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Stock Return Volatility and Financial Distress: Ownership Effects

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ABSTRACT

This study aims to analyze the effect of stock return volatility on financial distress moderated by corporate ownership structure. The study uses data from 1,007 observations involving six regression models that include various independent variables, including total asset turnover, net profit margin, profitability, audited firm, as well as moderating variables such as state ownership, foreign ownership, institutional ownership, and blockholders ownership. The results showed that stock return volatility has a positive significant effect on financial distress. Moderating variables provide mixed results, where state, foreign, and blockholders strengthen the positive relationship between stock return volatility and financial distress, while institutional ownership has a weakening effect. This study provides implications for corporate management in mitigating financial risk by ownership structure as part of the corporate governance strategy.

SARI PATI

Studi ini bertujuan untuk menganalisis pengaruh volatilitas *return* saham terhadap kesulitan keuangan *(financial distress)* yang dimoderasi oleh struktur kepemilikan perusahaan. Penelitian ini menggunakan data dari 1.007 observasi yang melibatkan enam model regresi yang mencakup berbagai variabel independen, termasuk perputaran total aset *(total asset turnover)*, margin laba bersih (*net profit margin*), profitabilitas, dan perusahaan yang diaudit, serta variabel moderasi seperti kepemilikan negara, kepemilikan asing, kepemilikan institusional, dan kepemilikan *blockholders*. Hasil penelitian menunjukkan bahwa volatilitas *return* saham memiliki pengaruh positif yang signifikan terhadap kesulitan keuangan. Variabel moderasi memberikan hasil yang beragam, di mana kepemilikan negara, kepemilikan asing, dan *blockholders* memperkuat hubungan positif antara volatilitas return saham dan kesulitan keuangan, sedangkan kepemilikan institusional memiliki efek memperlemah. Studi ini memberikan implikasi bagi manajemen perusahaan dalam memitigasi risiko keuangan melalui struktur kepemilikan sebagai bagian dari strategi tata kelola perusahaan (*corporate governance*).

INTRODUCTION

In the current era, the capital market constitutes an essential component of a nation's economy, with almost all countries possessing a capital market that plays a primary role as a channel for collecting funds from the public and subsequently allocating them to various sectors requiring investment. The capital market can be defined as the venue where parties with surplus funds and parties needing funds converge, facilitated by the mechanism of buying and selling securities (Tandelilin, 2010). According to Law Number 8 of 1995 concerning the Capital Market, the capital market is defined as activities encompassing public offerings, securities trading, and public companies related to the issued securities, as well as the institutions and professions involved in these securities activities.

The object traded in the capital market is referred to as a security, comprising various types of valuable papers, one of which is stock (Citra Puspa Permata, 2019). Stock represents proof of ownership of an individual or business entity in a company (Ramalingegowda et al., 2013). Parties with surplus funds allocate their funds to companies in need of capital, often through stock instruments. Investors with excess funds who wish to invest will purchase shares from the company offering them. The party purchasing the stock becomes a shareholder in the company and tends to anticipate a return on investment in the form of profit, referred to as stock return (Scott, 2015). Investors are more inclined to purchase stocks that exhibit a high or stable rate of return, as this potentially enhances shareholder profit.

Stock return, serving as compensation for the risk undertaken by the investor, is also the primary motivation for investment (Tandelilin 2001)). Stock return refers to the profit gained from investment activities, mathematically defined as the difference between the amount received and the amount invested, divided by the amount invested (Eugene F. Brigham, 2006). The magnitude of the stock return is subject to fluctuation, experiencing either increases or decreases over time, influenced by both internal and external factors (Nailul Mufidah, 2020). This increase or decrease in stock return is termed stock return volatility, as illustrated in Figure 1 In Indonesia, the fluctuation in stock returns observed across numerous stocks can be viewed collectively through the performance of the Jakarta Composite Index (JCI/IHSG) market return, which has experienced volatility from 2011 to 2024 (Figure 1).

