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Financial Distress, Earnings Management, and Leverage Effect on Firm Value with Firm Size as a Moderation Variable

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ABSTRACT
The study is aimed to analyze whether financial distress, earnings management, and leverage affects a firm value with firm size as a moderation variable. The method used in this study is multiple linear analysis. Samples engaged 144 public companies in manufacturing sectors listed in Indonesia Stock Exchange (*Bursa Efek Indonesia*) period 2017-2021. The result of the research revealed that earnings management positively affected firm value, firm size strengthened the relationship between financial distress with firm value, and firm size strengthened the relationship between earnings management and firm value. The study implies that companies can manage their resources and provide project financial statements based on applicable accounting standards to increase firm value. Furthermore, investors and creditors can consider the prospect of business and future projections of the issuer's fundamentals.

INTRODUCTION

In running a business, the company cannot avoid risks that possibly affect the company's performance. The factors of internal and external threats could significantly impact the company's performance. -One of the risks faced by a company in financial distress. Financial distress is defined as the situation when a company conducts a strenuous effort to obtain profit to fulfill total financial liabilities (Julasaria & Mandal, 2022). Financial distress conditions include increasing costs accompanied by illiquid assets and unfavorable global economic conditions for companies.

One of the mechanisms for financial statements to produce positive performance is by practicing earnings management. Earnings management is an intervention of management in the process of financial statements to fulfill self-interest objectives (category) of management (Siallagan, 2016). Earnings management strategy can improve firm value and prosperity of management and employees. The strategy is defined as efforts to create better firm value (Hernawati et al., 2021).

Manufacturing is one of the business sectors that needs colossal capital to lead business activities. The related money is used for working capital, capital expenditure, investment, and refinancing of maturing corporate debt. Hence, management searches for a fund from external sources such as banking, non-bank financial institutions, and the issuance of debt securities. Leverage is defined as a company's core competency level to utilize assets that come from debt and the allocation of stocks to actualize the company's goal to optimize sources provided by stakeholders (Malau, 2020c). If one company's financial performance improves, it will hopefully enhance the firm's value (Situmorang et al., 2021).

Besides obtaining profit, increasing a firm value becomes the top prospect to achieve a company. Management of a company's resources is measured through stock price and indicated as the firm value (Situmorang et al., 2021). The firm value will increase if the informative profit of a company. A better informative profit of a company relates to its company's prudence in managing its activities (Malau, 2020).

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An increase in asset value is a signal for firm size. If the firm size increases, the profit and dividend of the company expectedly will also increase. The firm size is based on asset total, arguing that actual policy can improve a company's asset value (Malau, 2020). Ikatan Akuntan Indonesia (2022) also stated that information regarding the performance of financial entities is reflected by accrual accounting. The cost of preparing the financial statements reflects the size of the company. Large companies are considered to have the ability to defray services of financial statements at high prices (Malau, 2020).

Karina and Soenarno (2022) research prove that financial distress affects earnings management. Investors and creditors must be aware of reported profits because companies tend to cover up their actual financial condition. Liem et al., (2022) state that the more outstanding the total debt, managers tend to manage earnings through real activities. A researcher, Awuye & Aubert (2022) states that companies bound by financial covenants are urged companies to carry out earnings management through Real Earnings Management (REM). Researcher Mendoza et al., (2020) state that managers manage earnings to avoid default on debt contracts. Researcher Surjandari et al., (2021) state that the leverage ratio affects earnings management. The proportion of a company's leverage reflects the strength of creditor control over the company. Researcher Kliestik et al., (2021) state that each country's cultural, social, legal, and economic conditions affect earnings management. Companies with sophisticated investors can effectively reduce earnings management (Yan, 2021). Researchers Malau & Murwaningsari (2018) state that the higher the company's leverage, the higher the potential for transferring assets from shareholders to creditors. Companies that depend on external funding sources are considered unfavorable, potentially reducing company profits (Margono & Gantino, 2021).

