

# FINANCIAL RATIOS AND SPECULATIVE DYNAMICS IN THIRD-LINER STOCKS: EVIDENCE FROM THE INDONESIA STOCK EXCHANGE

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## ABSTRACT

This study investigates whether traditional financial ratios remain valid predictors of stock prices in speculative market environments, focusing on third-liner stocks listed on the Indonesia Stock Exchange (IDX) from 2012 to 2019. Using panel data regression with a Random Effect Model on 72 companies, the research evaluates the influence of liquidity (Current Ratio), solvency (Debt-to-Equity Ratio), activity (Total Asset Turnover), and profitability (Return on Equity) on stock prices. The results show that only profitability (ROE) and solvency (DER) significantly affect stock prices, while liquidity and activity do not. However, the explanatory power of these ratios is minimal (adjusted  $R^2 = 0.02$ ), indicating that stock prices in this segment are largely shaped by speculative dynamics rather than fundamentals. These findings highlight the limitations of conventional financial analysis in high-risk, manipulation-prone markets. The study suggests the need for improved investor education, stricter regulatory oversight, and future research integrating behavioral and sentiment-based indicators to better capture price movements in speculative stocks.

**Keywords:** Financial Ratios, Third-Liner Stocks, Speculative Dynamics, Indonesia Stock Exchange (IDX), Random Effect Model (REM).

## ABSTRAK

*Penelitian ini mengkaji apakah rasio keuangan tradisional masih menjadi prediktor yang relevan terhadap harga saham dalam lingkungan pasar yang spekulatif, dengan fokus pada saham third-liner di Bursa Efek Indonesia (BEI) selama periode 2012 hingga 2019. Menggunakan regresi data panel dengan Random Effect Model pada 72 perusahaan, penelitian ini menganalisis pengaruh likuiditas (Current Ratio), solvabilitas (Debt-to-Equity Ratio), aktivitas (Total Asset Turnover), dan profitabilitas (Return on Equity) terhadap harga saham. Hasil penelitian menunjukkan bahwa hanya profitabilitas (ROE) dan solvabilitas (DER) yang berpengaruh signifikan terhadap harga saham, sedangkan likuiditas dan aktivitas tidak berpengaruh. Namun, daya prediksi (adjusted  $R^2$ ) hanya sebesar 0,02, menunjukkan bahwa harga saham pada segmen ini lebih banyak dipengaruhi oleh dinamika spekulatif daripada faktor fundamental. Temuan ini menyoroti keterbatasan analisis keuangan konvensional di pasar yang berisiko tinggi dan rawan manipulasi. Studi ini merekomendasikan peningkatan literasi investor, pengawasan regulasi yang lebih ketat, serta penelitian lanjutan yang mengintegrasikan indikator perilaku dan sentimen pasar untuk menangkap pergerakan harga secara lebih komprehensif.*

**Kata kunci:** Rasio Keuangan, Saham Third-Liner, Dinamika Spekulatif, Bursa Efek Indonesia (BEI), Random Effect Model (REM).

## 1. INTRODUCTION

The origins of the Indonesian capital market can be traced back to the year 1912, when it was established by the Dutch under the name *Vereniging voor de Effectenhandel*. The Indonesia Stock Exchange (IDX), previously known as the Jakarta Stock Exchange, later merged with the Surabaya Stock Exchange. As a vital component of national economic infrastructure, the stock market plays a critical role in enhancing economic growth by efficiently allocating capital, providing liquidity, and enabling risk diversification. Empirical evidence demonstrates a positive correlation between stock market development and economic progress (Bekaert & Harvey, 1998; Ngare et al., 2014; Azam et al., 2016; Samsi et al., 2019).