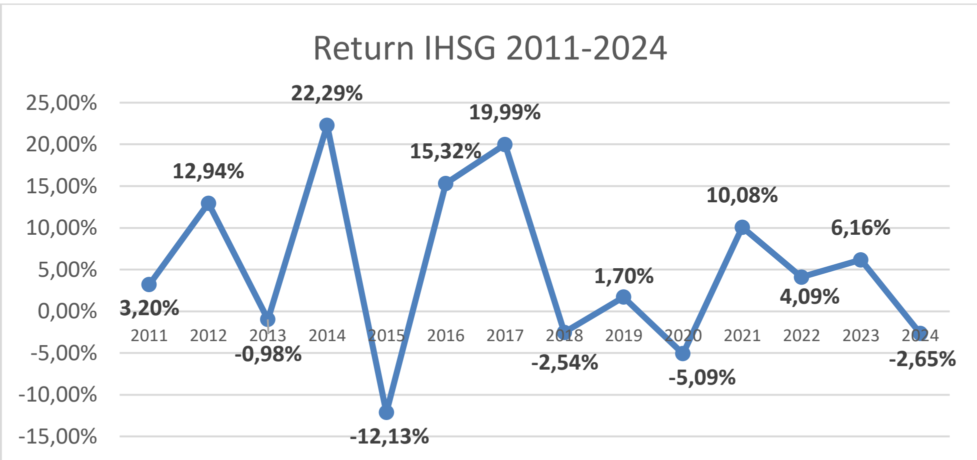

Figure 1. Return Market IHSG tahun 2011-2024. Source: *www.idx.com*

Stock return volatility is defined as the extent to which the rate of return on a stock fluctuates within a specific period, which impacts a company's investment decisions (Gharbi et al., 2014). Stock price volatility refers to the fluctuations (increases or decreases) in stock prices over a certain period (Fakhruddin, 2008), and stock price volatility is often used as a benchmark for determining stock return volatility. This volatility serves as an indicator for determining the level of investment risk, which affects the existence of the financial market as it is perceived as a concept related to risk (Sari, et al., 2017). High stock return volatility leads to uncertainty for the company (W. S. Kim & Sorensen, 2016), hindering the company's ability to obtain loans, causing negative cash flow management, and potentially increasing financial distress. Inefficient cash flow management and the gap between cash inflows and outflows can trigger financial distress (Aziz & Dar 2006).

High stock return volatility can increase the risk of financial distress, which is defined as a condition where a company cannot generate sufficient return to meet its debt obligations (Gordon, 1971). According to the liquidity theory, negative cash flow can impede a company's ability to pay its liabilities, thereby increasing the risk of default (Isayas, 2021). The uncertainty caused by stock return volatility results in the company being perceived as high-risk by creditors and investors, compelling them to demand higher returns as compensation for the increased risk. Companies with high stock return volatility face greater costs in raising funds, making it more difficult to finance new projects or refinance existing debt, which ultimately increases the risk of financial distress.

The capital market has undergone significant development in almost all countries, including Indonesia, allowing diverse investors ranging from individual investors, institutional investors, to the government and foreign investors to hold shares in domestic companies. This diversity in investor types creates varied ownership structures within a company, and this structure plays a crucial role in determining the success or failure of a company (La Porta & Andrei Shleifer, 2000). Due to the liberalization of investor entry into the capital market, ownership structures have diversified, which, according to Vuong et al., (2024), differentiates the probability of financial distress across four main structures: state ownership, foreign ownership, institutional ownership, and blockholder ownership. The distinct roles and interests of each ownership type influence corporate governance and management decisions, which can eventually trigger an increase in financial distress or stock return volatility.

Two types of ownership tend to amplify corporate risk. Companies with large state ownership are heavily influenced by political governance (Andrei Shleifer, 1996). where their main focus lies more on public service and social welfare than on maximizing shareholder value. Managers of State-Owned Enterprises (BUMN) often prioritize their own interests because they perceive no risk of takeover or bankruptcy comparable to those in the private sector (Thuy Thu Nguyen 2012). This creates uncertain strategies and magnifies corporate risk, thereby strengthening the influence of stock return volatility on financial distress. Similarly, the presence of foreign ownership, focused on short-term results, encourages companies to pursue competitive advantage and innovation, allowing them to undertake more risky projects and activities (Đặng et al., 2022).. These riskier investment policies positively impact the company's risk level in the eyes of creditors and investors (B. Kim 2011), thereby potentially strengthening the influence of stock return volatility on financial distress.

In contrast, institutional ownership and blockholder ownership exhibit different dynamics. Institutional investor groups focus on long-term results and are actively involved in monitoring management's operational activities (Donker et al., 2009). This effective oversight encourages management to make better and more responsible decisions (Shahwan, 2015), which can ultimately reduce the company's risk of default. However, blockholder ownership (shareholders with large holdings) introduces the risk of agency conflict between the dominant major shareholder and minority shareholders Fabrizio Barca (2001). The dominant shareholder potentially exploits their power for personal gain at the expense of minority shareholders (Maury & Pajuste 2005; Buysschaert et al., 2004; Tran & Le, 2020). The resulting conflict can influence suboptimal decision-making, diminish investor confidence, and ultimately increase corporate risk, which exacerbates the occurrence of financial distress (Andrei Shleifer, 1996).

