit margin of IDX80-listed companies for 2021-2023.

H6: A significant impact between earning per share and book value mediation by net profit margin in IDX80-indexed companies for 2021-2023.

H7: A significant impact between price earning ratio and book value mediation by net profit margin in IDX80-indexed companies for 2021-2023.

Method

Research Design

This study employs a quantitative approach utilizing an explanatory research design. The data comprises secondary information sourced from the annual and quarterly financial reports of 80 companies listed on the IDX80 index of the Indonesian Stock Exchange during the period 2021-2023.

Population and sample

The population of this study consists of all companies listed in the IDX80 index. The sample consists of 80 issuers selected randomly from the population to cover different industrial sectors representative of the index.

Types and Data Sources

The data utilized consists of secondary information derived from the public financial statements of the companies, accessible through the official database of the Indonesian Stock Exchange and the respective companies' official websites. This data includes information on each company's EPS, PERV, BV, and NPM during 2021-2023. Data is collected by accessing and downloading financial statements from the Indonesian Stock Exchange and the company's official website. The data is then stored in a format that can be processed for further analysis using statistical tools.

Measurement of research

Table 1. Measurement of research

Variable Name	Operational Definition	Formula	Source
Earnings per share (EPS)	Represents the profitability attributable to each outstanding common share,	(Net Income - Preferred Dividends) /	[1], [2], [7], [8]

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Variable Name	Operational Definition	Formula	Source
	calculated as net income divided by the number of shares outstanding.	Number of Shares Outstanding	
Price-to-earnings ratio (PER)	Measures the valuation of a company's shares relative to its earnings, calculated as the market price divided by earnings per share.	Market price per share/earnings per share	[1], [2], [7], [8]
Book value (BV)	Indicates the net asset value per share after deducting liabilities, calculated as net assets divided by the number of shares outstanding.	(Total Shareholder Capital - Preferred Capital) / Number of Shares Outstanding	[19]–[21]
Net Profit Margin (NPM)	Reflects a company's efficiency in generating profits from its total revenue, calculated as net profit divided by total revenue, multiplied by 100 to express it as a percentage.	(Net Profit / Total Revenue)	[22]–[25]

Source: Processed from various sources, 2024

Data Analysis Techniques

The data analysis utilizes SmartPLS, a PLS (Partial Least Squares) method suitable for handling complex conceptual models in research. This method enables path analysis and detailed mediation analysis, which are integral to this study's objectives. The analysis commences with data quality checks to ensure data integrity and accuracy, minimizing bias and enhancing analysis reliability. Eleven companies were excluded as they did not align with the study's objectives, leaving a sample of 69

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companies deemed suitable for analysis. Subsequently, the outer model was validated using the Fornell-Larcker criterion and discriminant validity [26], [27], facilitating an initial assessment of variable distribution and relationships.

Hypothesis testing analyzed the relationships between the independent variables (EPS and PER) and the dependent variable (BV), clarifying the significance of these associations. Moreover, mediation analysis was employed to explore the mediating role of NPM in the relationships between EPS, PER, and BV. This analytical approach unravelled the mechanisms through which mediator variables influence the dynamics of firm valuation.

Interpreting the analysis results aims to deepen understanding of factors impacting firm value in the Indonesian capital market. These insights validate or refute research hypotheses and offer practical implications for decision-makers in formulating effective financial and investment strategies.