The IDX is still considered a developing market with moderate capitalization. Out of 945 listed companies, around 47% are classified as small-cap stocks with market capitalizations under 1 trillion Rupiah (Indonesia Stock Exchange, n.d.). These small-cap or "third-liner" stocks significantly influence market dynamics and present both opportunities and risks, particularly because they tend to exhibit higher volatility, limited liquidity, and increased vulnerability to speculative trading. They are often perceived as undervalued due to less analyst coverage and lower investor familiarity, which may result in greater return potential for informed investors. Several studies support this perspective, indicating that smaller firms tend to yield higher returns due to undervaluation and expansive growth potential (Bauman et al., 1998; Banz, 1981; Pandey & Sehgal, 2016). However, this notion is not universally accepted. In the Indonesian context, for example, some research indicates that the relationship between firm size and returns is weak or even contrary to expectations, with larger firms occasionally offering higher or more stable returns (Black, 1993; Patel, 2012). These mixed findings underscore the

importance of understanding firm-specific and market-specific factors when evaluating small-cap stock performance.

The presence of widespread market manipulation, including financial statement fraud (Hasibuan et al., 2022; Kuncara, 2022), IPO mispricing (Purwanto, 2014; Sudarmaji et al., 2020), and pump-and-dump schemes (Pratama et al., 2022; Fahlevie et al., 2022; Edelweiss et al., 2024), and other forms of market manipulation that are prevalent (Aaron et al., 2020), raises questions about the reliability of traditional financial analysis in the IDX, particularly for third-liner stocks. These concerns are further supported by findings on overreaction and momentum effects in Indonesian stock markets (Santosa & Huda, 2020) as well as the identification of market trends using switching models (Lesmana, 2023), which emphasize the need for investors to consider behavioral and cyclical factors.

This research evaluates whether financial ratios remain relevant indicators of fundamental value in a speculative market context. It focuses on the impact of liquidity (Current Ratio), solvency (Debt-to-Equity Ratio), activity (Total Asset Turnover), and profitability (Return on Equity) on stock prices of third-liner companies in IDX from 2012 to 2019, aiming to uncover how valuation mechanisms operate in high-risk market segments dominated by speculative behavior.

## 2. Literature Review

### 2.1 Theoretical Framework: Signaling Theory

The use of financial ratios as proxies for a stock's fundamental value is rooted in Signaling Theory, which explains how individuals or organizations communicate relevant information under conditions of information asymmetry. In capital markets, companies send signals through financial disclosures such as earnings reports, dividend announcements, and balance sheets (Yasar et al., 2020; Puspitaningtyas,

2019; Agustin et al., 2023). Financial reports are among the most accessible signals investors rely on to assess firm performance and prospects.

## 2.2 Financial Ratios and Stock Prices

Numerous studies explore the influence of financial ratios on stock prices, yet their findings are often mixed and context dependent. Arkan (2016) conducted a comprehensive study on 12 financial ratios across Kuwaiti market sectors, concluding that only ROE exhibited a positive and significant relationship with stock prices, whereas CR, DER, and TAT showed no significant influence. Similar patterns were found in Indonesia by Wulansari et al. (2023), who revealed that ROE had a significant positive effect and DER a significant negative impact on telecommunications sector stocks. Ayudya et al. (2017) also reported a positive and significant effect of ROE, aligning with findings by Juwita & Diana (2020), who noted ROE's influence on stocks in the Jakarta Islamic Index, although DER was found to be insignificant.

Conversely, contradictory evidence is provided by Pražák & Stavárek (2017), who studied energy firms in the Prague and Warsaw Stock Exchanges and observed no significant influence of either DER or ROE on stock prices. Asmirantho & Somantri (2017), examining pharmaceutical companies on the IDX, found that financial ratios had no significant effects on stock prices. This was supported by Muktiadji & Pamungkas (2022) and Noviyanti et al. (2021), both of whom found that DER did not significantly affect banking stock prices on the IDX.

Herawati & Putra (2018), focusing on the food and beverage industry, found that TAT had a positive partial influence, whereas CR and DER had no significant effect. On the other hand, Nugraha & Artini (2022) observed that both CR and DER had a negative effect on stock prices in the automotive and component subsector.

These inconsistencies suggest that the impact of financial ratios varies across industries, time periods, and firm characteristics. They also indicate the potential limitations of traditional ratios in capturing stock price behavior, especially in markets prone to speculation or manipulation.