The novelty of this study is that researchers examine the effect of financial distress, earnings management, and leverage on firm value with firm size as a moderating variable in manufacturing companies listed on the Indonesia Stock Exchange for the 2017-2021 period. The purpose of this research are to analyze; (1) financial distress, (2) earnings management, (3) leverage affect firm value. In addition, this study also explores whether, (4) firm size strengthens/ weakens the relationship between financial distress and firm value, (5) firm size strengthens/ weakens the relationship between earnings management and firm value, and (6) firm size strengthens/ weakens the relationship between leverage and firm value.

This research's contributions include theoretical, practical, and policy contributions. This study confirms whether firm value can be influenced by the independent variables being studied. Theoretical contributions to this study include (1) the effect of financial distress, earnings management, and leverage on firm value and (2) firm size, which strengthens/ weakens the effect of financial distress, earnings management, and leverage on firm value. The practical contribution of this research is that companies can manage their resources and present and project financial reports by following applicable accounting standards, which aim to increase company value. The policy contribution of this research is to examine company value comprehensively, and it is hoped that the results of this research can become input for the Otoritas Jasa Keuangan in terms of increasing the value of listed companies in the manufacturing sector.

The Grand Theory used in this research is agency theory (Jensen & Meckling, 1976). In agency theory, it is stated that there is a contract between the authorizing parties (principal) to the party who obtains the authority (agent) to undertake something associated with the shareholders' interests by delegating several decision-making authorities to the agent (Jensen & Meckling, 1976). This agency theory is implemented in the relationship between shareholders and managers. The Middle Theory used in this study is Signaling Theory (Scott, 2015). Information published by management will enhance the company's reputation. When the data is announced and all market players have received the information, hence, they will first interpret and analyze related information as a good signal (good news) or bad signal (bad news) (Scott, 2015).

Financial Distress and Firm Value

A company that experiences failure is in an unpredictable financial position. However, predicted financial distress before bankruptcy occurs through the z-score calculation method (Altman, 1968). If a company fails, it inclines to manipulate financial statements so that the integrity of its financial information decreases (Malau & Murwaningsari, 2018). This matter indicates that the company will make a strenuous effort to manipulate financial statements so that the company's sustainability will decrease (Malau, 2018). A company experiencing financial distress tends to carry out long-term financial restructuring through business and operational

transformation (Akbar et al., 2022). The higher z-score, accordingly, the lower risk of financial distress occurs. The low risk of financial distress can increase the stakeholders' trust, impacting company value (Younas et al., 2021). Based on this explanation, the research hypothesis is:

H_1: Financial distress positively affects firm value.

Earnings Management and Firm Value

Earnings management is a manager's choice in applying accounting policies through concrete actions that can affect earnings to achieve the goal of profit (Scott, 2015). The management's motives for managing earnings are divided into two: achieving profitability ratios and increasing the predictability of reported earnings (Muchlis, 2006). Burgstahler and Dichev (1997) in Muchlis' research (2006), revealed that earnings management aims to avoid declining earnings statements or losses. Types of earnings management carried out by managers include taking a bath, income minimization, income maximization, and income (Scott, 2015). The company will try to manipulate financial statements so that the company's sustainability will decrease (Malau, 2018). The company tends to undertake earnings management practices through real activities to maintain the manager's position to control the company (Mendoza et al. 2021). Mendoza et al., (2020) and Ntokozi et al., (2022) state that earnings management aims to avoid default on debt contracts. An earnings strategy can increase the firm value and the prosperity of management and employees. This strategy creates better firm value (Hernawati et al., 2021). Based on the related explanation, the research hypothesis is as follows:

H_2 A: Earnings management (EM1) positively affects firm value

H_2 B: Earnings management (EM2) positively affects firm value

Leverage and Firm Value

Leverage is a comparison between debt and company assets. The higher level of a company's leverage, thus the higher potential for transferring assets from shareholders to creditors (Malau & Murwaningsari, 2018). The purpose of assets is to generate profits for the company. Meanwhile, the goal of debt is to pay out operational, investment, and expansion activities costs (Malau, 2020). The more aggressive the company's expansion strategy will increase the firm value (Hsiao & Chen, 2022). The company can be indicated as bankrupt when the total debt is greater than the total assets (Margono & Gantino, 2021). If the level of the leverage ratio continues to increase, the company's operating profit tends to decrease in the long term (Yinusa et al., 2021; Diantimala et al., 2021; and Kijkasiwat et al., 2022). The higher the company's leverage ratio, the higher the interest cost arises from acquiring debt. High-interest expenses will reduce the company's profit. High-interest expenses will reduce the company's profit. It can affect the firm value (Ichsani & Susanti, 2019). Based on this explanation, the research hypothesis is as follows:

H_3: Leverage has a positive effect on firm value.