Result and Discussion

Results

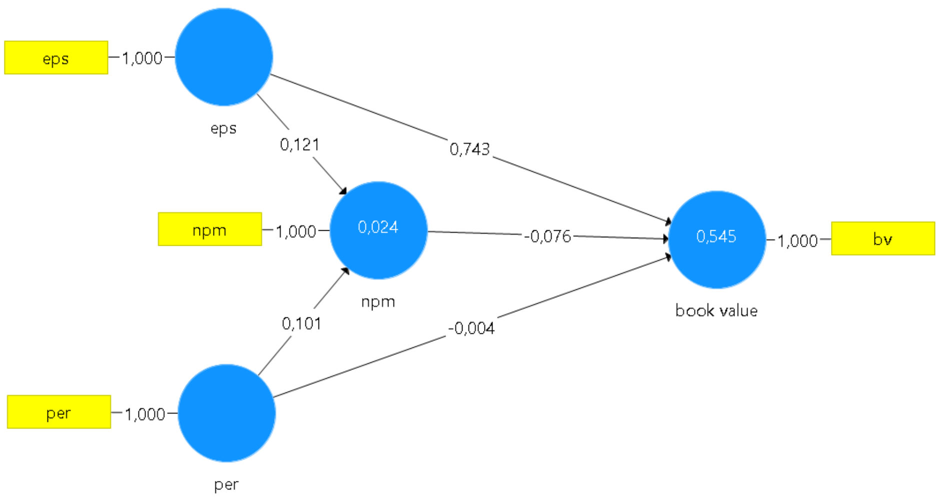

Figure 1. Outer Model

The R-square measures how much variability in bound variables can be explained by independent variables. The analysis results indicated that the book value variable had an R-squared value of 0.545, suggesting that about 54.5% of the variation in book value could be explained by independent variables [28]. On the other hand, the npm variable has a much lower R-squared, only about 2.4%, suggesting that the contribution of independent variables to the variation in net profit margin (NPM) is more limited [29].

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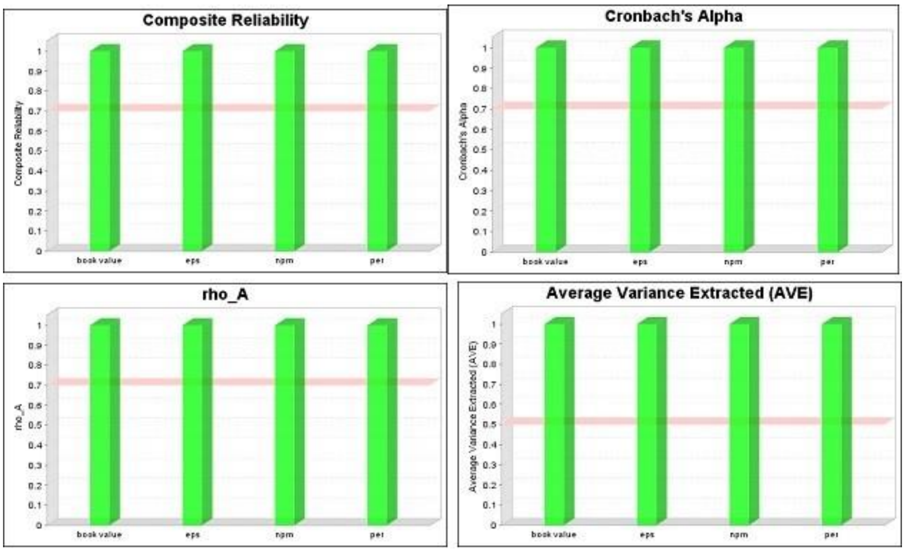

Figure 2. Validity and Reliability

This study employs SmartPLS to assess the validity and reliability of EPS, PER, Book Value, and NPM constructs within their mediated relationships. The results reveal Cronbach's Alpha, rho_A, Composite Reliability, and Average Variance Extracted (AVE) values of 1.000 each, indicating exceptionally high internal consistency and optimal convergent validity (Hair et al., 2019). These comparative criteria ensure that all constructs are reliable and effective in measuring the intended concepts Bustani and Juniar [30], thereby reinforcing the analytical integrity of investigating the impact of EPS and PER on Book Value with NPM mediation (see Figure 2).

Table 2. Validity check for decriminalization

	BV	**EPS**	**NPM**	**PER**
Fornell-Larcker criterion				
BV	**1.000**			
EPS	0.734	**1.000**		
NPM	0.011	0.117	**1.000**	
PER	-0.037	-0.035	0.097	**1.000**
Heterotrait-to-Monotraite Ratio (HTMT)				
BV				
EPS	**0.734**			
NPM	0.011	**0.117**		
PER	0.037	0.035	**0.097**	

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Source: data processed, 2024

Discriminatory validity is essential to ensure that each construct in a structural model captures a unique phenomenon. This study evaluated discriminant validity using the Fornell-Larcker criterion and the heterotrait-monotrait ratio (HTMT) between book value, EPS, NPM, and PER. The Fornell-Larcker criterion shows that the AVE value for each construct is 1.000, with an impact between book value and EPS of 0.734, book value and NPM of 0.011, and book value and PER of -0.037. The square root of the AVE is greater than the impact of other constructs that confirm the validity of discrimination [26], [28].