## 2.3 Evidence of Speculative Behavior in Third-Liner Stocks

Behavioral and institutional factors further complicate the relationship. The IDX has been subject to manipulation tactics including financial fraud, IPO mispricing, and pump-and-dump schemes (Yang et al., 2014; Aaron et al., 2020; Pratama et al., 2022; Fahlevie et al., 2022; Edelweiss et al., 2024). Speculative behavior, fueled by asymmetric information and retail investor irrationality, may overshadow traditional valuation signals (Nanayakkara et al., 2019; Umboh & Atahau, 2019; Mushinada, 2020; Ye et al., 2020; Sergi et al., 2024).

## 2.4 Research Gap

Despite extensive research on the influence of financial ratios on stock prices, there is limited focus on third-liner stocks, especially in speculative environments like the IDX. Most existing literature centers around large-cap firms or specific sectors. This study seeks to address this gap by focusing on third-liner stocks and examining whether financial ratios retain predictive validity amid speculation and manipulation.

## 2.5 Research Hypotheses

Based on the literature review and theoretical framework, the following hypotheses are formulated:

- H1: The Current Ratio (CR) significantly influences the stock prices of third-liner companies listed on the IDX.
- H2: The Debt-to-Equity Ratio (DER) significantly influences the stock prices of third-liner companies listed on the IDX.
- H3: The Total Asset Turnover (TAT)

significantly influences the stock prices of third-liner companies listed on the IDX.

H4: The Return on Equity (ROE) significantly influences the stock prices of third-liner companies listed on the IDX.

### 3. Research Method

This study utilizes financial statement data spanning from 2012 to 2019, sourced from the Indonesia Stock Exchange (IDX), Yahoo Finance, and Stockbit, covering 72 companies categorized as third-liner stocks and listed on the IDX. The dataset is considered time series due to the multi-year coverage, and also qualifies as panel data as it encompasses multiple firms 72 in total across the same time period. Given these characteristics, panel data regression was employed as the appropriate analytical model.

Panel data regression combines both cross-sectional and time-series dimensions, making it a suitable approach to capture dynamic changes over time such as fluctuations in a company's financial performance from year to year. This model offers advantages in terms of controlling for unobserved heterogeneity and reducing omitted variable bias, especially when working with a relatively large dataset. Panel regression is particularly effective in providing more robust and efficient estimates in studies involving multidimensional financial data.

This study does not incorporate control variables, as the primary objective is to examine the direct relationship between financial ratios namely Current Ratio (CR),

Debt to Equity Ratio (DER), Total Asset Turnover (TAT), and Return on Equity (ROE) and the stock prices of companies categorized as third-liners. The analysis is intentionally focused on firm-specific financial indicators, without accounting for external influences such as macroeconomic conditions or market sentiment, which may also affect stock price movements. By isolating these internal financial metrics, the study aims to provide a clearer understanding of how fundamental financial health relates to speculative dynamics in the third-liner segment.

Data transformation was carried out in the form of logarithmic transformation for year-end closing prices, Current Ratio (CR), Debt to Equity Ratio (DER), Total Assets Turnover (TAT), and Return On Equity (ROE) to reduce the influence of outliers and linearize the relationship between variables, especially in panel data regression (Gurajati & Porter, 2009). The  $\log(x+2)$  adjustment is used specifically to handle examples of zero or negative values so as to ensure all data points are included in the analysis without compromising the integrity of the model (Johnston & DiNardo 1997).

In panel data regression analysis, three models that can be used are the Common Effect Model, Fixed Effect Model, and Random Effect Model. To choose the most suitable model to use, a test starting from the Chow test was carried out to determine which CEM and FEM were more suitable. Next, the Hausman test is carried out to determine which REM and FEM are more suitable. Finally, the Lagrange Multiplier (LM) test was carried out to determine which model is better, CEM or REM.

**Table 1. Chow Test Results**

Effects Test	Statistic	d.f.	Prob.
Cross-section F	24.375333	(71,500)	0.0000
Cross-section Chi-square	861.373210	71	0.0000

Source : Data Analysis Results (2025)

**Table 2. Hausman Test Results**

Test Summary	Chi-Sq Statistic	Chi-Sq d.f.	Prob.
Cross-section random	9.258917	4	0.0549

Source : Data Analysis Results (2025)