Firm Size and Firm Value

Firm size is based on total assets, and it is argued that accrual policies can increase the value of company assets (Malau, 2020). The large company quickly gets access to funding from the capital market (Jannah & Sartika, 2022). For large companies, financial distress significantly results in significant losses for investors, creditors, and stakeholders, impacting firm value (Arora & Saurabh, 2022). Hanafi et al. (2021) state that management must apply the precautionary principle in managing finances because it will impact the risk of financial distress. Creditors and investors must make forecasts to measure the level of risk of financial distress. This will have an impact on the firm value. Based on the related explanation, the research hypothesis is as follows:

H_4: Firm size strengthens the relationship between financial distress and firm value.

Firm size is based on total assets, and it is argued that accrual policies can increase the company asset's value (Malau, 2020). A large company utilizes financing/ debt facilities for business expansion or refinancing long-term liabilities. This fact encourages managers to develop earnings management practices to avoid default on debt contracts (Mendoza et al., 2020). Research by Karina & Soenarno (2022) states that the

company manages earnings to cover its actual financial conditions. Researcher Awuye & Aubert (2022) says that companies bound by financial covenants urge companies to carry out earnings management through Real Earnings Management (REM). Large companies tend to carry out earnings management to achieve earnings reporting objectives (Michalkova et al., 2022). It will have an impact on the firm. Based on the related explanation, the research hypothesis is as follows:

H_5 A: Firm size strengthens the relationship between earnings management (EM1) and firm value.

H_5 B: Firm size strengthens the relationship between earnings management (EM2) and firm value.

Firm size is based on total assets, and it is argued that accrual policies can increase the company asset's value (Malau, 2020). A company with significant nominal assets can optimize the resources management provided by shareholders (Ichsani & Susanti, 2019). A large company can quickly get access to funding from the capital market (Jannah & Sartika, 2022). One of the criteria for providing loan facilities from banks or non-bank financial institutions is the total assets owned by the prospective debtor (Roy & Bandopadhyay, 2022). Based on this explanation, the research hypothesis is as follows:

H_6: Firm size strengthens the relationship between leverage and firm value.

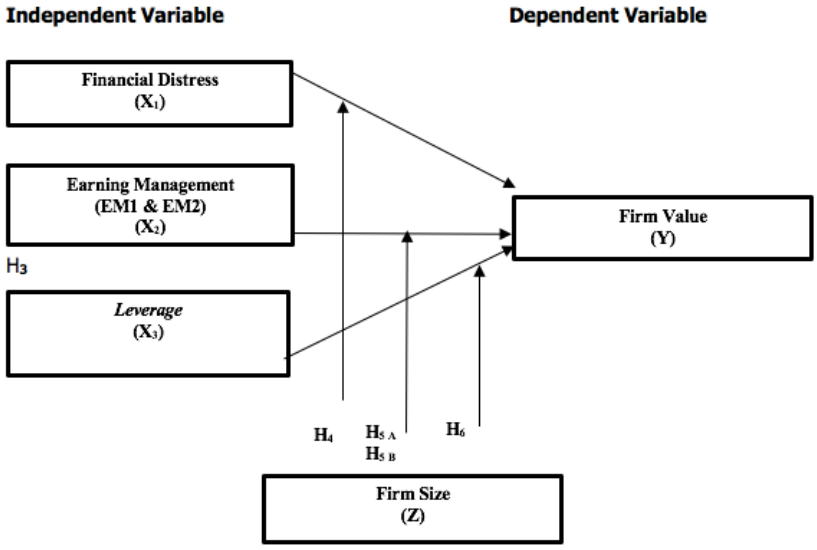

Figure 1. Conceptual Framework

METHODS

Research Design

This study aims to determine the extent to which (1) financial distress, (2) earnings management, and (3) leverage affect firm value. In addition, this study also analyzes whether (4) Firm size strengthens/weakens the relationship between financial distress and firm value, (5) Firm size strengthens/weakens the relationship between earnings management and firm value, and (6) Firm size strengthens/weakens the relationship between leverage and firm value. This research is a cross-sectional study doing a research period of the last five years,2017-2021. The analysis technique in this study is multiple linear analysis using Eviews 9 software.