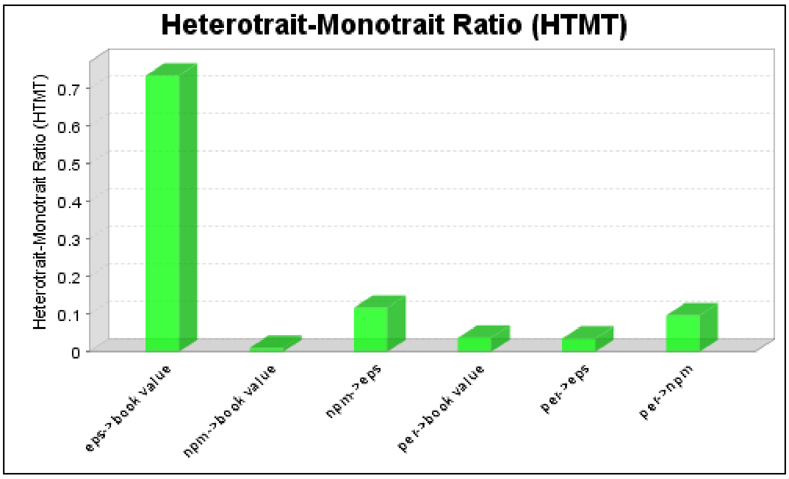

Figure 3. HTMT

In addition (see Figure 3), the HTMT value also shows good discriminatory validity. The HTMT between book value and EPS is 0.734, EPS and NPM 0.117, and EPS and PER 0.035. Any HTMT values below 0.85 indicate that the analyzed construct is different and valid. This strong validity of discrimination confirms that EPS, NPM, and PER are different but interrelated indicators that affect book value. This supports financial and investment decisions in IDX80-indexed companies and strengthens the reliability of research results.

Table 3. Model Fit

Model_Fit	Saturated model
SRMR	0.000
d_ULS	0.000
d_G	0.000
NFI	1.000

Source: data processed, 2024

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The results of the fit model analysis (Table 3) show that the saturated model provides an excellent interpretation of the observational data used. An SRMR value close to zero indicates that the model effectively replicates the observed variables' impact pattern [31]. In addition, values close to zero d_ULS and d_G indicate no significant difference between the proposed and the exact models, confirming the model's suitability for the data[32]. An NFI score of almost 1,000 confirms that the model is an excellent fit and is close to being perfect [33]. These results show that the saturated model is suitable for modelling the data used in this study under the widely accepted model.

