



## **Does Investor Sentiment Moderate the Link Between Ownership Structure, Debt, and Stock Price Crash Risk in the Indonesian Technology Sector?**

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### **ABSTRACT**

**Purpose** – Conducting this research will help to look into how ownership structure, debt maturity, and investor sentiment affect the chance of a stock price crash risk among technology businesses that are traded on the IDX stock market between 2020 and 2022. The goal is to identify the key elements determining the likelihood of collisions.

**Methodology** – A quantitative method employing binary logistic regression is utilised to investigate the impact of ownership structure, debt maturity, and investor sentiment on the likelihood of stock price crashes. Ownership composition, debt maturity, sentiment indicators, and stock price data from 172 firm-month observations are among the secondary data included in the investigation.

**Findings** – According to the findings, Investor Sentiment (X3) substantially enhances the chance of a stock price crash (Y). While Debt Maturity (X2) and Ownership Structure (X1) are not significant on their own, their interaction with Investor Sentiment (X3) exerts a considerable moderating influence. Associated with Investor Sentiment (X3) and crash risk is substantially influenced by diverse Ownership Structure (X1) types, implying that market sentiment's effect depends on ownership characteristics.

**Originality/Novelty** – This research contributes to the restricted field of empirical studies conducted with regard to the possibility of stock market crises occurring in developing economies, particularly in the technology sector in Indonesia. By incorporating Debt Maturity (X2) and Investor Sentiment (X3) as explanatory variables, it offers a more detailed understanding of factors leading to crash risk.

**Implications** – The results provide helpful information for technology companies' risk management plans. They advise investors and policymakers to carefully monitor ownership trends, debt maturity, and investor sentiment to better predict and minimise the danger of stock market crashes.

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## INTRODUCTION

The crash risk of stock price has gained significant attention in financial research due to its capacity to cause substantial disruptions in the market and lead to investor losses. Notable examples of market crashes include the 2007 financial meltdown, the 2008 global crisis, and the Chinese stock bubble. Other events such as the Dubai debt crisis in 2009, the European debt crisis, and the "Flash Crash" in 2010, where the Dow Jones dropped 1000 points, as well as the Federal Reserve's stimulus tapering in 2013, have caused major market disturbances. Additional factors that contributed to the intensification of economic uncertainty include the devaluation of the Chinese yuan and the subsequent market crash in 2015, the outcome of the presidential election in the United States in 2016, the Dow Jones entering a bear market in 2018, and shocks resulting from the COVID-19 pandemic and oil price war in 2020, which resulted in a 2000-point drop in the Dow Jones. The conflict between Russia and Ukraine in 2022 and the continued trade strains between the United States and China in 2025 further aggravated the instability of the global market.

Stock crashes often arise from sudden disclosures of accumulated negative information previously withheld by firms (Kothari et al., 2009; Yuan et al., 2016). The ultimate disclosure of this secret knowledge precipitates a severe decline in stock values and may result in market crashes. Recent instances of sudden and significant stock price declines have garnered increasing interest from academics and professionals. Numerous international studies have examined how company-specific factors, encompassing both internal and external features, affect the probability of stock market crashes (Moradi et al., 2021). According to Chang et al., (2017) contend that the prospect of a market crash can greatly reduce wealth and dampen investor interest in equities.

In developing countries, various systems of corporate governance, include institutional, managerial, and public ownership, external auditors, and rating agencies often fail to function effectively. Sun et al., (2015) suggest that ownership structure plays a crucial role in mitigating agency problems, thereby enhancing company value and stock price. Menon (2016) found a positive relationship between the debt-to-equity ratio, stock price, and capital. Chauhan et al., (2017) indicate that companies with a higher number of majority shareholders are more accountable and less prone to stock price crashes. When the primary shareholder holds significant control, the risk of crashes is lower; however, extensive selling by major shareholders increases crash likelihood. Meanwhile, Pan et al., (2021) demonstrate that the presence of institutional investors is positively connected with crash risk in vulnerable enterprises. Numerous financial policies, including debt levels, loan maturity structure, and cash holdings, are critical elements influencing business performance; yet, previous studies frequently analyse these issues in isolation (Nnadi et al., 2022).

The heterogeneous New Keynesian model with financial frictions and endogenous debt maturities rationalizes empirical findings and explores the aggregate effects of monetary policy. Firms finance investments through a mix of debt and equity, where debt offers tax advantages but entails default risk. Businesses use both short- and debt with a long-term maturity; while long-term debt lowers the cost of refinancing, it may also raise the chance of default due to outstanding obligations (Jungherr et al., 2022). Dang et al., (2018) establish a linkage between the likelihood of a stock market crash and levels of short-term debt. Jia et al., (2018) report that the debt structure, especially the ratio of bank loans to trade credit, has a strong connection to the likelihood of a crash due to financial deterioration post-debt maturity.



Behavioural finance theory proposes that abnormalities when trading stocks are ascribed to investor sentiment, and by looking at investor behaviour through the prism of human emotions, we can understand how it affects the stock market. Investors sometimes disregard the fundamental value of stocks and obsessively pursue price rises when the stock market is bullish. The stock price thus diverges significantly from its real worth. Investors' income will drop precipitously shortly as the stock price progressively reverts to its fundamental value. Irrational investor pessimism at the time propagated quickly throughout the stock market, causing competitive stock sales and raising the possibility of stock price crashes. Investors respond asymmetrically to market news depending on their optimism or pessimism. Therefore, it is imperative to look into the link between how investors feel about market crashes from multiple perspectives (Wu et al., 2021).

### Hypothesis Development

In accordance with Chen et al., (2001) employed the NCSKEW and DUVOL methodologies for the first investigation of whether there is a chance that the stock market will experience a crash. The agency's theoretical perspective on the risk of dropping company-specific stock prices provides two avenues through which hoarding bad news can occur. These avenues are based on the theoretical reasons presented by Jin & Myers, (2006) and Benmelech et al., (2010). Opacity in financial reporting and excessive investment are the two paths that can be taken.

The theoretical development of Benmelech et al., (2010) developed a theory based on the claim that managers can conceal bad news by using overinvestment due to information asymmetry. This behaviour is specifically seen when investment prospects slow down, and managers are motivated to conceal unfavourable news to protect their pay due to growing concerns about their income. In order to meet investor expectations, they overinvest while feigning that growth alternatives are still common. When there are challenges inside the organisation, managers engage in wasteful expenditures in order to meet investor expectations. The term "free cash flow" refers to a company's ability to invest in its future without having to dip into its current reserves (Jensen, 1986; Stulz, 1990). According to Andreou et al., (2021) assert that excessive overinvestment manifests as expenditures above the required quantity in order to sustain assets in their existing locations and to fund anticipated further monetary investments made in projects that have a net present value (NPV) that is positive.

### The Effect of Ownership Structure on Stock Price Crash Risk

Earlier theories about shareholding structure include Shleifer & Vishny (1986), proposed that a certain amount of concentrated ownership enhanced business performance due to large block shareholders, which is among the earlier theories about shareholding structure. Ownership has limited motivations and resources to keep an eye on management choices, and it is positioned to reap most of the gains from firm enhancements, performance, or acquisitions (Qi et al., 2000). In many stock markets, the most significant shareholders are members of other ownership arrangements, including institutional investors. These investors seek to optimise profits for their clients by managing risk and generating financial returns (Lamb & Butler, 2018). However, due to the knowledge among these investors and their clientele, stakeholder theory contends that institutional investors offer reliable services (Sarhan & Al-Najjar, 2022).