Literature Review and Hyphothesis Development

Stock return volatility is defined as the fluctuation in the return or yield on a stock over a specific period. This fluctuation creates uncertainty (W. S. Kim & Sorensen, 2016), which significantly impedes the company's ability to obtain loans from creditors and funding from investors (Gharbi et al., 2014). The uncertainty resulting from high volatility reflects a high risk in the eyes of creditors, leading them to impose higher interest rates as compensation for that risk. This increase in the interest rate raises the company's fixed burden, such as interest payments, thereby increasing cash outflows. This increase in cash outflows potentially leads to negative cash flow and increases the risk of default, which continuously escalates into a state of financial distress.

In addition to impacting creditors, high stock return volatility, which reflects corporate risk, also causes investors to hesitate in investing, for instance, by purchasing the company's shares. This investor hesitation makes it difficult for the company to fund potential projects or undertake expansion (such as acquiring new branches or machinery). Consequently, the company loses the potential to generate revenue from these projects or expansion activities, meaning it loses potential cash inflows from investment and operations. In line with the liquidity theory, high stock return volatility increases the risk of financial distress because consistent long-term negative cash flow leads to difficulties in meeting obligations (Isayas, 2021). Thus, the increased risk of default caused by stock return volatility directly reflects an increase in financial distress, forming the basis for the hypothesis:

H1. Stock return volatility has a positive effect on financial distress.

Furthermore, state ownership potentially strengthens the positive effect of stock return volatility on financial distress because state-majority owned companies are often subject to political control and focus more on public service or political objectives rather than maximizing firm value and efficiency (Andrei Shleifer, 1996; Andrei Shleifer & Robert W. Vishny, (1994). This lack of incentive for efficiency is compounded by the fact that managers of State-Owned Enterprises (BUMN) do not face the same risks of bankruptcy or takeover as private sector managers Thuy Thu Nguyen, (2012), leading to corporate strategies that are often poorly directed and high-risk. This strategic uncertainty and inefficiency directly increase corporate risk and exacerbate the impact of high stock return volatility on the likelihood of financial distress.

H2. State ownership strengthens the positive effect of stock return volatility on financial distress.

Furthermore, the effect of foreign ownership also potentially strengthens the positive influence of stock return volatility on financial distress. Although foreign investment is often regarded as a benchmark of market confidence (Dahlquist & Robertsson, 2001), the enhancement in corporate governance it brings allows companies to adopt riskier and more innovative investment policies to pursue competitive advantages and better performance (Đặng et al., 2022). According to B. Kim (2011), the adoption of these risky policies positively impacts the company's risk level in the eyes of creditors and investors, which ultimately strengthens the effect of stock return volatility. Moreover, in Indonesia, foreign investors tend to exacerbate stock market volatility because local investors often mimic their stock choices, causing returns to become increasingly volatile (Naufa, 2017). This is supported by Wang, (2008) finding that greater foreign ownership increases stock return volatility, thereby worsening corporate risk and financial distress.

H3. Foreign ownership strengthens the positive effect of stock return volatility on financial distress.

Conversely, the effect of institutional ownership potentially weakens the positive influence of stock return volatility on financial distress. This is because domestic institutional investors play a crucial role in reducing stock market volatility due to their superior investment strategies and information-gathering capabilities (Aloui & Jarboui 2019). By increasing their shareholding, institutional investors actively monitor the performance of executives and regulators. According to Lin et al., (2018), this active monitoring helps to stabilize stock prices and mitigate corporate uncertainty risk. Furthermore, institutional investors are typically oriented towards long-term results (Donker et al., 2009), which drives them to be more involved in overseeing management's operational activities. This active oversight enhances corporate performance and potentially lowers the risk of default, ultimately helping the company reduce uncertainty related to stock return volatility and the risk of financial distress

H4. Institutional ownership weakens the positive effect of stock return volatility on financial distress.

Meanwhile, blockholder ownership also potentially strengthens the positive influence of stock return volatility on financial distress. Blockholder ownership refers to a significant proportion of shares held by specific individuals or groups capable of influencing management decisions. The primary focus in share ownership has shifted to an agency conflict between the dominant shareholders and the minority shareholders (Fabrizio Barca 2001). Dominant shareholders frequently leverage their influence for personal gain, even at the expense of minority shareholders' interests (Maury & Pajuste 2005). Research by Tran & Le (2020), in Vietnam reinforces the finding that larger blockholder ownership increases the likelihood of agency conflicts, which ultimately can lead to suboptimal management decisions. These suboptimal decisions increase corporate uncertainty and risk in the eyes of investors and creditors, thereby strengthening the negative impact of stock return volatility on the likelihood of financial distress.