Data and Samples

This study used secondary data. The secondary data used in this study were the financial statements of public companies in the manufacturing sectors listed on the Indonesia Stock Exchange during 2017-2021. Indonesia Stock Exchange uses electronic media to communicate movement data of stock prices to the public. One of the stock price movement indicators is the stock price index. The stock price index is an indicator that shows the direction of stock prices on the market in a period (Infovesta, 2022). The samples used in this study used a purposive sampling method, namely determining the examples using the criteria set by the researcher (Sekaran & Bougie, 2017). In this study, researchers used the following criteria:

1) Manufacturing sector public company listed on the Indonesia Stock Exchange.
2) The manufacturing sector is the energy sector, basic materials, industrials, consumer non-cyclical, consumer cyclical, healthcare, technology, and infrastructures.
3) All companies operated commercially during the study period.
4) Never delisted from the Indonesia Stock Exchange.
5) Do not carry out a business merger.
6) Industry status remained the same during the study period.
7) The financial statements were audited by a Public Accounting Firm during the study period and received an unqualified opinion.
8) The financial statements of publicly traded companies in the manufacturing sector are denominated in Rupiah and United States Dollars. Presentation of financial statements using United States Dollars converted into Rupiah at the Bank Indonesia moderate rate during the study period.
9) Availability of Annual Reports during the study period 2017-2021.

Based on the Industry Classification of Listed Companies PT Bursa Efek Indonesia, as of January 19, 2021, the total number of listed companies in the manufacturing sector is745. However, based on the criteria above, there was a reduction in the sample of 591 companies due to the classification of business types adjusted for the research variables, the unavailability of annual reports during the study period, and the website not being accessible, so that the final sample of this study were 144 companies.

Variables and Measurements

Dependent Variable

The Firm Value

The dependent variable in this study is firm value. Increasing the firm value is the main prospect the company wants to achieve. The company's resources carried out by management are measured through stock prices, which is called firm value (Situmorang et al., 2021). The benchmark of value in the stock market can be influenced by investment opportunities so that the company will grow in the future. This situation signals to increase in the firm value (Situmorang et al., 2021). The measure that describes the stock price against its book value is called Price to Book Value (PBV). The amount of market trust in the company attracts shareholders (investors) to buy stocks it resultingin increasesin stock prices when the PBV ratio is more significant (Julianti, 2015) in research Situmorang et al., (2021). In conducting stock valuation, one of the methods used is the multiple price model, which is based on prevailing market prices, then compared with specific values such as benchmarks, industry averages, multiple competing companies, and others. The formula often used is PBV, which is the stock price divided by the book equity value per stock in a particular year (The Indonesia Capital Market Institute, 2021). The formula for calculating PBV is based on literature Situmorang et al.,(2021), Handayati et al.,(2022), and The Indonesia Capital Market Institute(2021) as follows:

$$\text{Price to Book Value (PBV)} = \frac{\text{Price per share}}{\text{Book value per share}} \quad \text{.. (1)}$$

Independent Variable

Financial Distress

The first independent variable is financial distress. Financial distress is measured using the theory of financial distressprediction or corporate bankruptcy developed by Altman (1968). The Altman Z-Score method has been modified several times to adapt to the development of a company's industry, and it is proven accurate for evaluating a company's financial condition (Almamy et al., 2015; Bhandari & Lyer 2013; Chouchan et al., 2014; Mizan & Hossain 2014) in Akbar et al. (2022). The latest modified Altman Z-Score model can be applied to calculate the default potential for capital markets such as bonds (Infovesta, 2022). The Z-Score calculation variables include:

1) The Liquidity ratio (X1) is the ratio between net working capital (current assets - current liabilities) and total assets' book value.
2) The Continuity ratio (X2) is the ratio between retained earnings and total assets' book value.