Investor behaviour is influenced by a company's ownership structure, particularly with regard to the potential risk of a stock market crash. Agency theory states that by improving managerial oversight and lowering how likelihood of digitalisation, it is that the stock market will crash, and ownership concentration can lessen agency issues (Board et al., 2022). The chance of a stock price crash goes down a lot when institutions own shares, according to research by Chen et al. (2023). It is mostly due to management's improved monitoring function and decreased buildup of false information. In addition, a study by Hou & Liu (2023) found that institutional ownership is also negatively associated with the risk of stock price crashes, involving increased information transparency and reduced incentives to withhold negative information. However, a study by Chen & Li (2024) showed that managerial ownership could increase the risk of stock price crashes, especially in companies not audited by large accounting firms and regions with high levels of digitalisation, due to the greater potential for information manipulation. The hypothesis (H1) that can be put forward is that a concentrated ownership structure, either through joint institutional or cross-institutional ownership, can reduce the risk of stock price falls through increased monitoring and information transparency. Conversely, high managerial ownership can increase this risk, especially in an environment with weak external monitoring.

*H1a: Ownership Structure (Managerial) has a significant effect on Stock Price Crash Risk.*

*H1b: Ownership Structure (Institutional) has a significant effect on Stock Price Crash Risk*

*H1c: Ownership Structure (Community) has a significant effect on Stock Price Crash Risk*

### **The Effect of Debt Maturity on Stock Price Crash Risk**

The acquisition of capital by firms in the United States and around the world is mostly accomplished through the utilization of debt (for example, Graham et al., (2015); Öztekin (2015) respectively). There is a lot of impact that the maturity structure of loan contracts has on the decisions that are made by businesses, including investors. At this point in time, the scholarly literature on debt maturities is divided into two distinct schools of thought. Although there is a growing understanding of the significance of loan maturities in the formation of company financial and investment strategies, Limited research has been undertaken regarding the impact of monitoring short-term debt lenders on shareholder wealth and stock prices (V. A. Dang et al., 2018)

Companies having an increased ratio of long-term liabilities may reduce managers' incentives to hide negative information because longer payment obligations give creditors more time to monitor the firm's performance (Haider et al., 2024). Conversely, short-term debt may increase managerial monitoring and reduce bad information-hiding behaviour because creditors have a faster claim on the firm's assets (Haider et al., 2024). Research by Xu et al., (2014) the risk of a stock market crash is mitigated by a higher level of long-term debt, especially in developing countries with strong accounting standards such as IFRS, because it increases transparency and reduces information asymmetry. However, prolonged debt may elevate the likelihood of a stock price crash in an environment with weak external monitoring because there are incentives for managers to hide bad news. The hypothesis (H2) that can be put forward is that a higher long-term debt structure can reduce stock price crash risk through increased creditor monitoring and reduced detrimental managerial behaviour.

*H2: Debt maturity has a significant effect on Stock Price Crash Risk.*



### **The Effect of Investor Sentiment on Stock Price Crash Risk**

Investor sentiment is an overblown opinion or emotion that investors have about the market or company stock. Undoubtedly, this can impact someone, particularly when it comes to investment decisions. Investors progressively develop investment views that may mirror their speculative inclinations based on projections of future cash flows and investment risks. According to Wu et al., (2021) investors produce a variety of distinct opinions that can be identified as investor sentiment in the stock market because of their disparate investment beliefs and subjective assessments.

Investor sentiment positively influences the chance of stock price crashes. For example, a study by Liu & Li (2025) found that high investor sentiment can worsen the quality of internal control, increasing its vulnerability to stock price crashes, especially in state-owned enterprises with weak internal control. Mediation analysis revealed that investor sentiment damages the quality of internal control, exacerbating stock price crash risk (Liu & Li, 2025). Investor sentiment refers to the collective view of investors on market conditions or economic prospects that can influence their investment decisions. Research by Bashir et al., (2024) and Kustina et al., (2024) shows that investor sentiment positively impacts the risk of stock price crash, especially at high sentiment levels. Due to herd behavior, investors tend to follow the majority's investment decisions without considering fundamental analysis. The sentiment connection among companies significantly influences the possibility of a stock price crash. This connectivity creates a domino effect in the market, where negative sentiment on one company can spread and affect others, worsening overall market conditions (Kustina et al., 2023). The hypothesis (H3) that can be developed is

*H3: Investor Sentiment has a significant effect on Stock Price Crash Risk.*

### **The Mediating Role of Investor Sentiment**

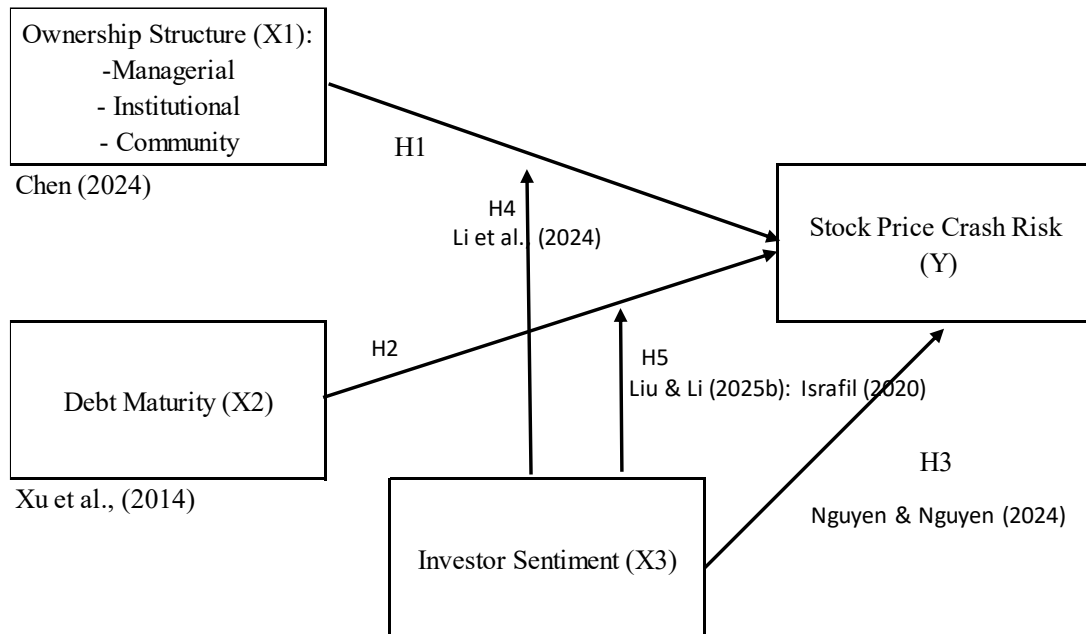
Investor sentiment affects stock price crash risk through psychological mechanisms and market behaviour. Research by Nguyen & Nguyen (2024) shows that excessive positive sentiment may elevate the likelihood of crashes, especially when it reaches medium to high levels, because investors tend to ignore fundamental factors and get caught up in market euphoria. Investor sentiment, via psychological amplification processes, enhances the impact of ownership structure on the probability of stock price crashes. High institutional ownership tends to exacerbate the impact of excessive positive sentiment because institutions have the resources to influence market perceptions, thereby accelerating the accumulation of asymmetric information (Yang Li et al., 2024). In addition, a study in Africa found that weak accounting standards exacerbated this effect, where excessive sentiment triggered the overvaluation of long-term debt (Israfil, 2020). Investor sentiment strengthens the influence of ownership structure on the risk of stock price crises through several psychological mechanisms and market behavior. High investor sentiment—either in the form of excessive optimism or pessimism—encourages investors to overreact to information related to company ownership, thereby strengthening the institutional or public ownership impact on the volatility of stock prices. For example, institutions with significant ownership tend to withhold or postpone the revelation of unfavorable information, and when market sentiment is very positive, this delay can trigger the accumulation of hidden risks that eventually lead to a stock price crash. Conversely, institutional ownership can accelerate massive selling when negative sentiment dominates, exacerbating the price decline (Chen, 2024).