H5. Blockholders ownership strengthens the positive effect of stock return volatility on financial distress.

Table 1

Definitions of all variables.

Variable	Symbol	Calculation
Dependent variable		
Financial Distress	FD	$Z\text{-}SCORE_{i,t}$ = 1.2*(Working capital$_{i,t}$ / total assets$_{i,t}$) + 1.4*(Retained earnings$_{i,t}$ / Total assets$_{i,t}$) + 3.3* (EBIT$_{i,t}$ / Total assets$_{i,t}$) + 0.6*(Market value of equity$_{,t}$ / Total liabilities$_{i,t}$) + 0.999* (Sales$_{i,t}$ / Total assets$_{i,t}$)
Independent variable		
Stock Return Volatility	SRV	$\text{SRV}_{i,t} = \sqrt{\sum_{i}^{N}(R_{i,m,t} - MEAN_{i,t})^2 \times \frac{1}{N_{i,t}}}$
Moderating variable		
State Ownership	SO	$SO_{i,t} = \frac{State\ Ownership_{i,t} i,t}{Total\ Equity_{i,t}}$
Foreign Ownership	FO	$FO_{i,t} = \frac{Foreign\ Ownership_{i,t} i,t}{Total\ Equity_{i,t}}$
Institutional Ownership	IO	$IO_{i,t} = \frac{Institutional\ Ownership_{i,t} i,t}{Total\ Equity_{i,t}}$
Blockholders Ownership	BO	$BO_{i,t} = \frac{Blockholders\ Ownership_{i,t} i,t}{Total\ Equity_{i,t}}$
Control variable		
Asset Turnover	AT	$AT_{i,t} = \frac{Net\ Sales_{i,t}}{Total\ Assets_{i,t}}$
Profit Margin	PM	$FORE_{i,t} = \frac{Foreign\ Ownership_{i,t} i,t}{Total\ Equity_{i,t}}$
Profitability	PROFIT	$PROFIT_{i,t} \begin{cases} 0, if\ the\ company\ doesn't\ generate\ positif\ net\ income \\ 1, if\ the\ company\ generate\ positife\ net\ income \end{cases}$
Audited Firm	AU	$PROFIT_{i,t} \begin{cases} 0, if\ the\ company\ not\ audited\ by\ BIG-4\ company \\ 1, if\ the\ company\ audited\ by\ BIG-4\ compay \end{cases}$

DATA AND METHODOLOGY

3.1 *Model Specification*

Following the developed research framework and prior studies, a series of Panel Data Regression Models are formulated to test the proposed hypotheses (H1 to H5). First, to examine the direct effect of Stock Return Volatility on Financial Distress (H1), the following Baseline Model (Model 1) is employed:

$$FD_{i,t} = \beta_0 + \beta_1 * SRV_{i,t} + \beta_2 * AT_{,i,t} + \beta_3 * PM_{i,t} + \beta_4 * PROFIT_{i,t} + \beta_5 * AU_{i,t} + \varepsilon_{i,t} \quad (1)$$

$FD_{i,t}$ is the dependent variable, Financial Distress, for firm (i) at year (t). $SRV_{i,t}$ is the main independent variable, Stock Return Volatility. To isolate the effect of other factors, commonly used control variables from the literature are included asset turnover, profit margin, profitability and audited firm.

Subsequently, to investigate the moderating role of various types of ownership structure, four additional models are formulated. Each model tests one type of ownership as a moderating variable. An interaction term between Stock Return Volatility and the ownership variable is added to test hypotheses H2, H3, H4, and H5. The coefficient on this interaction term will indicate whether a specific ownership structure strengthens or weakens the effect of *SRV* on *FD*.