3) The Profitability ratio (X3) is the ratio between operating profits and total assets' book value.
4) The Solvability ratio (X4) is the ratio between the book value of total equity to the book value of total liabilities.
5) Activity Ratio (X5) is the total net sales ratio to the total assets' book value.

The formula for calculating the Modified Z-Score is based on the literature of Malau (2017), Malau (2018), Malau & Murwaningsari (2018), Akbar et al., (2022), Liem et al., (2022), Julasaria & Mandal (2022), and Penilai Harga Efek Indonesia (2022)are as follows:

$$Z'' = 1{,}2\ (X_1) + 1{,}4\ (X_2) + 3{,}3\ (X_3) + 0{,}6\ (X_4) + 0{,}9\ (X_5) \quad \ldots\ldots\ldots\ldots\ (2)$$

- If the Z-Score is lower than 1,8, the company is in a zone of "financial distress/bankruptcy."
- If the Z-Score is between 1,81 – 2,99, the company is in the "caution" or "attention" zone.
- If the Z-Score is more than 2,99, the company is in the "safe" zone.

Earning Management

The second independent variable is earnings management through accruals earnings management. This variable is measured using two manipulation models of financial statements, including discretionary accruals proposed by Dechow et al. (1995) and Kothari et al. (2005) in the study conducted by Mendoza et al. (2020). The first formula of earnings management (EM1) used in this study is as follows:

$$\frac{TA_{it}}{TAS_{it-1}} = \beta_0 + \beta_1\left[\frac{1}{TAS_{it-1}}\right] + \beta_2\left[\frac{\Delta REV_{it} - \Delta REC_{it}}{TAS_{it-1}}\right] + \beta_3\left[\frac{PPE_{it}}{TAS_{it-1}}\right] + \varepsilon_{it} \quad \ldots\ldots\ldots\ldots\ldots(3)$$

TA_{it} = Total accruals of a company in period t obtained from Operating Income minus Operational Cash Flow
TAS_{it-1} = Total assets of a company in period t-1
ΔREV_{it} = Change in operating income of a company in period t with period t-1
$\Delta\ REC_{it}$ = Change in trade receivables of a company in period t with period t-1
PPE_{it} = Properties, plants, and equipment of a company in period t
ε_{it} = Error

Meanwhile, the formula proposed by Kothari et al. (2005) in the study conducted by Mendoza et al. (2020) uses a modified Jones (1991) to measure earnings management. The second formula of earnings management (EM2) used in this study is as follows:

$$\frac{TA_{it}}{TAS_{it-1}} = \beta_0 + \beta_1\left[\frac{1}{TAS_{it-1}}\right] + \beta_2\,\Delta\left[\frac{REV_{it} - \Delta\ REC_{it}}{TAS_{it-1}}\right] + \beta_3\left[\frac{PPE_{it}}{TAS_{it-1}}\right] + \beta_4\,ROA_{it} + \varepsilon_{it} \quad \ldots\ldots(4)$$

TA_{it} = Total accruals of a companyin period t obtained from Operating Income minus Operational Cash Flow
TAS_{it-1} = Total assets of a company in period t-1
$\Delta REV_{it.}$ = Change in operating income of a company in period t with period t-1
$\Delta\ REC_{it}$ = Change in trade receivables of a company in period t with period t-1
PPE_{it} = Properties, plants, and equipment of a company in period t
ROA_{it} = Return on Assets of a companyin period t obtained from Net Profit divided by Total Assets
ε_{it} = Error

The formulas shown in numbers (3) and (4) have been carried out through empirical studies by many researchers such as Garcia et al. (2005), Sáenz-González & Garcia-Meca (2014), Saona & Muro (2018) in the study conducted by Mendoza et al. (2020).