**Table 3. Lagrange Multiplier Test Result**

Test Hypothesis	Cross-Section	Time	Both
Breusch-paqan	1072.043 (0.000)	2.731362 (0.0984)	1074.774 (0.0000)
Honda	32.74207 (0.0000)	-1.652683 (0.9508)	21.98351 (0.0000)
King-wu	32.74207 (0.0000)	-1.652683 (0.9508)	8.231836 (0.0000)
Standardized Honda	33.65319 (0.0000)	-1.499419 (0.9331)	17.44465 (0.0000)
Standardized King-Wu	33.65319 (0.0000)	-1.499419 (0.9331)	5.064196 (0.0000)
Gourieroux, et al.	-	-	1072.043 (0.0000)

Source : Data Analysis Results (2025)

The test results in Table 1 show that the Chow Test has a p-value of 0.0000, thus indicating that the FEM model is more suitable. The Hausman test in Table 2 produces a p-value of 0.0549, so the REM model is more suitable for use. Table 3 Displays results of the Lagrange Multiplier Test produce a p-value of 0.0000 which indicates the REM model is a superior choice. After considering the results of all tests, the Random Effect Model (REM) is the most suitable model for this research. This determination is supported by the results of the Hausman Test and Lagrange Multiplier Test.

The selection of the use of the Random Effect Model (REM) causes the research model to be written as follows:

$$SP_{it} = \alpha + \beta 1 CR_{it} + \beta 2 DER_{it} + \beta 3 TAT_{it} + \beta 4 ROE_{it} + e_{it}$$

Where:

SP = Thirdliner Stock Year-end Closing Price

$\alpha$  = Constant

CR = Current Ratio

DER = Debt to Equity Ratio

TAT = Total Assets Turnover

ROE = Return On Equity

$\varepsilon$  = Standard Error

The year end closing price shows the last price recorded by a company's shares at the last business day of the year on the stock market, during a regular trading day. This price is used by investors to measure and compare the performance of a company's shares over time. Current Ratio is a financial ratio that measures a company's ability to utilize the current assets on its balance sheet to meet short-term debt. Debt to Equity Ratio is a financial ratio that shows the comparison between the amount of debt and the amount of capital owned by the company by dividing the total amount of debt and capital owned by the company. Total Assets Turnover is a financial ratio that measures the company's efficient level in managing its assets to generate income which is measured by the total sales amount divided by the result of the initial amount of assets plus the final amount of assets then divided by two. Return On Equity is a

financial ratio that measures how efficiently a company manages and utilizes capital provided by shareholders to generate profits which are measured by the amount of net profit divided by the average amount of shareholder equity.

The choice to use the Random Effect Model (REM) means that the classical assumption test is not needed. This is because the Random Effect Model (REM) has considered the possibility of heteroscedasticity and autocorrelation in errors so that it uses Generalized Least Squares (GLS) which can overcome problems with heteroscedasticity and autocorrelation. Random Effect Model (REM) uses a Generalized Least Squares (GLS) approach which has overcome problems with heteroscedasticity and

autocorrelation so it does not require classical assumption tests (Gujarati & Porter, 2009).

#### 4. Results and Discussion

This study investigates the relationship between financial ratios and stock prices within the third-liner stock segment of the Indonesia Stock Exchange (IDX), utilizing a Random Effect Model. The analysis identifies profitability (measured by Return on Equity, ROE) and solvency (measured by the Debt-to-Equity Ratio, DER) as the most significant predictors of stock price movements among the financial ratios considered.

The results of the descriptive statistics test from closing prices, CR, DER, TAT, and ROE from 2012 to 2019 can be seen in table 4.

**Table 4. Descriptive Statistics**

	N	Range	Minimun	Maximun	Mean	Standard Deviation
SP	576	12250	50	12300	593,91	1154,635
CR	576	48,14	0,00	48,14	2,4161	3,42680
DER	576	32,19	-1,25	30,94	1,0236	2,04238
TAT	576	9,85	0,00	9,85	1,0588	1,15748
ROE	576	13,0830	-1,7954	11,2876	0,050621	0,5136757

Source : Data Analysis Results (2025)

The average closing stock price (SP) across the sample is 593,91, with a minimum of 50 and a maximum of 12,300. This extremely wide price range, spanning 12,250, reflects the inherent volatility of third-liner stocks and indicates the potential for speculative movements. The standard deviation of 1,154.635 further reinforces the substantial price dispersion among companies, confirming that third-liner stocks are prone to abrupt and unpredictable price changes.