Model (2) - Moderation by State Ownership (H2):

$$FD_{i,t} = \beta_0 + \beta_1{*}SRV_{i,t} + \beta_2{*}SO_{,i,t} + \beta_3{*}SRV_{,i,t}{*}SO_{i,t} + \beta_4{*}AT_{,i,t} + \beta_5{*}PM_{i,t} + \beta_6{*}PROFIT_{i,t} + \beta_7{*}AU_{i,t} + \varepsilon_{i,t} \quad (2)$$

Model (3) - Moderation by Foreign Ownership (H3):

$$FD_{i,t} = \beta_0 + \beta_1{*}SRV_{i,t} + \beta_2{*}FO_{,i,t} + \beta_3{*}SRV_{,i,t}{*}FO_{i,t} + \beta_4{*}AT_{,i,t} + \beta_5{*}PM_{i,t} + \beta_6{*}PROFIT_{i,t} + \beta_7{*}AU_{i,t} + \varepsilon_{i,t} \quad (3)$$

Model (4) - Moderation by Institutional Ownership (H4):

$$FD_{i,t} = \beta_0 + \beta_1{*}SRV_{i,t} + \beta_2{*}IO_{,i,t} + \beta_3{*}SRV_{,i,t}{*}IO_{i,t} + \beta_4{*}AT_{,i,t} + \beta_5{*}PM_{i,t} + \beta_6{*}PROFIT_{i,t} + \beta_7{*}AU_{i,t} + \varepsilon_{i,t} \quad (4)$$

Model (5) - Moderation by Blockholders Ownership (H5):

$$FD_{i,t} = \beta_0 + \beta_1{*}SRV_{i,t} + \beta_2{*}BO_{,i,t} + \beta_3{*}SRV_{,i,t}{*}BO_{i,t} + \beta_4{*}AT_{,i,t} + \beta_5{*}PM_{i,t} + \beta_6{*}PROFIT_{i,t} + \beta_7{*}AU_{i,t} + \varepsilon_{i,t} \quad (5)$$

In Models (2.2) through (2.5), the variables SO, FO, IO, and BO respectively represent State Ownership, Foreign Ownership, Institutional Ownership, and Blockholder Ownership. The primary focus is on the interaction coefficient (B3), which captures the moderating role of each type of ownership

3.2 Data Sample

Indonesia provides a compelling and unique setting for this investigation. As one of the largest emerging economies, the country possesses a dynamic capital market characterized by a diverse mix of share ownerships. The complexity of the ownership structure in Indonesia, involving state, foreign, institutional, and blockholder ownership, makes it an ideal laboratory to test how corporate governance moderates the transmission of market risk to corporate financial stability. Given the importance of stock market stability for both domestic and foreign investors, stock return volatility serves as a crucial market risk signal, positioning Indonesia as a key case study for testing our hypotheses.

Within this context, our sample is drawn from the population of non-financial firms listed on the Indonesia Stock Exchange (IDX/BEI) during the period 2021–2023. We deliberately selected non-financial firms to avoid the unique financial structures and regulatory environments of the banking and financial services sector, consistent with standard practice in corporate finance research. Accounting data and daily stock price information for the listed companies were obtained from the Bloomberg service and Financial Reports published on the companies' official websites. We excluded firms lacking complete data throughout the entire observation period to construct a balanced panel, which helps avoid attrition bias (Baltagi, 2008) Our final sample comprises 1,007 observations from the listed companies. Data regarding the ownership structure variables (state ownership, foreign ownership, institutional ownership, and blockholders ownership), as well as control variables, were collected from these sources for the 2021–2023 period.

3.3 Methods

The data analysis technique used is the Multiple Linear Regression model, which is applied to test the hypotheses of both direct and moderating effects (Gujarati & Porter, 2009). The analysis is conducted using the SPSS 25 statistical software package. Prior to estimating the regression model, a series of classical assumption tests are performed to ensure that the resulting model is valid, unbiased, and consistent. These tests include: the normality test to examine the distribution of residuals using Normal P-P Plots (Ghozali, 2013); the multicollinearity test to detect correlations among independent variables through Tolerance and Variance Inflation Factor (VIF) values, where a VIF value below 10 is considered acceptable (Gujarati & Porter, 2009; Hair et al., 2010); the heteroskedasticity test to ensure the homogeneity of variance of the residuals using scatter plot analysis; and the autocorrelation test to detect serial correlation in the residuals using the Durbin-Watson statistic (Gujarati & Porter, 2009).

After ensuring the model meets the classical assumptions, hypothesis testing is conducted by analyzing the statistical significance of the regression coefficients for each variable. The tests are performed at the 1%, 5%, and 10% significance levels to determine whether the independent variables have a significant effect on the dependent variable, and whether the moderating variables significantly strengthen or weaken this relationship. Finally, the ability of the independent variables to explain the variation in the dependent variable is evaluated using the Coefficient of Determination (Adjusted R-Square) (Gujarati & Porter, 2009).