Leverage

The third independent variable is leverage. The company's leverage is measured using the formula for the ratio of the company's liabilities to the company's assets. This formula is in accordance with studies conducted by Malau & Murwaningsari (2018), Mendoza et al., (2020), Musa et al., (2022), Sajnóg & Pawełczyk (2022), and Awuye & Aubert (2022). The leverage ratio indicates a company's ability to fulfill its long-term liabilities (CSA, 2021).

$$Leverage = \frac{\text{Total Liabilities}_{it}}{\text{Total Assets}_{it}} \quad \ldots\ldots (5)$$

Moderation Variable

Firm Size

The moderating variable used in this study is firm size. Firm size is measured using the logarithm of total assets listed in the financial statements. This formula is by following research conducted by Singhvi & Desai (1971); Cooke (1992); Alsaeed (2006); Francis et al. (2004); Wang (2013) in researchby Malau (2020), Mendoza et al. (2020), Fan et al. (2022), Sajnóg & Pawełczyk (2022), and Diantimala et al. (2021). In addition, Jogiyanto (2000) and Asnawi (2005) in Jannah &Sartika (2022) also stated that firm size could be assessed using the logarithm of total assetsbecause total assets have a more excellent value when compared to other financial instruments.

$$Firm\ Size = Log\,(Total\ Assets) \quad \ldots\ldots (6)$$

RESULTS

Table 1. Selection Test Results of Estimation Model

Chow Test		Hausman Test		Decision
Cross-section Chi-square	**Probability Chi-square**	**Cross-section random**	**Probability Chi-square**	
899.142727	0.0000	16.552687	0.0477	FEM

Source: Processed Data, 2022 (Eviews 9.0)

There were several tests in choosing the most appropriate model to estimate the model in this study. First, the researchers undertook the test using the Chow Test, namely the null hypothesis (H0) was a Common Effect model which obtained a probability value of Chi-Square less than 0.05. Hence, the null hypothesis (H0) was rejected, so a better model was the estimation model with the Individual Effect represented by the Fixed Effect Model. Therefore, the next test was to compare Fixed Effects with Random Effects, and this test used the Hausman Test. Based on the results of the Hausman Test, the null hypothesis (H0) was a Random Effect model which was obtained where the probability value of Chi-Square is less than 0.05 so that the null hypothesis (H_0) was rejected, thus the better model used was the Fixed Effect estimation.

Table 2. Estimation Results of Hypothesis Test

$PBV_{it} = \alpha + \beta_1 FD_{it} + + \beta_2 EM1_{it} + \beta_3 EM2_{it} + + \beta_4 LEV_{it} + \beta_5 SIZE_{it} + \varepsilon_{it}$						
Variabel	**Teori**	**Coef.**	**Std. Error**	**t-Statistic**	**Prob. (1 Tail)**	**Keputusan**
C		13.80976	3.232110	4.272677	0.0000***	
FD	+	-1.390226	0.438322	-3.171703	0.0016***	Ha rejected
EM1	+	-8.083904	3.621467	-2.232218	0.0260**	Ha rejected
EM2	+	**23.39949**	**6.352330**	**3.683607**	**0.0003*** **	**Ha accepted**

$PBV_{it} = \alpha + \beta_1 FD_{it} + + \beta_2 EM1_{it} + \beta_3 EM2_{it} + + \beta_4 LEV_{it} + \beta_5 SIZE_{it} + \varepsilon_{it}$						
Variabel	**Teori**	**Coef.**	**Std. Error**	**t-Statistic**	**Prob. (1 Tail)**	**Keputusan**
LEV	+	-6.815695	5.135359	-1.327209	0.1850	Ha rejected
SIZE	+	-0.423703	0.111472	-3.800985	0.0002***	Ha rejected
FD*SIZE	+	**0.047395**	**0.014693**	**3.225624**	**0.0013*** **	**Ha accepted**
EM1*SIZE	+	**0.330475**	**0.125204**	**2.639504**	**0.0085*** **	**Ha accepted**
EM2*SIZE	+	-0.903617	0.229014	-3.945692	0.0001***	Ha rejected
LEV*SIZE	+	0.238595	0.187117	1.275111	0.2028	Ha rejected
Goodness of Fit						
R^2		0.728443				
Adj R^2		**0.655645**				
F-statistik		10.00631				
Prob F-stat		**0.000000*** **				