In addition, investor sentiment affects the risk of a stock price crisis in companies with long-term debt through several main mechanisms. High investor sentiment, especially excessively optimistic sentiment, can encourage investors to ignore the risks inherent in the company's long-term debt structure. It causes stock prices to become overvalued and creates a price bubble vulnerable to sharp corrections or crashes when sentiment changes suddenly Liu & Li (2025b) A study shows that increasing investor sentiment significantly increases the potential decline in stock value, particularly for businesses that have weaknesses in internal control and large debt structures, because long-term debt increases the company's exposure to financial risks that are not easily overcome in the short term. The hypotheses that can be developed are:

- H4a: Investor sentiment strengthens the influence of Ownership Structure (Managerial) and significantly affects Stock Price Crash Risk.*
- H4b: Investor sentiment strengthens the influence of Ownership Structure (Institutional) and has a significant effect on Stock Price Crash Risk*
- H4c: Investor sentiment strengthens the influence of Ownership Structure (Community) and has a significant effect on Stock Price Crash Risk*
- H5: Investor sentiment strengthens the influence of debt maturity and has a significant effect on Stock Price Crash Risk*

The significance of ownership structure, debt maturity, and sentiment of investors in predicting stock price crash risk has been emphasized by earlier studies. For example, Khanqah & Talebnia, (2018) discovered that companies with larger amounts of holders of short-term debt are in a better position to weather a stock market crash because creditors effectively monitor managers. Similarly, Dang et al., (2018) found that enterprises with higher degrees of information asymmetry and lower levels of institutional ownership have a more substantial moderating effect of Short-term debt and its correlation with crash risk. On the other hand, Canbaloglu et al., (2022) discovered a negative correlation between the percentage of long-term debt issuance and the probability of a stock market meltdown in Turkish enterprises. The conceptual framework of the way debt maturity affects things (X2), investor sentiment (X3), and ownership structure (X1) on the probability of stock price crashes (Y) is depicted in Figure 1. The danger of stock price crashes is strongly impacted by ownership structure, which includes debt maturity and managerial, institutional, and community ownership (H1 and H2). In addition to being an independent variable that directly influences crash risk (H3), investor mood also serves as a moderating variable that increases the effect of debt maturity (H5) and ownership structure (H4) on crash risk.

**Figure 1.** Research Model

## METHOD

### Type and Research Approach

Using a comparative causal method and a quantitative approach, this study examines how ownership structure, debt maturity, and investor sentiment affect a crash in stock prices in technology business companies traded on the Indonesia Stock Exchange (IDX) between 2020 and 2022. The proportion of managerial, institutional, and public ownership is used to assess the ownership structure variable, and binary logistic regression, which calculates the likelihood of a crash, to determine the value of the risk of stock price crashes because the dependent variable is a dummy variable, binary logistic regression was selected for data analysis.

### Population and Sample

According to this study, the population consists of every single business in the technology industry that was included on the list on the Indonesia Stock Exchange (IDX) during the years 2020 and 2022. The criteria for selecting the population are using the resources that are available complete data related to ownership structure, debt maturity, investor sentiment, and stock price data required for the analysis. Thus, the population includes active companies with consistent financial reports and market data for the three years. The research sample consists of 172 firm-per-month observations taken making use of a method known as purposive sampling, namely selection according to particular criteria so that the data used is valid and relevant.

### Type and Data Source

The utilized data comprises secondary data acquired from corporate financial reports, stock ownership data, debt maturity, investor sentiment indicators, and stock price data accessed through IDX and other trusted financial data sources, for example, investing.com.



### Operational Definition of Variables and Measurement

The study's four variables used to assess the likelihood of a stock market crash are detailed in Table 1. The initial variable is Stock Price Crash Risk (Y), quantified as a binary (dummy) measure based on the weekly standard deviation of stock prices; if volatility drops drastically below the average, a stock crash is considered to have occurred. The second variable is Share Ownership Structure (X1), which refers to the composition of the company's share ownership, such as institutional, managerial, and public ownership, which is measured in the percentage of shares each group owns. The third variable is debt maturity (X2), which describes the term of the company's debt and is classified by the debt term (1, 2, 3, and 5 years). Finally, Investor Sentiment (X3) is measured through a trading volume indicator that reflects market optimism or pessimism toward the stock.

**Table 1. Operational Variables**

No	Variable	Definition	Scale	Indicator
1	Stock Price Crash Risk	Investor perception related to stock investment can cause losses from company-related internal and external variables.	Ratio	Crash: Dummy variable, 1 = Crash, 0 = No crash.  Information: Crashes are determined from the weekly standard deviation value. If the standard deviation in period t is lower than the monthly average, then a crash occurs.  Risk Description: The stock price crash risk reflects an extreme trend toward negative outcomes in a company ((Chen et al., 2001); (J. Jin et al., 2022); (Kim & Zhang, 2016)).  Indicators: Institutional ownership, managerial ownership, and public/community ownership.  Measured as follows:  Institutional ownership = (number of institutional shareholdings/number of shares outstanding) x 100%  Managerial ownership = (number of managerial shareholdings / numbers of outstanding shares) x 100%  Public/community ownership = (total public/community shareholding / number of outstanding shares) x 100%
2	Share Ownership Structure	The composition of shareholders in a company can affect decision-making and, in turn, the company's value.	Ratio	Debt Categories (Dang et al., 2019) ST1 = debt due in 1 year ST2 = debt due in 2 years ST3 = debt due in 3 years ST5 = debt due in 5 years
3	Debt Maturity	Deadline for repayment of loans given to a company.	Ratio	Indicator: Based on trading volume (Mayer, 2011).
4	Investor Sentiment	The level of emotion influenced by a situation, which affects investor decisions on investment instruments.	Ratio	

Source: Adapted from (Chen et al., 2001); (J. Jin et al., 2022); (Kim & Zhang, 2016); (Dang et al., 2019).



### Data Analysis Techniques

Using monthly financial data from five technology sector entities registered on the IDX from 2020 to 2022, this study seeks to assess three variables. The Logistic Regression Test is used in research. The Hosmer and Lemeshow Test, the Prediction Rate Accuracy Test, and the Multicollinearity Test are used to assess the model's viability. Use the LR (Likelihood Ratio) Test for the simultaneous and Z tests for the partial tests when assessing hypotheses.