RESULTS AND DISCUSSION

4.1 *Data Descriptions*

The descriptive statistics for the 1,027 observations obtained during the 2020–2021 period are presented in Table 2. The Financial Distress (FD) variable, measured by the Altman Z-Score, shows a minimum value of 0.155 (indicating a high risk of financial difficulty) and a maximum value of 9.416 (low risk), with a mean value of 3.090 , suggesting that the average sample company is in a relatively healthy financial category. The Stock Return Volatility (SRV) variable has a mean of 0.029, ranging from 0.000 to 0.082, reflecting variations in market risk among the sample companies.

Regarding ownership structure, Institutional Ownership (IO) shows a high dominance with a mean of 51.868%. Meanwhile, Foreign Ownership (FO) has a mean of 22.110%, and Blockholders Ownership (BO) stands at a mean of 7.340%. Conversely, State Ownership (SO) is at a very low average level (0.392%), although it recorded a maximum value of 52.090%. Overall, the dominance of institutional ownership and the high diversity in other ownership variables provide a robust context for examining how the governance structure moderates the relationship between market volatility and corporate financial distress.

Table 2

Summary statistics.

Variabel	*N*	*Minimum*	*Maximum*	*Mean*	*Std. Deviation*
FD	1027	0,155	9,416	3,090	1,835
SRV	1027	0,000	0,082	0,029	0,014
SO	1027	0,000	52,090	0,392	3,812
FO	1027	0,000	99,782	22,110	27,006

IO	1027	0,000	99,759	51,868	30,456
BO	1027	0,000	95,910	7,340	16,9774
AT	1027	0,000	7,560	0,887	0,860
PM	1027	-264,840	162,300	3,367	24,957
PROFIT	1027	0,000	1,0000	0,771	0,4220
AU	1027	0,000	1,0000	0,320	0,467

4.2 *Stock Return Volatility and Finansial Distress*

Based on the regression test results from Models 1 through 5 in Table 3, Stock Return Volatility (SRV) is proven to have a negative and significant effect on the Z-score (the level of financial health). This finding indicates that higher stock return volatility leads to a lower level of corporate financial health. Since a low level of financial health is equivalent to a high risk of financial distress, the study's first hypothesis, which states that SRV has a positive effect on financial distress, is accepted. This finding aligns with the research by Vuong et al., (2024), in Vietnam and Alvita et al., (2024), which demonstrates that greater stock market volatility increases the level of corporate financial distress risk. This result is supported by W. S. Kim & Sorensen (2016) and Aziz & Dar (2006), who argue that stock return volatility creates uncertainty that hinders a company's ability to obtain loans and funding, reflecting a high level of risk in the eyes of creditors and investors.

In line with this uncertainty, creditors tend to apply higher interest rates as risk compensation, which increases the company's fixed burden in the form of interest payments and cash outflows. This increase in cash outflows potentially leads to negative cash flow. Consistent with the liquidity theory, high stock return volatility can increase the risk of financial distress, because negative cash flow impedes a company's ability to pay its obligations, thereby increasing the risk of default (Isayas, 2021). Furthermore, the high corporate risk also causes investors to hesitate in investing or purchasing shares, which makes it difficult for the company to fund potential projects or expand. This funding difficulty leads to a loss of potential revenue and cash inflows, which further magnifies the likelihood of negative cash flow, increases the risk of default, and ultimately results in an increase in financial distress.

Table 3

Hypothesis testing and result (Dependent variable (FD).

Variable	MODEL 1-5				
	(1)	**(2)**	**(3)**	**(4)**	**(5)**
(Constant)	2,371***	2,291***	2,283***	2,997***	2,262***
	(13,382)	(12,841)	(11,535)	(10,914)	(12,202)
SRV	-13,241**	-11,467***	-8,781*	-41,490*	-10,094**
	(-3,441)	(-2,957)	(-1,898)	(-5,367)	(-2,432)
SO		0,123***			
		(2,966)			
SRV*SO		-7,131**			
		(-2,520)			
FO			0,004		