Inner model

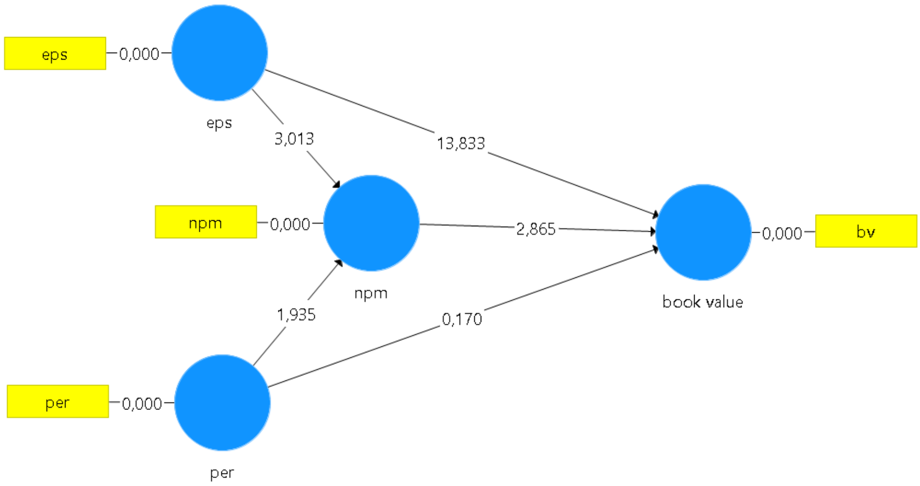

Figure 3. Inner model

Table 4. Hypothesis testing

Variables	Original Sample (O)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values	Hypothesis
EPS -> BV	0.743	0.054	13.833	0.000	accepted
EPS -> NPM	0.121	0.040	3.013	0.003	accepted
NPM -> BV	-0.076	0.027	2.865	0.004	accepted
EPS -> BV	-0.004	0.022	0.170	0.865	rejected
PER -> NPM	0.101	0.052	1.935	0.054	rejected
EPS -> NPM -> BV	-0.009	0.004	2.460	0.014	accepted
PER -> NPM -> BV	-0.008	0.005	1.602	0.110	rejected

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Source: data processed, 2024

Discussion

Relationship between EPS and BV in IDX80-indexed companies for the period 2021-2023

This study found that the connection between EPS and BV in the IDX80 stock index on the Indonesian Stock Exchange had a significant positive relationship (coefficient 0.743, T-statistic = 13.833, p-value = 0.000); see Table 4 and Figure 4. These findings support the signalling theory, which argues that high earnings per share give investors a positive signal about a company's performance and the potential growth in net asset value per share. In the context of the IDX80, which covers various sectors of the economy, the BV improvement is interpreted as a direct result of improved operational performance and a growth strategy reinforced by strong EPS performance. Stock valuation theory supports these results by suggesting that high earnings per share can provide a positive signal for a company's performance and potential growth in net asset value per share. In the context of the IDX80, which covers various sectors of the economy, the increase in BV can be seen as a direct result of strong EPS performance, indicating a higher intrinsic value of the company.

The findings of this study also support signalling theory, which posits that high EPS provide investors with a positive signal regarding a company's performance and the potential growth in net asset value per share [15], [16]. Furthermore, stock valuation theory suggests that high EPS can indicate a company's strong performance and potential growth in net asset value per share [17] (. These study results align with research conducted by [34], [35], which found a significant positive impact between EPS and company value in the Chinese stock market, indicating that investors perceive higher EPS as a signal of company value and stability. Similarly, the study by Collins and Kothari [36] demonstrated that higher EPS is closely associated with increased stock prices in the firm value U.S. market, reinforcing that EPS is a critical indicator in evaluating a company's financial performance. These findings are consistent with our study results, showing that high EPS reflects strong financial performance and enhances the book value per share, thereby supporting signalling and stock valuation theories.

Relationship between EPS and NPM in IDX80 indexed companies for the period 2021-2023

The positive and significant relationship between earnings per share (EPS) and net profit margin (NPM) (coefficient 0.121, T-statistic = 3.013, p-value = 0.003) (see Table 4 and Figure 4) in IDX80 stocks supports agency theory [37]. This theory states that managers tend to optimize earnings per share to improve the financial performance of companies, which is reflected in the increase in NPM. The EPS performance reflects the company's financial health and improves operational efficiency in diversified stock indices such as the IDX80.

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Stock valuation theory emphasizes that the market's assessment of the financial achievements of an organization and its prospects is crucial for determining its stock valuation [15], [16]. Earnings per share (EPS) serves as a key metric in assessing profitability per share, while the Price-to-Earnings ratio (PER) indicates how the market values a stock relative to its EPS [17]. According to Jensen and Meckling [9], EPS plays a pivotal role in determining a company's valuation by reflecting its capacity to generate profitable revenue streams. Companies with higher EPS often command more excellent market value, indicating their ability to sustain robust profitability over time [11]. The research underscores that high EPS enhances a company's valuation and signifies stability and potential for future earnings growth, reinforcing EPS's significance in stock valuation analysis [5].

Relationship between NPM and BV in IDX80-indexed companies for the period 2021-2023

The finding that the net profit margin (NPM) has a significant negative relationship with book value per share (BV) (coefficient -0.076, T-statistic = 2.865, p-value = 0.004) (see Table 4 and Figure 4) suggests that there is a trade-off between profitability and net asset value per share in the IDX80 index. Trade-off theory supports these findings by pointing out that while increasing NPM can increase profitability, it can also reduce the investment required for long-term growth, ultimately impacting BV. In the context of stock indices that cover various sectors such as banking, consumer goods, telecommunications, and manufacturing, these trade-offs reflect the company's strategy of maintaining a balance between profitability and long-term value growth [38].