## RESULTS AND DISCUSSION

### Descriptive Statistical Analysis

This test aims to describe all research variables in the manifestation of Stock Price Crash Risk (Y), Ownership Structure (X1) which is measured using three structures such as Managerial Ownership (X1A), Institutional ownership (X1B), and Community/public ownership (X1C), as well as Debt Maturity (X2), and Investor Sentiment (X3). Based on the recapitulation of statistics processed using the help of the eviews version 13 application can be displayed in the table below:

**Table 2.** Descriptive Analysis

Statistic	Managerial Ownership (X1A)	Institutional Ownership (X1B)	Community Ownership (X1C)	Debt Maturity (X2)	Investor Sentiment (X3)	Stock Price Crash Risk (Y)
Mean	0.017167	0.036778	0.026833	1.62E+10	9.74E+07	0.277778
Median	0.011734	0.030000	0.026374	1.50E+10	3.46E+07	0.000000
Maximum	0.053332	0.061219	0.056150	3.70E+10	1.66E+09	1.000.000
Minimum	-0.000382	0.014029	0.005034	1.89E+08	2.00E+03	0.000000
Std. Dev.	0.016478	0.017367	0.012062	1.10E+10	1.81E+08	0.449153
Skewness	1.021.250	0.202615	0.742754	0.546301	4.797.760	0.992278
Kurtosis	2.712.405	1.363.388	2.779.671	2.229.169	35.706.490	1.984.615
Jarque-Bera	31.908.860	21.320.320	16.914.590	13.409.700	8.713.413.000	37.271.010
Probability	0.000000	0.000023	0.000212	0.001225	0.000000	0.000000
Sum	3.090.009	6.619.998	4.829.985	2.92E+12	1.75E+10	50.000.000
Sum Sq. Dev.	0.048602	0.053988	0.026041	2.18E+22	5.85E+18	36.111.110
Observations	180	180	180	180	180	180

Table 2 illustrates how a dummy variable (0 = no crash, 1 = crash) measures the stock price crash risk variable. With a mean of 0.277778 (27.78% of observations experience a crash) and a standard deviation of 0.449153, the data distribution displays a minimum value of 0.000000 (no crash) and a high value of 1.000000 (crash). The majority of the sample (72.22%) did not experience a crash, according to the median value of 0.000000. Skewness of 0.992 indicates a right-skewed distribution, while kurtosis of 1.985 (less than 3) reflects a lighter tail of the distribution. The crash risk in the sample tends to be low, but there are significant extreme cases.

Managerial Ownership (X1A): Average of 0.017167 (1.72%) with a minimum value of -0.000382 (possibly data error or outlier) and a maximum of 0.053332 (5.33%). The distribution is skewed to the right (skewness 1.021) and has a standard deviation of



0.016478, indicating low ownership variation across firms. Institutional Ownership (X1B): An average of 0.036778 (3.68%) is higher than managerial ownership, with a maximum value of 0.061219 (6.12%) and a standard deviation of 0.017367. The distribution is relatively symmetrical (skewness 0.203), indicating a moderate dominance of institutional ownership. Public Ownership (X1C): An average of 0.026833 (2.68%) with a standard deviation of 0.012062 indicates stable public ownership. The distribution is skewed to the right (skewness 0.743), and kurtosis 2.780 indicates the concentration of data around the mean.

Debt Maturity (X2): Debt values range from 1.89E+08 to 3.70E+10 with a mean of 1.62E+10 and a standard deviation of 1.10E+10. The distribution is skewed to the right (skewness 0.546), indicating most firms have below-average long-term debt. The median of 1.50E+10 (lower than the mean) confirms the presence of outliers at the maximum value.

Investor Sentiment (X3): Minimum value is 2.000, maximum 1.66E+09. The mean of 97,412,727 and median of 34,590,000 indicate a highly right-skewed distribution (skewness 4.798) with long tails (kurtosis 35.706). It reflects highly volatile investor sentiment that is influenced by external factors (e.g., market news).

### Multicollinearity Test

The lack of notable correlation among the independent variables is one of the requirements for the logistic regression test. A multicollinearity test determines whether the independent variables in the logistic regression model have a strong link with one another. If the resulting value is less than 0.9, it is said that there is no strong link. It is evident from Table 2 that no value greater than 0.9 is displayed. The test results indicate an absence of substantial multicollinearity among the independent variables.

**Table 3.** Multicollinearity Test Results

	Stock Price Crash Risk (Y)	Managerial Ownership (X1A)	Institutional Ownership (X1B)	Community Ownership (X1C)	Debt Maturity (X2)	Investor Sentiment (X3)
Stock Price Crash Risk (Y)	1	-0.062273	0.031310	0.024698	0.049618	-0.145746
Managerial Ownership (X1A)	-0.062273	1	-0.787128	-0.408389	-0.419120	0.087671
Institutional Ownership (X1B)	0.031310	-0.787128	1	-0.233190	-0.094148	-0.280099
Community Ownership (X1C)	0.024698	-0.408389	-0.233190	1	0.821426	0.298505
Debt Maturity (X2)	0.049618	-0.419120	-0.094148	0.821426	1	0.175731
Investor Sentiment (X3)	-0.145746	0.087671	-0.280099	0.298505	0.175731	1

Table 3 presents the findings of the correlation analysis regarding Stock Price Crash Risk (Y) variable and several independent variables: Managerial Ownership (X1A), Institutional Ownership (X1B), Community Ownership (X1C), Debt Maturity (X2), and Investor Sentiment (X3). The values in Table 3 represent the level of linear relationship



between each variable, where numbers approaching 1 or -1 indicate a strong correlation, while numbers approaching 0 denote a weak correlation or absence of correlation.

The risk of stock price crashes (Y) exhibits a weak negative connection with Managerial Ownership (X1A) and Investor Sentiment (X3) and a very weak positive correlation with Institutional Ownership (X1B), Community Ownership (X1C), and Debt Maturity (X2). It shows that changes in managerial ownership and investor sentiment somewhat influence the crash likelihood of the stock market, nonetheless, the impact is minimal. Meanwhile, institutional ownership, community, and debt maturity have almost no significant effect on the risk.

In addition, from the table, it can be seen that several independent variables have quite high correlations with each other, for example, the negative correlation between Managerial Ownership (X1A) and Institutional Ownership (X1B) of -0.787 and the positive correlation between Community Ownership (X1C) and Debt Maturity (X2) of 0.821. It shows a reasonably strong relationship between the independent variables, which needs to be considered to avoid multicollinearity problems in further analysis. Investor Sentiment (X3) has a weaker correlation with other variables, except for Community Ownership (X1C), which is positive.