The Current Ratio (CR) has a mean value of 2,4161 suggesting that, on average, firms are capable of covering their short-term liabilities with current assets. Nonetheless, the minimum value of 0.00

and maximum 48,14 highlight a considerable gap in liquidity capacity between companies. The standard deviation of 3,42680 reveals substantial fluctuations, suggesting that while some companies maintain strong liquidity buffers, others face significant short-term financial constraints.

The Debt to Equity Ratio (DER) presents an average of 1,0236 indicating that companies generally balance their financing between debt and equity. However, a minimum value of -1,25 may suggest recording error or firms experiencing negative equity, a potential red flag for financial distress. The maximum DER of 30,94 points to a highly

leveraged condition in certain firms, while a standard deviation of 2,04238 reflects diverse capital structures within the sample.

In terms of operational efficiency, the Total Asset Turnover (TAT) yields an average of 1.0588. This implies that, on average, companies generate slightly more than one unit of revenue for each unit of total assets in a single period. However, the minimum of 0,00 and maximum of 9,85 suggest wide variation, ranging from firms with generate less revenue generation to those with very high asset efficiency. The standard deviation of 1,15748 reinforces this observation.

The Return on Equity (ROE), an indicator of profitability, averages at 0,050621. This shows which is generally relatively low. However, the wide range between the minimum of -1,7954 and

maximun of 11,2876 reflects a stark contrast between unprofitable firms and those generating high returns. The standard deviation of 0,5136757 shows that there is a significant difference in the ability to generate profits from equity between companies

In summary, the findings indicate that third-liner stocks in Indonesia exhibit high heterogeneity in both financial performance and market price behavior. The large deviations and wide value ranges across variables reflect a market segment characterized by speculative trading activity and weak linkage to fundamental indicators. These patterns are in line with the general nature of third-liner stocks, which tend to attract speculative interest due to their low liquidity and limited analyst coverage.

**Table 5. Results of the Panel Cross Section Random Effects Test using the Generalized Least Squares (EGLS) Estimation method.**

Variable	Coefficient	Std. Error	t-Statistic	Prob.
SP	2.270818	0.149530	15.18640	0.0000
ROE	0.439656	0.136931	3.210780	0.0014
TAT	0.246786	0.244768	1.008242	0.3138
DER	-0.240106	0.115436	-2.080000	0.0380
CR	0.065825	0.086986	0.756733	0.4495
Effects Specification				
		S.D.		Rho
Cross-section random		0.390826		0.7375
Idiosyncratic random		0.233162		0.2625
Weighted Statistics				
R-squared	0.030882	Mean dependent var		0.506269
Adjusted R-squared	0.024093	S.D. dependent var		0.237107
S.E. of regression	0.234233	Sum squared resid		31.32794
F-statistic	4.548831	Durbin-Watson stat		0.840440
Prob(F-statistic)	0.001266			
Unweighted Statistics				
R-squared	0.004329	Mean dependent var		2.453038
Sum squared resid	124.0907	Durbin-Watson stat		0.212178

Source : Data Analysis Results (2025)

The findings in Table 5 indicate that ROE has a positive and statistically significant effect on stock prices ( $p < 0.05$ ). Specifically, a 1% increase in ROE corresponds to an approximately 0.43% rise in stock prices, holding other factors

constant. This result underscores the importance of profitability as a key indicator of financial health and a firm's ability to generate shareholder returns. High ROE values suggest efficient management and sustainable growth,

which bolster investor confidence. These findings align with prior studies (e.g., Arkan, 2016; Wulansari et al., 2023; Ayudya et al., 2017; Juwita & Diana, 2020), which highlight the role of profitability in attracting both speculative and long-term investors.

Conversely, the DER demonstrates a significant negative relationship with stock prices ( $p < 0.05$ ). A 1% increase in DER is associated with a 0.24% decrease in stock prices, *ceteris paribus*. This finding suggests that higher leverage is perceived as a financial risk by investors, particularly in the speculative third-liner segment. Elevated debt levels may raise concerns about a firm's ability to meet its financial obligations, thereby diminishing its appeal to investors. This negative relationship aligns with previous research (e.g., Wulansari et al., 2023; Ayudya et al., 2017; Nugraha & Artini, 2022) that highlights the risks associated with high financial leverage.