According to Trade-off Theory, which suggests that while increasing NPM can enhance profitability, it may also reduce the allocation of resources necessary for long-term growth, thereby affecting BV. Recent empirical studies further support these findings. For example, research by [39], [40] has highlighted similar trade-offs in various economic contexts, affirming the strategic challenge companies face in balancing short-term gains with sustainable long-term value creation [38].

Relationship between PER and BV in IDX80-Indexed Companies for the Period 2021-2023

There is no significant impact between the price-to-earnings (PER) ratio and book value per share (BV) in the IDX80 stock sample (coefficient -0.004, T-statistic = 0.170, p-value = 0.865); see Table 4 and Figure 4. These findings imply that the valuation theory, which asserts that the PER influences stock valuations, is not entirely applicable in the context of this stock index. IDX80, as a critical indicator of the development of the Indonesian equity market, underlines that equity valuations are more influenced by fundamental factors such[41] as EPS and NPM than by the PER. The results of this study are consistent with fundamental analysis theory, which suggests that stock valuation is mainly driven by fundamental company factors, including EPS, PER, and other metrics that indicate the company's operational and financial performance.

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Relationship between PER and NPM in IDX80-indexed companies for the period 2021-2023

This hypothesis tests the relationship between the price-to-earnings (PER) ratio and net profit margin (NPM) in IDX80 stocks. The analysis showed a positive impact close to the significance level (coefficient 0.101, T-statistic = 1.935, p-value = 0.054) (see Table 4 and Figure 4). Although it does not reach the typically established statistical significance level ($p < 0.05$), these results lead to the theory that PER can provide an early indication of a company's potential profitability, which may be reflected in the NPM. Nevertheless, more research is needed to confirm this relationship in the context of the IDX80 stock index, which covers different sectors of the economy with different characteristics.

Relationship between EPS and BV by NPM in IDX80 indexed companies for the period 2021-2023

The NPM played an essential role as an intermediary in the relationship between EPS and BV (coefficient -0.009, T-statistic = 2.460, p-value = 0.014); see Table 4 and Figure 4. These findings support agency theory by showing that EPS performance directly impacts BV through improved operational efficiency and management strategies to increase shareholder value. The results show that the net profit margin (NPM) plays a crucial intermediary in the relationship between EPS and BV in the context of the IDX80 stock index (EPS path coefficient -> NPM -> BV -0.009, T-statistic = 2.460, p-value = 0.014). This supports relevant theories such as the agency theory, which states that EPS performance directly impacts BV and increases the company's value through improved operational efficiency and management strategies [42]. These results are also in line with the concept that NPM, as an indicator of profitability, plays a crucial role in how efficiently a company converts revenue into a net profit, which in turn contributes to the valuation of the company [43], [44] Thus, the integration of NPM as an intermediary in the analysis of the relationship between EPS and BV not only strengthens the validity of the underlying theories but also provides a deeper understanding of the internal dynamics of the company to achieve optimal business value.

Relationship between PER and BV by NPM in IDX80 Indexed Companies for the Period 2021-2023

The mediation relationship between PER, NPM, and BV is not statistically significant (coefficient -0.008, T-statistic = 1.602, p-value = 0.110) (see Table 4 and Figure 4). These results suggest that valuation theory may not be entirely relevant to explaining how the PER affects stock valuation through NPM mediation in the context of the IDX80 stock index. Fundamental variables such as EPS and NPM will likely play a more dominant role in determining the valuation of stocks in this stock index.

The insignificant intermediary relationship between the PER ratio, NPM, and BV in the IDX80 stock index triggered a discussion within the framework of valuation theory. Valuation theory states that the PER ratio is essential in influencing the valuation of stocks and reflects market expectations and investor sentiment. However,

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the results show that NPM as an intermediary between PER and BV does not significantly impact stock valuations. This suggests that traditional valuation measures such as the PER may not fully describe the complexity of the stock valuation mechanisms in a diversified equity index such as the IDX80. Conversely, earnings per share (EPS) and NPM, which directly reflect financial performance and profitability, are likely to impact stock valuations significantly.