			(0,990)		
SRV*FO			-0,245*		
			(-1.767)		
IO				-0,010***	
				(-2,612)	
SRV*IO				0,498***	
				(4,140)	
BO					0,017**
					(2,085)
SRV*BO					-0.480**
					(-2,028)
AT	0,662***	0,669***	0,671***	0,661***	0,661***
	(10,897)	(11,024)	(11,017)	(10,992)	(10,872)
PM	0,010***	0,010***	0,010***	0,009***	0,010***
	(3,921)	(3,904)	(3,927)	(3,818)	(3,928)
PROFIT	0,479***	0,484***	0,471***	0,427***	0,478***
	(3,224)	(3,271)	(3,164)	(2,889)	(3,928)
AU	0,361***	0,382***	0,380***	0,357***	0,380***
	(3,106)	(3,289)	(3,100)	(3,094)	(3,243)
F-Statistik	50,694***	37,842***	37,007***	40,353***	36,927***
	(0,000)	(0,000)	(0,000)	(0,000)	(0,000)
R Square	0,199	0,206	0,203	0,212	0,202
N	1027	1027	1027	1027	1027

*,**,*** significant at the 10%, 5%, 1%.

4.3 *Stock Return Volatility, Financial Distress, and State Ownership*

Based on the regression test results from Model 2 in Table 3, State Ownership (SO) is proven to strengthen the negative effect of Stock Return Volatility SRV on the Z-score (financial health). This means that a higher proportion of government shareholding in a company intensifies the negative impact of SRV on financial health, thereby ultimately magnifying the risk of financial distress. Consequently, the study's second hypothesis, stating that State Ownership strengthens the positive effect of SRV on financial distress, is accepted. This result is supported by the finding of Santoso & Nugrahanti (2022), who suggest that government ownership generally has a positive effect on financial distress.

This amplifying phenomenon can be explained by the fact that state ownership often becomes a major cause of inefficiency, which worsens the influence of stock return volatility on financial distress (Andrei Shleifer & Robert W. Vishny, 1994). Governments tend to leverage their owned companies to achieve specific economic and political objectives, such as creating jobs or garnering political support. This political prioritization potentially sacrifices productivity and efficiency, as resources are allocated based on political agendas rather than business considerations. Furthermore, Andrei Shleifer (1996), explains that the focus of state-owned enterprises lies more on public service than maximizing firm value, and Thuy Thu

Nguyen (2012), adds that BUMN managers often lack strong incentives for efficiency due to lower bankruptcy risk. Consequently, the strategies implemented tend to be poorly directed and high-risk, which substantially increases corporate risk and thus exacerbates the positive effect of stock return volatility on financial distress.

4.4 *Stock Return Volatility, Financial Distress, and Foreign Ownership*

Based on the regression test results from Model 3 in Table 3, Foreign Ownership (FO) is proven to strengthen the negative effect of Stock Return Volatility SRV on the Z-score (financial health). This indicates that a higher proportion of foreign shareholding in a company intensifies the negative impact of SRV on financial health, thereby magnifying the risk of financial distress. Consequently, the study's third hypothesis, stating that Foreign Ownership strengthens the positive effect of SRV on financial distress, is accepted. This result is consistent with the research by Udin et al., (2017), who suggest that foreign ownership has a positive effect on financial distress.

This amplifying effect is attributed to the tendency of foreign ownership to encourage companies to undertake greater risks to create competitive advantage, better performance, and innovation Đặng et al., (2022) and B. Kim (2011). By adopting creative and high-risk investment policies, the company's overall risk level increases, which potentially exacerbates the positive influence of stock return volatility on financial distress. Furthermore, in Indonesia, Naufa (2017) explains that foreign ownership can worsen stock market volatility because local investors tend to follow the investment choices of foreign investors. This tendency increases stock return fluctuations, supported by Wang (2008), finding that greater foreign ownership leads to higher stock return volatility in Indonesia. This increased volatility ultimately raises the risk of financial distress for companies, especially during unstable market conditions.

4.5 *Stock Return Volatility, Financial Distress, and Institutional Ownership*

Based on the regression test results from Model 4 in Table 3, Institutional Ownership (IO) is proven to weaken the negative effect of Stock Return Volatility SRV on the Z-score (financial health). This finding indicates that a higher proportion of institutional shareholding reduces the negative impact caused by SRV on corporate financial health. Consequently, the company's financial health is better, which mitigates the risk of financial distress. Thus, the study's fourth hypothesis, stating that Institutional Ownership weakens the positive effect of SRV on financial distress, is accepted. This result aligns with the research by Widhiadnyana (2020), who suggests that institutional ownership has a negative effect on the probability of financial distress.