#### Model Feasibility Test (Hosmer and Lemeshow)

For this evaluation, the Goodness of Fit Test developed by Hosmer and Lemeshow was utilised to assess the reliability of the regression model. The null hypothesis posits that the empirical data aligns with the model, indicating no discrepancy in relation to the data and the model; this hypothesis is evaluated using the model. Regarding the outcomes:

H0 = Model fit

H1 = Model not fit

1. H-L values < 0.05 = H0 rejected.

**Table 4.** Model Feasibility Test Results (Hosmer and Lemeshow)

H-L Statistic	4.5816	Prob. Chi-Sq(8)	0.8012
Andrews Statistic	14.0651	Prob. Chi-Sq(10)	0.1700

According to Table 4, the statistical H-L value has a magnitude of 3.7750 and a significance probability of 0.8012. Because it matches the observation data or the fit model, H0 is accepted in the study, and H1 is rejected, indicating that the model can predict the observation value with a significance probability value of 0.8012, greater than 0.05.

#### Expectation-Prediction Evaluation

This Expectation-Prediction Evaluation test aims to assess the degree of precision of the variable and equation models utilized in research. Using Models with variables exhibits more accuracy if the results shown are almost 100%.

**Table 5: Expectation-Prediction Evaluation**

Based on Actual Counts

	Estimated Equation	Constant Probability
	Dep=0	Dep=1
P(Dep=1) ≤ C	127	49
P(Dep=1) > C	3	1
Total	130	50
Correct	127	1
% Correct	97.69%	2.00%
% Incorrect	2.31%	98.00%
Total Gain*	-2.31	2.00
Percent Gain**	NA	2.00

Based on Expected Values

	Estimated Equation	Constant Probability
	Dep=0	Dep=1
E(Dep=0)	95.87	34.13
E(Dep=1)	34.13	15.87
Total	130.00	50.00
Correct	95.87	15.87
% Correct	73.74%	31.74%
% Incorrect	26.26%	68.26%
Total Gain*	1.52	3.96
Percent Gain**	5.48%	5.48%

The accuracy rate is displayed in Table 5 is 97.69% when comparing the stock price crash risk to different ownership structure sizes (managerial, institutional, and community), debt maturity, and investor sentiment. Since the model typically yields nearly 100% accurate results, these findings suggest that it is both viable and accurate enough to be used in future research.

#### Efficiency of Determination (McFadden R-Squared)

According to Table 6, the projected result's McFadden R-squared value is 0.042002. It indicates that the model's independent variable can account for 4.2% of the likelihood of a stock price crash variation, with other factors outside the model accounting for the remaining 95.8%..

**Table 6. Results of Determination****Model Fit Statistics**

Statistic	Value	Statistic	Value
McFadden R-squared	0.101806	Mean dependent var	0.273256
S.D. dependent var	0.446932	S.E. of regression	0.434655
Akaike info criterion	1.169.808	Sum squared resid	3.060.584
Schwarz criterion	1.352.801	Log likelihood	-9.060.345

**Model Fit Statistics**

Statistic	Value	Statistic	Value
Hannan-Quinn criter.	1.244.053	Deviance	1.812.069
Restr. deviance	2.017.458	Restr. log likelihood	-1.008.729
LR statistic	2.053.890	Avg. log likelihood	-0.526764
Prob(LR statistic)	0.014863		

**Observations**

Category	Count
Dep=0	125
Dep=1	47
Total	172

The model can account for almost 10% of changes in the variable that is being measured, according to McFadden's R-squared of 0.101806 (roughly 10.2%), which is relatively moderate in logistic regression. There is statistical significance in the model overall compared to the null model, indicating that the independent variables included contribute significantly to the prediction of the dependent variable, as indicated by the LR statistic value of 2053.890 with a probability of 0.014863 ( $p < 0.05$ ). The Akaike Information Criterion (AIC) of 1,169.808, the Schwarz Criterion of 1,352.801, and the Hannan-Quinn Criterion of 1,244.053 help compare this model with other alternative models, where lower values indicate a better model. The log-likelihood of -9,060,345 and the deviance of 1,812,069 are also indicators of model suitability, with lower deviance indicating a better model. The standard regression error of 0.434655 indicates a relatively good model prediction accuracy.

**Partial Test (Hypothesis Test)**

The hypothesis test is performed to determine whether a statistical variable partially affects the dependent variable by comparing the probability value to the  $\alpha$  value (0.05). Here is a table of hypothesis test results:

**Table 7.** Hypothesis Test

Variable	Coefficient	Std. Error	z-Statistic	p-value	Significance
C (Constant)	3.280.694	8.689.018	0.377568	0.7058	
X1A (Managerial Own.)	-4.729.350	1.199.317	-0.394337	0.6933	
X1B (Institutional)	-5.863.249	1.061.669	-0.552267	0.5808	
X1C (Community Own.)	-3.007.931	1.111.415	-0.270640	0.7867	
X2 (Debt Maturity)	-9.82E-12	3.68E-11	-0.266836	0.7896	
X3 (Investor Sent.)	3.58E-07	1.49E-07	2.409.557	0.0160	**
MODERATING X1A×X3	-5.22E-06	2.12E-06	-2.468.064	0.0136	**
MODERATING X1B×X3	-4.49E-06	1.89E-06	-2.377.282	0.0174	**
MODERATING X1C×X3	-4.02E-06	1.65E-06	-2.438.018	0.0148	**
MODERATING X3×X2	-1.05E-24	1.87E-24	-0.560721	0.5750	

The Z test results for each independent variable and the dependent variable's control are as follows:



- H1a: Managerial Ownership (X1A) Has a Significant Effect on Stock Price Crash Risk; Despite the fact that the p-value (0.6933) is higher than 0.05, the findings indicate that there is a negative association between the likelihood of a stock price drop and the X1A coefficient (-47.29350). This indicates that crash risk is not impacted much by managerial ownership. Since the hypothesis was disproved, management ownership does not predict the risk of a stock market crash.
- H1b: Institutional Ownership (X1B) Has a Significant Effect on Stock Price Crash Risk; Although the p-value (0.5808) is more than 0.05, the X1B coefficient (-58.63249) is likewise negative. This finding indicates that crash risk is not much impacted by institutional ownership. The rejection of the hypothesis suggests that institutional ownership domination is not a risk factor for stock price crash risk.
- H1c: Community Ownership (X1C) Has a Significant Effect on Stock Price Crash Risk; Although the p-value (0.7867) is more than 0.05, the coefficient of X1C (-30.07931) indicates a negative connection. Crash risk is unaffected by community ownership. The theory is disproved.
- H2: Debt Maturity (X2) Has a Significant Effect on Stock Price Crash Risk; The p-value (0.7896) is greater than 0.05, while the coefficient of X2 (-9.82E-12) is quite small. These findings suggest that crash risk is not substantially impacted by debt maturity. This theory is disproved.
- H3: Stock Price Crash Risk Is Significantly Affected by Investor Sentiment (X3); The p-value (0.0160) is less than 0.05, and the coefficient of X3 (+3.58E-07) is positive. These findings support the idea, which shows that stock price crashes are more probable to manifest when investor sentiment is elevated.
- H4: Investor Sentiment (X3) Has a Significant Effect on Stock Price Crash Risk; The p-value (0.0160) is less than 0.05, and the coefficient of X3 (+3.58E-07) is positive. These findings support the idea, which shows that stock price crashes are more likely to occur when investor sentiment is high.
- H4a: Investor Sentiment Strengthens the Effect of Managerial Ownership (X1A×X3) on Stock Price Crash Risk; Although the p-value (0.0136) is less than 0.05, the interaction coefficient of X1A×X3 (-5.22E-06) is negative. The hypothesis is supported by these findings, which demonstrate that the correlation between stock price crash risk and managerial ownership is moderated by investor sentiment. Because of this detrimental effect, the safeguarding influence of management ownership on crash risk increases with high investor sentiment.
- H4b: Investor Sentiment Strengthens the Effect of Institutional Ownership (X1B×X3) on Stock Price Crash Risk; With a p-value of (0.0174) < 0.05, the interaction coefficient of X1B×X3 (-4.49E-06) is negative. These results lend credence to the hypothesis, showing that the effect of large-scale ownership on the likelihood of crash risk is amplified by investor sentiment. This adverse consequence, however, demonstrates how institutional ownership increases the crash risk under circumstances of elevated sentiment.
- H4c: Investor Sentiment Strengthens the Effect of Community Ownership (X1C×X3) on Stock Price Crash Risk; The p-value (0.0148) is less than 0.05, and the interaction coefficient X1C×X3 (-4.02E-06) is negative. This theory is confirmed, showing that the impact of community ownership on crash risk is amplified by investor sentiment.