Conclusion

This study aims to unravel the mystery of book value by examining the impact of earnings per share (EPS) and price-to-earnings (PER) ratios on operational efficiency in companies listed in the IDX80 index from 2021 to 2023. This study aims to provide a deeper understanding of how financial and operational performance affects equity valuations and focuses on how EPS and PER interact with a net profit margin (NPM) as an intermediary, with an approach that integrates the theoretical concepts of equity valuation, signalling, and mediation in the context of Indonesia's dynamic capital market. The results of this analysis not only confirm or reject the research hypotheses but also provide important practical implications for decision-makers in designing effective financial and investment strategies. The finding that EPS have a significant impact on the share valuation reflected in BV, as well as the mediating role of the NPM in the relationship between EPS and BV, shows how important financial and operational performance is in determining the value of companies in the Indonesian capital market. The study also shows the complexity of valuing stocks with the PER metric, which does not fully describe the intrinsic value of the companies in the IDX80 stock index, which comprises different sectors.

Nonetheless, the excellence of this study lies in integrating relevant financial theories such as stock valuation, signals, and mediation, which provides a solid foundation for analyzing the factors influencing stock valuation in a dynamic economic context. This study's limitations include reliance on secondary data and a focus on specific periods, highlighting the necessity for further research to explore the deeper dynamics of equity valuation factors in the Indonesian capital market. The recommendations focus on developing a more comprehensive model, data diversification, advanced research, and better strategy execution in investment decisions and financial management in this ever-evolving capital market.

References

[1] D. J. Skinner and R. G. Sloan, "Earnings surprises, growth expectations, and stock returns or don't let an earnings torpedo sink your portfolio," *Rev. Account. Stud.*, vol. 7, no. 2, pp. 289–312, 2002.

[2] T. Akhtar, "Market multiples and stock returns among emerging and developed financial markets," *Borsa Istanbul Rev.*, vol. 21, no. 1, pp. 44–56, 2021, doi: 10.1016/j.bir.2020.07.001.

[3] Y. Ariesa, T. Tommy, J. Utami, I. Maharidha, N. C. Siahaan, and N. B. Nainggolan, "The effect of current ratio (CR), firm size (FS), return on equity

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(ROE), and earning per share (EPS) on the stock prices of manufacturing companies listed in Indonesia stock exchange in the 2014-2018 period," *Budapest Int. Res. Critics Inst. Humanit. Soc. Sci.*, vol. 3, no. 4, pp. 2759–2773, 2020.
[4] B. Asikin, M. H. Saudi, and R. Roespinoedji, "Influence of Return on Assets (ROA), Return on Equity (ROE), and Earning Per Share (EPS) of Stock Price (Survey on Corporate Advertising, Printing, and the Media listed on the Indonesia stock exchange Period 2015-2019)," *Solid State Technol.*, vol. 63, no. 3, pp. 3941–3955, 2020.
[5] R. A. Brealey, S. C. Myers, and F. Allen, *Principles of corporate finance*. McGraw-hill, 2014.
[6] A. Damodaran, *The little book of valuation: How to value a company, pick a stock, and profit*. John Wiley & Sons, 2024.
[7] M. Salisu and K. Shika, "Muhammad Salisu & Kassim Shika Yusha'u 2," *Int. J. Adv. Stud. Econ. Public Sect. Manag.*, vol. 8, no. 1, pp. 165–179, 2020, doi: http://internationalpolicybrief.org/journals/international-scientific-research-consortium-journals/intl-journal-of-economics-vol8-no1-february-2020.
[8] M. R. Islam, T. R. Khan, T. T. Choudhury, A. M. Adnan, and 1 Senior Lecturer, "How Earning Per Share (EPS) Affects on Share Price and Firm Value," *Eur. J. Bus. Manag.*, vol. 6, no. 17, pp. 2222–2839, 2014.
[9] W. H. Meckling and M. C. Jensen, "Theory of the Firm," *Manag. Behav. Agency Costs Ownersh. Struct.*, 1976.
[10] A. Damodaran, *Investment valuation: Tools and techniques for determining the value of any asset*, vol. 666. John Wiley & Sons, 2012.
[11] A. S. Alarussi and S. M. Alhaderi, "Factors affecting profitability in Malaysia," *J. Econ. Stud.*, 2018, doi: 10.1108/JES-05-2017-0124.
[12] R. B. Tampubolon, S. N. P. Zai, and H. Agustin, "The impact of fuel oil increase on stock prices: an event study approach on the IDX80 Indonesia stock exchange 2022," *Int. J. Econ. Bus. Account. Res.*, vol. 7, no. 3, pp. 979–988, 2023.
[13] D. Kaluge and A. Kinesti, "Overreaction behavior analysis on IDX80 stocks during bearish market conditions," in *Brawijaya International Conference on Economics, Business and Finance 2021 (BICEBF 2021)*, 2022, pp. 66–72.
[14] M. Jihadi, E. Vilantika, S. M. Hashemi, and ..., "The effect of liquidity, leverage, and profitability on firm value: Empirical evidence from Indonesia," *J. Asian …*, 2021, [Online]. Available: https://eprints.umm.ac.id/88934/.
[15] G. Grullon and R. Michaely, "The information content of share repurchase programs," *J. Finance*, vol. 59, no. 2, pp. 651–680, 2004.
[16] T. Vermaelen, "Common stock repurchases and market signalling: An empirical study," *J. financ. econ.*, vol. 9, no. 2, pp. 139–183, 1981.
[17] T. E. Copeland, J. F. Weston, and K. Shastri, *Financial theory and corporate policy*, vol. 4. Pearson Addison Wesley Boston, 2005.
[18] B. Bustani, F. Swandari, and A. Yunani, "Green Capital Dynamics: Investigating the Impact of Capital Structure on Profitability among IDX LQ45 Low Carbon