Source: Processed Data, 2022 (Eviews 9.0)

Information: *** Significance on the levels 1%; ** Significance on the levels 5%; * Significance on the levels 10%

Test Models

Coefficient of Determination (Adj. R^2)

The test results of the fit model resulted in Adj. Values R^2 at 0.655645. It meant that thevariation of the independent variables included Financial Distress (FD), Earnings Management (EM1 and EM2), Leverage (LEV), and Firm Size (SIZE) as moderating variables. These moderating variables could explain the variation of the dependent variable, namely Firm Value (PBV) of 65.56%. In comparison, the remaining 34.44% was a variation of other independent variables affecting Firm Value (PBV), but they were not included in the model.

Global Test (Test F)

The result of the global test resulted in a statistical F value of 10.00631 with a probability value of the Statistical F Test at 0.000000 <0.05 (alpha 5%), which meant that Ho was rejected, and Ha was accepted. Hence, at least one independent variable significantly affected the dependent variable. In this study, the independent variable of Earnings Management (EM2) had a significant effect on Firm Value (PBV) with a coefficient value of 23.39949 and a probability value of 0.0003 <0.05 (alpha 5%), which meant that Ha was accepted.

Hypothesis Test

H_1: Financial distress has a positive effect on firm value

Based on Table 2, it was known that the coefficient of Financial Distress (FD) was -1.390226, which meant that if Financial Distress (FD) increased by 1 unit, thus the average Firm Value (PBV) decreased by -1.390226. The test results showed that the generated coefficient sign was not by the hypothesis proposed in this study. In theory, Financial Distress (FD) positively affects Firm Value (PBV). Therefore, the hypothesis test was not continued, and it rejected H_1. Statistically, there was no positive effect of Financial Distress (FD) on Firm Value (PBV).

H_2 A: Earnings management (EM1) has a positive effect on firm value

Based on Table 2, it was known that the Earnings Management coefficient (EM1) was -8.083904, which meant that if Earnings Management (EM1) increased by 1 unit, thus the average of Firm Value (PBV) decreased

by -8.083904 units. The test results showed that the generated coefficient sign was not by the hypothesis proposed in this study. In theory, earnings management (EM1) has positively affected Firm Value (PBV). Therefore, the hypothesis test was not continued and rejected H_2A. It was concluded. Statistically, there was no positive effect of Earnings Management (EM1) on Firm Value (PBV).

H_2 B: Earnings management (EM2) has a positive effect on firm value

Based on Table 2, it was known that the Earnings Management coefficient (EM2) was 23.39949, which meant that if Earnings Management (EM2) increased by 1 unit, thus the average Firm Value (PBV) decreased by 23.39949 units. The test results showed that the generated coefficient sign was by the hypothesis proposed in this study. In theory, Earnings Management (EM2) positively affects Firm Value (PBV). Therefore, the hypothesis test was continued again, and the test results showed a p-value of 0.0003 <0.05 (alpha 5%). Thus, it accepted H_2 B, and it was concluded. Statistically, there was a positive effect on Earnings Management (EM2) on Firm Value (PBV).

H_3: Leverage has a positive effect on firm value

Based on Table 2, it was known that the Leverage coefficient (LEV) is -6.815695, which meant that if the leverage (LEV) increased by 1 unit, the average Firm Value (PBV) decreased by -6.815695 units. The test results showed that the generated coefficient sign was not by the hypothesis proposed in this study. In leverage theory (LEV), it positively affected Firm Value (PBV). Therefore, the hypothesis test was not continued, and it rejected H_3. Statistically, there was no positive effect on Leverage (LEV) to Firm Value (PBV).

H_4: Firm size strengthens the relationship between financial distress and firm value

Based on Table 2, it was known that the coefficient value of Financial Distress (FD) was 0.047395, which meant that if Financial Distress (FD) increased by 1 unit, the average of Firm Value (PBV) increased by 0.047395 units moderated by Firm Size (SIZE). The test results showed that the generated coefficient sign was by the hypothesis proposed in this study, where Firm Size theory (SIZE) strengthened the relationship between Financial Distress (FD) and Firm Value (PBV). Therefore, the hypothesis test was resumed. The test results showed that the p-value is 0.0013/2 < 0.05 = 0.00065 (alpha 5%), then it accepted H_4, and it was concluded statistically, Firm Size strengthened the relationship between Financial Distressand Firm Value.