Despite the negative coefficient, this indicates that community ownership has a greater impact on crash risk when sentiment is strong.

- H5: Investor Sentiment Strengthens the Effect of Debt Maturity ( $X3 \times X2$ ) on Stock Price Crash Risk; With a p-value ( $0.5750$ )  $> 0.05$ , the interaction coefficient  $X3 \times X2$  ( $-1.05E-24$ ) is extremely tiny. These findings disprove the notion that the relationship between debt maturity and crash risk is influenced by market emotion.

## Discussion

### The Effect of Ownership Structure (Managerial Ownership) on Stock Price Crash Risk

H1a: Stock Price Crash Risk Is Significantly Affected by Managerial Ownership ( $X1A$ ) was denied. The risk of a stock market meltdown is typically impacted by managerial ownership. Similar to the study conducted by Haghghi & Safari Gerayli (2020), the long-term value of the company suffers when managers are encouraged as a means of concealing unfavourable news and misleading investors in order to increase the present stock price. However, if it is either too expensive or impossible to do so, keep stifling unfavourable news once it reaches a critical threshold. When that crucial moment arrives, management is forced to quit, and the stock price plummets when all the terrible news is revealed immediately. Family-owned businesses dominate the capital market in Indonesia; the founding family owns 67% of the companies listed on the IDX (Mughtar et al., 2023). Due to entrenched management, many of whom are members of the owner's family, strategic choices are frequently skewed to safeguard the family's interests rather than minority shareholders (Anderson & Reeb, 2003). Family businesses on the IDX have ownership structures exceeding 50%, which increases the risk of information asymmetry and lowers managerial accountability (Wistawan et al., 2015).

Both what this research found and those of the investigation came to the same conclusions conducted by Zahn (2018), where ownership structure does not significantly affect stock price crash risk. This study shows that managerial ownership has a negative effect and is insignificant to the risk of stock market crashes. In other words, the more shares owned by management, the less likely the stock price is to crash. One possible reason is that managers with a greater stake in the company are more motivated to protect their reputation and ensure consistent performance. It contributes to stock price stability. This is supported by Abaoub dan Mokrani (2024) showing that financial expertise in the audit committee increases monitoring and helps reduce the risk of price crashes. Tight monitoring makes it more difficult for managers to hide bad news.

On the other hand, Li (2024) finds that when government shareholders are involved in private companies, the risk of stock market crashes can be significantly reduced. It suggests that powerful and influential shareholders, such as the state, can provide resources and monitoring that may prove more effective than managerial ownership alone, especially in markets with different dynamics. Lin et al. (2023) show that the preponderance of ownership by foreign institutions also helps reduce the risk of bankruptcy. When institutions own significant shares, they can monitor management more closely and thus prevent them from hiding bad news. It strengthens the idea that external monitoring by institutional investors, combined with management ownership, effectively reduces the stock price crash risk. Fang et al. (2024) with an emphasis on generalist CEOs: leaders with extensive experience in various industries. CEOs help reduce the risk of bankruptcy by using more conservative accounting practices and avoiding earnings manipulation.



### **The Effect of Ownership Structure (Institutional Ownership) on Stock Price Crash Risk**

This study's findings demonstrate that controlled enterprises are more vulnerable to stock price crash when institutional ownership is present. This led to the rejection of H1b. Stock price crash risk are more likely to occur in companies with a high level of institutional ownership. Since institutions tend to be more information-driven, with incentives to protect the value of their investments, they are often more proactive in exploiting negative information, which is a significant cause of stock price appreciation. Chen et al. (2024) found that overall institutional ownership significantly reduces stock price decline risk. This effect arises because institutional owners who own shares in most firms control the management of information, which is a highly regulated incentive due to externalities in management. Institutional owners contribute to the stability of stock prices in the capital market by reducing the accumulation of bad news and encouraging CEO turnover in risky companies (Chen et al., 2024). Company managers are more careful when making strategic decisions and disclose information promptly and transparently. Crashing of stock prices is less likely to occur at companies with large institutional ownership due to the thorough and responsible management methods employed by these companies (Li et al., 2022) They also discovered that institutional ownership can lessen the detrimental effect of real earnings management on stock price volatility. Li et al., (2022) More importantly, they found that being owned by institutions lessens the detrimental effects of real earnings management on stock price volatility.

Furthermore, the findings of this study are consistent with those of a number of earlier studies that demonstrated that the presence of external monitoring by institutional owners has an effect on the stability of stock prices. Consequently, it considerably lessens the likelihood of stock price drops as a result of information that is more properly handled. This result is agreed upon by several previous studies that indicated the impact that institutional owners' external monitoring has on the stability of stock prices. The chance of a decline in stock price is significantly reduced as a result of improved management of information implications (Li et al. 2025). In addition, Lin et al. (2023) found that Taiwan is owned by institutional investors from other countries internationally. However, not every study comes to the same conclusions all the time. A study conducted by Suhani et al. (2024) discovered that institutional ownership had a positive correlation with the likelihood of a decrease in stock prices in the Indonesian market. It is possible that this is owing to the shortcomings of the corporate governance structure in that setting, or it might be related to the distinctive characteristics of emerging markets, which are characterized by the fact that institutional shareholders are unable to play a fully active monitoring role. It is important to take into account market conditions and the quality of institutions when evaluating the role that institutional owners play in maintaining stock prices, as this difference underscores the importance of doing so.

### **The Effect of Ownership Structure (Community Ownership) on Stock Price Crash Risk**

A notable impact has not been detected of managerial ownership (X1c) on the risk of a stock price crash. Community ownership does not considerably lessen the risk of a stock market crash, according to the research. Consistent with what Suhani et al. (2024) showed, institutional ownership contributes to organisational control, while in the case of



community ownership, adequate monitoring levels are not necessarily required. Community ownership may not be strong enough to be monitored, which can lead to a reduction in bad news stocks and become a risk of a stock price crash. Another study by Lin et al. (2023) examining the Vietnamese market also found that institutional shareholders in the form of block shareholders increase the risk of stock market crashes, especially when stock liquidity is high. Given that community ownership tends to be more fragmented and concentrated than institutional constraints, the impact on disaster risk is less effective and can expose disasters to the public if the leadership is not disciplined in disseminating information.