This weakening effect is supported by the crucial role of institutional ownership in reducing stock return volatility (Aloui & Jarboui 2019). Institutional investors possess superior ability to develop investment strategies and gather information, which aids in stabilizing the stock market. Through active involvement and effective oversight, institutional investors extend their influence to monitor management performance and protect shareholder interests. Lin et al., (2018) state that this effective supervision can stabilize stock prices, reduce uncertainty, and lower corporate risk in the eyes of creditors and investors. Furthermore, Donker et al., (2009), explain that the long-term focus of institutional investors commits them to overseeing operational activities, prompting management to make responsible decisions, improve efficiency, and reduce the risk of default. The presence of strong institutional ownership significantly lowers the risk of default, thereby weakening the positive influence of stock return volatility on financial distress.

4.6 *Stock Return Volatility, Financial Distress, and Blockholders Ownership*

Based on the regression test results from Model 5 in Table 3, Blockholders Ownership (BO) is proven to strengthen the negative effect of Stock Return Volatility (SRV) on the Z-score (financial health). This finding indicates that a higher proportion of blockholder shareholding in a company intensifies the negative impact SRV on financial health, thereby magnifying the risk of financial distress. Consequently, the study's fifth hypothesis, stating that Blockholders Ownership strengthens the positive effect of SRV on financial distress, is accepted. This result is consistent with the research by Younas et al., (2021) and Celiktas et al., (2024), who suggest that blockholder ownership has a positive effect on financial distress.

This amplifying effect is attributed to the shift in the focus of agency conflict, moving from the traditional conflict between managers and shareholders to a more complex conflict between dominant and minority shareholders Fabrizio Barca (2001). Blockholders possess the ability to influence corporate policy and frequently exploit their dominant position for personal gain, often at the expense of minority shareholders' rights and interests (Buysschaert et al., 2004; Maury & Pajuste 2005). This exploitation reinforced by the high conflict potential found by Tran & Le (2020) in Vietnam can involve suboptimal managerial decisions or policies. This internal conflict ultimately leads to suboptimal decisions, disrupting the company's long-term stability. This instability, in turn, increases corporate risk in the eyes of investors and creditors, thereby significantly exacerbating the positive influence of stock return volatility on financial distress.

CONCLUSION

The economic context of Indonesia, characterized by a diverse capital market dynamic and a push for enhanced corporate stability, provides a unique setting for this research. Publicly listed firms in Indonesia are required to manage high stock market risk while maintaining their financial health. In this study, we focused on three main issues for non-financial firms in Indonesia. First, we conducted an empirical investigation into the effect of Stock Return Volatility on Financial Distress in an emerging market. Second, further tests examined whether this relationship varies depending on the type of ownership structure. Third, our study explicitly tested the moderating effects of State Ownership, Foreign Ownership, Institutional Ownership, and Blockholders Ownership on the nexus between SRV and FD within the Indonesian economic context.

To address these issues, we analyzed data from 1,007 observations of non-financial firms listed on the Indonesia Stock Exchange (BEI) from 2021 to 2023 using Multiple Linear Regression estimations. The main empirical finding reveals that an increase in stock return volatility is significantly associated with an increase in the risk of Financial Distress. Furthermore, this positive relationship was found to vary significantly based on ownership structure: the positive relationship between SRV and FD is significantly strengthened in firms with higher levels of State Ownership, Foreign Ownership, and Blockholders Ownership. Conversely, this study finds that the positive relationship between SRV and FD is significantly weakened in firms with higher levels of Institutional Ownership.

Our research provides valuable insights for corporate managers, investors, and regulators in Indonesia. For managers, this finding emphasizes that stock market volatility is not merely an external risk but requires strong internal governance mechanisms to mitigate it. In particular, institutional ownership can effectively serve as a monitoring mechanism to stabilize firms against market shocks. For investors, the results support the use of ownership structure analysis as a relevant factor in assessing financial distress risk. For regulators, the findings provide evidence that promoting the active role of institutional investors can create positive market-based incentives for corporate stability. This study contributes to the literature by presenting evidence from the emerging market context of Indonesia, highlighting how the effectiveness of governance mechanisms can be contingent on local ownership factors.

Nevertheless, this research has several inherent limitations that open avenues for future inquiry. The main limitation lies in the generalizability of the findings due to a sample restricted to non-financial firms and a relatively short observation period (2021–2023). Future research could expand the sample to other sectors and longer time periods to capture complete economic cycle dynamics. Methodologically, although we controlled for key variables, subsequent studies could employ more advanced econometric techniques, such as System GMM (Generalized Method of Moments), to better address potential endogeneity concerns. Finally, future investigation could also explore other potential moderators, such as board characteristics (e.g., the presence of a risk committee) or external pressures like media coverage, to provide an even more comprehensive understanding of the contingent factors at play in the relationship between market volatility and financial difficulties.

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