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Leaders in Indonesia," *Account. Financ. Stud.*, vol. 4, no. 3, pp. 225–242, Jul. 2024, doi: 10.47153/afs44.11092024.
[19] E. G. Okoro and C. M. Ekwueme, "Is accounting alchemy still the right medicine for firm's earnings and book value? Evidence from Sub-Saharan Africa," *RAM. Rev. Adm. Mackenzie*, vol. 22, no. 3, p. eRAMF210007, 2021.
[20] S. S. Ibrahim, O. Olarewaju, and V. Yearwood, "Financial ratios and book value of shares for selected money transfer companies listed on the Iraq stock exchange," *Innovations*, vol. 18, no. 1, pp. 260–269, 2021.
[21] A. Srivastava and H. Muharam, "Value relevance of earnings and book values during IFRS convergence period in India," *J. Financ. Report. Account.*, vol. 19, no. 5, pp. 885–900, 2021.
[22] J. Lerner and A. Leamon, *Venture capital, private equity, and the financing of entrepreneurship*. John Wiley & Sons, 2023.
[23] A. Anton, S. Lorensa, I. Purnama, P. Eddy, and A. Andi, "Net Profit Margin, Earnings per Share, Return on Asset, Debt Equity Ratio, and Current Ratio on Firm Value in Agricultural Sector Companies Listed on Indonesia Stock Exchange 2016-2021," *J. Appl. Bus. Technol.*, vol. 4, no. 2, pp. 155–167, 2023.
[24] T. N. Nariswari and N. M. Nugraha, "Profit growth: impact of net profit margin, gross profit margin and total assests turnover," *Int. J. Financ. Bank. Stud.*, vol. 9, no. 4, pp. 87–96, 2020.
[25] B. Bustani, K. Kurniaty, and R. Widyanti, "The Effect of Earning Per Share, Price to Book Value, Dividend Payout Ratio, and Net Profit Margin on the Stock Price in Indonesia Stock Exchange," *J. Maksipreneur Manajemen, Koperasi, dan Entrep.*, vol. 11, no. 1, p. 1, 2021, doi: 10.30588/jmp.v11i1.810.
[26] W. W. Chin, "Commentary: Issues and Opinion on Structural Equation Modeling," *MIS Q.*, vol. 22, no. 1, pp. vii–xvi, Jan. 1998, [Online]. Available: http://www.jstor.org/stable/249674.
[27] J. F. Hair, J. J. Risher, M. Sarstedt, and C. M. Ringle, "The Results of PLS-SEM Article information," *Eur. Bus. Rev.*, vol. 31, no. 1, pp. 2–24, 2018.
[28] J. F. Hair, G. T. M. Hult, C. M. Ringle, and M. Sarstedt, "A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM)," SEAGE Publication,Inc. California, USA, 2017.
[29] A. Maydeu-Olivares, "Goodness-of-fit assessment of item response theory models," *Meas. Interdiscip. Res. Perspect.*, vol. 11, no. 3, pp. 71–101, 2013.
[30] B. Bustani and A. Juniar, "Exploring Transformational Leadership and Employee Performance: The Mediation Role of Psychological Empowerment Millennial Generation," *Ilomata Int. J. Manag.*, vol. 4, no. 4, pp. 697–717, Nov. 2023, doi: 10.52728/ijjm.v4i4.1006.
[31] L. Hu and P. M. Bentler, "Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives," *Struct. Equ. Model. a Multidiscip. J.*, vol. 6, no. 1, pp. 1–55, 1999.
[32] J. M. Wicherts and C. V Dolan, "A cautionary note on the use of information fit