Unorganized community ownership has the potential to reduce the risk of stock price declines due to the lack of strong monitoring incentives, especially in emerging markets where information transparency is limited. In addition, the study's results by Cao et al. (2023) show that the risk of stock price declines increases with uncontrolled earnings management (REM) and earnings manipulation practices. Community ownership, generally less active in external monitoring, allows REM practices to flourish, increasing the risk of crashes. This study shows that only institutional owners with monitoring incentives and data processing capabilities can reduce this risk. Overall, these negative results are consistent with the study by Rahimzadeh et al. (2022) Institutional ownership, especially foreign investors, reduces risk by using more intensive and professional monitoring methods. In contrast, fragmented and unorganised community ownership fails to create adequate monitoring pressure on management. Chen et al. (2024) also showed that institutional co-ownership significantly reduces risk by proactively monitoring and motivating CEOs when risks increase. It shows that the type of ownership and concentration structure significantly determine the effectiveness of mitigating the risk of a stock price crash.

### **The Effect of Debt Maturity on Stock Price Crash Risk**

H<sub>2</sub>: Based on the logistic regression calculation for the Debt Maturity variable, which yielded a coefficient value of -0.0000000000982 with a probability value of 0.07896 or less than 0.05, it can be said that hypothesis 2 is rejected, indicating that there does not appear to be any substantial connection between Debt Maturity and Stock Price Crash Risk. Researchers offer the first fresh proof in the accident risk literature that, in addition to the effects of other accident risk determinants found in earlier research, a company's financial policies, such as debt maturities, significantly impact the high moment of distribution of stock returns. Based on the study's findings, it can be said that short-term debt has no discernible impact on the risk of a stock market crash, particularly when it comes to monthly stock returns, which are more closely linked to debt maturity as determined by calculating annual short-term debt and extrapolating it into monthly company data. Additionally, findings by Khanqah & Talebnia (2018) point to a stronger negative relationship between companies' short-term debt and their risk of having a crash in the future, where knowledge asymmetry is substantial. In other words, when combined with other elements like inadequate information asymmetry, maturing short-term debt can have a significant impact at any time. Over time, these factors can compound and lead to more significant issues for the affected organization. The influence of the structure of the debt on the potential for future crash of company-specific returns was then examined by Jia et al., (2018) who found compelling evidence that debt structure, as measured by the trade credit to bank lending ratio, is positively correlated with the future accident risk of company-specific returns; that is, it affects the likelihood of a stock price crash.



### **The Effect of Investor Sentiment on Stock Price Crash Risk**

The logistic regression calculations for the investor sentiment variable show that it considerably lowers the risk of stock price crashes (coefficient =  $-0.000000358$ , probability =  $0.0160$ , which is less than  $0.05$ ). Thus, we can conclude that hypothesis 3 is accepted. Higher investor sentiment raises the likelihood of accidents, according to research by Cui & Zhang (2020) which is supported by the findings of this study. According to Fan et al. (2021) Research findings from 2021, stocks with wider spreads in professional analysts' earnings estimates, particularly those with fewer institutional holdings, have a stronger positive correlation between investor sentiment and the risk of a stock price crash. Then, Wu et al., (2021) demonstrate that investor sentiment can strongly influence the danger of declining stock prices in the Shanghai and Shenzhen A-share markets. According to the findings of current theories and research, investor sentiment can have a direct impact on the risk of a stock price crash because nearly every unfavourable aspect of the business that lowers stock prices will undoubtedly engender negative sentiment or opinions among investors and raise the volume of transactions, particularly in terms of sales. The necessity for investors and policymakers to keep a careful eye on market mood fluctuations is further highlighted by the substantial influence that investor sentiment has on crash risk. Negative sentiment can worsen stock prices, resulting in more frequent and severe crashes.

### **Investor Sentiment Strengthens the Effect of Managerial Ownership on Stock Price Crash Risk**

The results of this research show that investor mood has an impact on fortifying the link between managerial ownership and stock price risk, showing negative and insignificant results. In other words, in this study sample, investor sentiment failed to strengthen or weaken the relationship statistically. This finding indicates that the investor sentiment factor, which is often considered a fairly dominant market psychological variable, within the framework of this research, does not significantly alter the effect of managerial ownership on the danger of stock price crash.

Liu & Li (2025) In their study of state-owned companies in China, they found that high investor sentiment can reduce the efficiency of an organisation's internal control. As a result, this leads to an increase in the risk of stock price declines. When investor sentiment is too optimistic, weak internal control cannot withstand the risk of opportunistic managerial behaviour, so the possibility of a decline increases. Likewise, Fan et al. (2021) found that investor sentiment contributes to an increase in the risk of a decline, especially in stocks with low institutional ownership. The high investor sentiment can drive stock price volatility and trigger herd behaviour that increases the potential for a decline through mutually reinforcing market psychological mechanisms.

The findings of this research make it clear that investor sentiment significantly increases the risk of stock price crashes in technology companies in Indonesia, especially when interacting with managerial ownership. The negative moderation coefficient on managerial ownership and investor sentiment indicates that high investor sentiment can strengthen the adverse effect of managerial ownership on the risk of stock price crashes. Managers with larger shares tend to have incentives to manage information and withhold bad news to maintain stock prices. However, excessive optimism from investors can trigger unrealistic expectations, so when adverse information is ultimately disclosed, the impact of price declines becomes sharper. In other words, investor sentiment worsens the situation by



increasing pressure on managers to hide negative information, which leads to a higher risk of a crash when disclosure occurs.

### **Investor Sentiment Strengthens the Effect of Institutional Ownership on Stock Price Crash Risk**

Investor sentiment exerts a beneficial and substantial influence on strengthening an analysis of the impact of institutional ownership on the volatility of stock prices. In other words, the higher the investor sentiment, the greater the impact of institutional ownership on stock price volatility. Investor sentiment is a stabilising factor and plays an active role in the stock ownership structure that leads to capital market volatility. As large shareholders, institutions have great potential to influence stock price volatility through their responses to market sentiment. Therefore, at the institutional level, risk management needs to consider how investors' collective perceptions and emotions can strengthen the impact of their ownership on price fluctuations. It requires institutions to implement transparent communication and information management strategies to avoid overly pessimistic sentiment that has the potential to cause stock price declines.

Chen & Lok (2024) found that although institutions often act as market monitors, they sometimes hide negative information to protect their portfolios or value. This practice is counterproductive because when investor sentiment is high, it can experience a sharp correction when negative information is finally revealed to the market. In other words, investor sentiment can be a trigger or amplifier of the impact of institutional ownership. Wu et al. (2021) found that the impact of institutional ownership on the risk of price declines is greater when investor sentiment is high, especially during market volatility or declines. Being too optimistic or pessimistic can lead to overreaction to the market and exacerbate price volatility. A study by Cui et al. (2025) the difference in sentiment between retail and institutional investors can increase market volatility and the risk of excessive price declines. This difference can trigger large-volume trading, create uncertainty, and increase the risk of losses. However, not all studies show the same results. Chen et al. (2024) argue that institutional ownership conflicts can be reduced because institutions tend to implement strict monitoring and information disclosure. In market conditions with high liquidity and transparency, investor sentiment does not continually strengthen the relationship between institutional ownership and failure risk. Furthermore, Wu et al. (2021) argue that positive sentiment can reduce failure risk in efficient markets with high liquidity and transparency, even when institutional ownership is high.