Interestingly, liquidity (measured by the Current Ratio, CR) and operational efficiency (measured by Total Asset Turnover, TAT) do not exhibit statistically significant effects on stock prices. This finding suggests that metrics traditionally significant for larger or more stable firms may have limited relevance in the speculative and volatile environment of third-liner stocks. Instead, non-fundamental factors such as market sentiment, trading volume, and speculative behavior are likely to play a more dominant role in influencing stock prices within this segment.

Based on the regression output, the results support H2 and H4, indicating that Debt-to-Equity Ratio (DER) and Return on Equity (ROE) significantly affect stock prices of third-liner companies. Specifically, ROE has a positive relationship, while DER has a negative relationship with stock prices. Meanwhile, H1 and H3, which proposed

significant effects of Current Ratio (CR) and Total Asset Turnover (TAT) respectively, are not supported, as these variables do not exhibit statistically significant effects. These findings affirm that only select financial ratios retain predictive power in speculative market segments.

The model's adjusted R-squared value is 0.02, indicating that only 2% of the variability in stock prices is explained by the selected financial ratios. This low explanatory power highlights the predominance of non-fundamental drivers in the price dynamics of third-liner stocks. These results emphasize the speculative nature of this market segment, where traditional financial metrics provide limited predictive power for stock price movements.

## 5. Conclusion

This study concludes that stock prices of third-liner companies on the Indonesia Stock Exchange are predominantly influenced by speculative dynamics and investor irrationality, rather than traditional financial metrics. Among the financial ratios analyzed, only Return on Equity (ROE) and Debt-to-Equity Ratio (DER) exhibit statistically significant relationships with stock prices in which ROE positively and DER negatively, while Current Ratio (CR) and Total Asset Turnover (TAT) show no significant influence.

However, the explanatory power of these variables is weak, with an adjusted R-squared of only 0.02, indicating that just 2% of price movement can be attributed to these financial indicators. This highlights the limited role of fundamentals in a segment dominated by speculation. As such, third-liner stocks are more appealing to high-risk investors seeking short-term gains and may be unsuitable for those who favor stable, fundamentally driven investments.



The results reinforce the importance of understanding investor psychology and speculative behavior in small-cap markets. Enhancing transparency and minimizing information asymmetry are critical steps toward improving price efficiency in this segment.

### 5.1 Managerial Implication

These findings carry important implications for market participants, particularly investors, corporate managers, and regulators. Investors, especially those active in the small-cap segment, should reconsider the overreliance on conventional financial ratios when evaluating third-liner stocks. Instead, a more comprehensive approach that incorporates behavioral signals, market sentiment, and trading activity would offer better insights into the drivers of price movements in speculative environments.

For corporate managers, this research highlights the importance of transparent communication and consistent financial disclosures. Since investor perceptions in this segment are often shaped more by speculative sentiment than by actual financial performance, companies should actively manage how they present their narratives to the market. Strengthening investor engagement and providing accessible, timely information can help reduce information asymmetry, mitigate mispricing, and build long-term credibility.

Meanwhile, regulators and policymakers must enhance market surveillance and introduce targeted measures to address manipulative trading behavior. Improved enforcement of capital market regulations, the implementation of real-time detection systems for abnormal trading patterns, and expanded investor education programs are essential to promoting fairness and transparency in the third-liner segment. These efforts will not only protect vulnerable investors but also help foster a more efficient and trustworthy capital market ecosystem.

### 5.2 Future Research Recommendation

Building on these results, future research should consider integrating non-fundamental variables such as market sentiment, investor behavior, and trading volume to better understand the drivers of price movements in speculative environments. The inclusion of behavioral finance theories, real-time sentiment data, or even machine learning models for anomaly detection could offer deeper insights into how stock prices in high-risk segments diverge from intrinsic value. Additionally, industry-specific studies may reveal whether speculative dominance varies across sectors or during different market cycles, providing a more granular understanding of third-liner dynamics in emerging markets like Indonesia.

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