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indexes in covariance structure modeling with means," *Struct. Equ. Model.*, vol. 11, no. 1, pp. 45–50, 2004.
[33] P. M. Bentler and D. G. Bonett, "Significance tests and goodness of fit in the analysis of covariance structures.," *Psychol. Bull.*, vol. 88, no. 3, p. 588, 1980.
[34] S. Ashraf, E. G. S. Félix, and Z. Serrasqueiro, "Do traditional financial distress prediction models predict the early warning signs of financial distress?," *J. Risk Financ. …*, 2019, [Online]. Available: https://www.mdpi.com/1911-8074/12/2/55.
[35] R. Arhinful and M. Radmehr, "The effect of financial leverage on financial performance: evidence from non-financial institutions listed on the Tokyo stock market," *J. Cap. Mark. Stud.*, vol. 7, no. 1, pp. 53–71, 2023, doi: 10.1108/JCMS-10-2022-0038.
[36] D. W. Collins and S. P. Kothari, "An analysis of intertemporal and cross-sectional determinants of earnings response coefficients," *J. Account. Econ.*, vol. 11, no. 2–3, pp. 143–181, 1989.
[37] M. C. Jensen and W. H. Meckling, "Theory of the firm: Managerial behavior, agency costs and ownership structure," *Corp. Gov. Values, Ethics Leadersh.*, no. 4, pp. 77–132, 2019, doi: 10.4159/9780674274051-006.
[38] F. Modigliani and M. H. M. Miller, "American Economic Association Corporate Income Taxes and the Cost of Capital : A Correction," *Am. Econ. Rev.*, vol. 53, no. 3, pp. 433–443, 1963.
[39] P. Haessler, "Strategic decisions between short-term profit and sustainability," *Adm. Sci.*, vol. 10, no. 3, p. 63, 2020.
[40] C. Liu and H. Jiang, "Impact of CEO characteristics on firm performance: evidence from China listed firms," *Appl. Econ. Lett.*, 2020, doi: 10.1080/13504851.2019.1607965.
[41] I. A. Fatmayuni, Sri Dwi Ari Ambarwati, and Hendro Widjanarko, "Determinant Financial Distress: Evidence Manufacture Company in Indonesia Stock Exchange 2018 – 2022," *Account. Financ. Stud.*, vol. 4, no. 1, pp. 1–16, 2024, doi: 10.47153/afs41.8502024.
[42] A. R. Tantra, F. D. Jayanti, D. A. Ani, and B. A. Indarto, "The Effect of ROA, ROE and EPS on Company Value (On construction and Building Sector Companies)," in *The Virtual International Conference on Economics, Law and Humanities*, 2022, vol. 1, no. 1, pp. 88–98.
[43] A. D'Amato, "Does intellectual capital impact firms' capital structure? Exploring the role of firm risk and profitability," *Manag. Financ.*, 2021, doi: 10.1108/MF-02-2020-0089.
[44] I. Siedschlag and W. Yan, "Do green investments improve firm performance? Empirical evidence from Ireland," *Technol. Forecast. Soc. Change*, vol. 186, no. PB, p. 122181, 2023, doi: 10.1016/j.techfore.2022.122181.

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