### **Investor Sentiment Strengthens the Effect of Community Ownership on Stock Price Crash Risk**

The logistic regression of the data demonstrates that the interplay between the sentiment of investors and community ownership has a negative and statistically significant coefficient. It means that when investor sentiment increases, the effect of community ownership on the risk of stock price crashes weakens. This adverse effect can be interpreted as community ownership acting as a market stabilizer in high sentiment conditions, helping to reduce the risk of crashes by restraining investors' overreaction to fluctuating market sentiment. It agrees with what has been found of Cao et al., (2025) that community investors tend to have a long-term orientation and are more rational in decision-making, thus being able to reduce volatility triggered by excessive market sentiment. Community ownership



supported by strong investor sentiment can strengthen informal monitoring mechanisms and investor communication. Chen et al., (2023) show that a cohesive investor community can disseminate more accurate information and reduce the practice of bad news hoarding, which often triggers stock price crashes. Thus, positive investor sentiment can strengthen the role of community ownership in maintaining stock price stability, especially in emerging markets that are vulnerable to sentiment fluctuations. However, excessive sentiment can also cause herding behaviour, which can increase volatility, so the role of community ownership becomes crucial in balancing market dynamics (Cao et al., 2025).

Maryam & Kaouther (2022) found that high investor sentiment often leads company management to delay or withhold negative information during excessive optimism. Consequently, when unfavourable news emerges, the market correction tends to be more severe. This effect is particularly relevant in markets like Saudi Arabia, where lower liquidity strengthens the connection between the sentiment of investors and the probability of a drop in stock prices. Supporting this, Wu et al. (2021) studied the Chinese stock market and found that both aggregate and varying investor sentiments significantly impact the risk of stock market crashes. Further studies by Li & Zhang (2021) and Fan et al. (2021) Expand on this by examining how stock-specific risks and speculative behaviours influence the relationship between investor sentiment and crash risk. Stronger investor sentiment heightens the effect of ownership on the risk of a stock price crash, reflecting a complex interplay between ownership patterns and market psychology. Yu (2024) challenges such as endogeneity and difficulty accurately measuring investor sentiment can lead to biased or misleading results.

### **Investor Sentiment Strengthens the Effect of Debt Maturity on Stock Price Crash Risk**

This interaction between investor sentiment (X3) and debt maturity (X2) reveals a minimum coefficient (-1.05E-24) with a p-value of 0.5750, which indicates that it is not statistically significant. The results of the logistic regression analysis demonstrate that this interaction is not statistically significant. It suggests that the sentiment of investors does not strengthen the influence of debt maturity on the probability of stock price crashes in technology businesses that are listed on the Indonesia Stock Exchange over the period of 2020-2022. Companies cannot rely on investor sentiment to manage risks associated with debt maturity. It indicates that fundamental factors such as debt structure and maturity must be managed independently from fluctuations in market sentiment. Company management should focus more on managing financial risks related to debt maturities, such as debt restructuring and liquidity planning, without relying on changes in investor sentiment, which are volatile and difficult to predict. In addition, companies need to increase transparency and clear communication regarding debt conditions to reduce market uncertainty that can trigger stock price volatility.

Many other research have shown similar results, thus our results are in line with those that in emerging markets, such as Indonesia, the influence of investor sentiment on crash risk is more prevalent in behavioural variables and stock ownership than it is in structural variables, such as debt maturity and monetary policy, and that macroeconomic conditions have a greater influence on deciding the risks associated with debt structure (Afifah & Badaruddin, 2024); Meanwhile, Firth et al. (2015) found that the interaction between sentiment and structural factors in emerging markets is often insignificant without strong and transparent corporate governance. Therefore, investor sentiment does not continually



strengthen all fundamental risk factors, especially debt maturity in the Indonesian capital market.

The novelty of this research lies in the fact that it makes a contribution to the very limited empirical literature, specifically with regard to the possibility of stock price crashes, particularly in developing markets such as Indonesia. The study offers a more thorough perspective on the factors that lead to market instability by including investor attitude and debt maturity into the stock price crash risk analysis. This allows for a more complete understanding of the components being considered. This research adds value by concentrating on the technology sector, which has been given less attention in prior studies. As a result, it provides new information about how stock prices move in crashes in this significant and fast-expanding area.

## **CONCLUSION**

Between the years 2021 and 2023, the technology sector on the Indonesian Stock Exchange (IDX) was subjected to a stock price crash risk analysis. This analysis was carried out on technological companies. In the study, the researchers looked into how factors such as ownership structure, debt maturity, and investor sentiment influence the likelihood of a stock price crash. Despite the fact that ownership structure, particularly management, institutional, and public ownership, does not significantly increase the probability of a stock price crash, the data indicate that debt maturity and investor attitude have significant effects. In particular, it was discovered that a shorter debt maturity and a negative market attitude considerably enhance the probability of stock price crashes, but a longer debt maturity minimises the risk of such crashes occurring. The findings of the study that are most compelling imply that debt maturity is an essential factor in reducing the likelihood of a stock price crash. When it comes to managing financial stress, businesses that have longer debt maturities are more equipped, which lowers the risk of a crash occurring suddenly. Additionally, the importance of the psychological components of market activity is highlighted by the negative association that exists between investor emotion and the chance of a drop in stock prices. Technology firms, regardless of whether or not they have a high level of short-term debt, should be more prudent in managing their financial conditions, particularly their short-term debt, in order to ensure that the value of the company continues to be high. This is especially important if the company wants to keep its stock value stable and avoid a crash. Because if the entire short-term debt of the firm is relatively high, or even near to or even above the whole assets of the company, it can directly risk negative sentiment, which can cause the stock price to collapse, and the danger of a stock price crash is pretty high. A greater degree of caution ought to be exercised by investors when selecting companies in which to invest, particularly in businesses whose financial situation is deteriorating or that have debt-related ratios that exceed the limitations that are considered to be fair.

The most important contribution that this study makes is the development of literature concerning the possibility of a crash in stock prices in emerging countries, particularly in the technology sector in Indonesia. This study contributes to the strengthening of the theory of market behaviour that places an emphasis on the role that sentiment plays in the dynamics of stock prices. This is accomplished by integrating investor sentiment as an independent and moderating variable, as well as debt maturity and ownership structure as independent factors. These findings also cover a gap in empirical research, which rarely investigates the



interplay between ownership, debt, and investor sentiment simultaneously in emerging markets. This gap is filled by these findings.

There are certain drawbacks to this study, such as the fact that it covers a relatively short period of time (2020-2022), which includes the COVID-19 pandemic phase. As a result, the results may be affected by substantial market volatility. In addition, the results are not applicable to other sectors or nations because they were primarily focused on technology companies in Indonesia. As a result, it is recommended that more research be done in order to incorporate additional variables, such as corporate governance, market liquidity, or macroeconomic considerations. Deepening the analysis can also be accomplished through the use of alternative methodologies such as machine learning models or panel data. Furthermore, the incorporation of samples from other developing nations or from a variety of economic sectors can result in research that is both more comprehensive and more accurate.

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