H_5 A: Firm size strengthens the relationship between earnings management (EM1) and firm value

Based on Table 2, it was known that the coefficient value of Earnings Management (EM1) was 0.330475, which meant that if Earnings Management (EM1) increased by 1 unit, the average of Firm Value (PBV) increased by 0.330475 units moderated by Firm Size (SIZE). The test results showed that the generated coefficient sign was by the hypothesis proposed in this study, where Firm Size theory (SIZE) strengthened the relationship between 14 Earnings Management (EM1) and Firm Value (PBV). Therefore, the hypothesis test was resumed. The test results showed that the p-value was 0.0085/2 <0.05 = 0.00425 (alpha 5%), thus it accepted H_5 A, and it was statistically concluded, Firm Size (SIZE) strengthened the relationship between Earnings Management (EM1) and Firm Value (PBV).

H_5 B: Firm size strengthens the relationship between earnings management (EM2) and firm value

Based on Table 2, it was known that the coefficient value of Earnings Management (EM2) was -0.903617, which meant that if Earnings Management (EM2) increased by 1 unit, the average of Firm Value (PBV) increased by -0.903617 units moderated by Firm Size (SIZE). The test results show that the generated coefficient sign was not by the hypothesis proposed in this study, where Firm Size theory (SIZE) strengthened the relationship between Earnings Management (EM2) and Firm Value (PBV). Therefore, the hypothesis test was not continued and rejected H_5 B. It was concluded. Statistically, Firm Size (SIZE) weakened the relationship between Earnings Management (EM2) and Firm Value (PBV).

H6: Firm size strengthens the relationship between leverage and firm value

Based on Table 2, it was known that the coefficient value of Leverage (LEV) was 0.238595, which meant that if Leverage (LEV) increased by 1 unit, the average Firm Value (PBV) increased by 0.238595 units moderated by Firm Size (SIZE). The test results showed that the generated coefficient sign was by the hypothesis proposed in this study, where Firm Size theory (SIZE) strengthened the relationship between Leverage (LEV) and Firm Value (PBV). Therefore, the hypothesis test was resumed. The test results showed that the p-value was 0.2028/2 > 0.05 = 0.1014 (alpha 5%). Thus, it rejected H_6, and it was concluded statistically, Firm Size (SIZE) strengthened the relationship between Leverage (LEV) and Firm Value (PBV), but it was not significant with a value of 0.1014 > 0.05 (alpha 5%).

CONCLUSION

This study analyzes the effect of Financial Distress (FD), Earnings Management (EM1 and EM2), and Leverage (LEV) on Firm Value (PBV) with Firm Size (SIZE) as a moderating variable. This study used 144 samples of manufacturing sector companies listed on the Indonesia Stock Exchange (IDX) for the 2017-2021 period. This study provides theoretical implications that Earnings Management (EM2) has a positive effect on Firm Value (PBV), Firm Size (SIZE) strengthens the relationship between Financial Distress (FD) and Firm Value (PBV), and Firm Size (SIZE) strengthens the relationship between Management Profit (EM1) and Enterprise Value (PBV). The managerial implication in this study is that companies can manage their resources, present and project financial reports by applicable accounting standards, which aim to increase firm value.

The results of this study prove that companies tend to carry out earnings management to cover their actual financial conditions, especially companies bound by financial covenants. Earnings management practices are carried out to avoid default on debt agreements. Research conducted by Karina & Soenarno (2022), Awuye & Aubert (2022), Liem et al., (2022), and Mendoza et al., (2020).Earnings management strategy is considered an effort to create better corporate value, according to research conducted by Hernawati et al., (2021). On the other hand, companies with significant nominal assets have an advantage in obtaining access to external funding. For large companies, financial distress results in significant losses, especially for investors, creditors, and stakeholders. This is by research conducted by Jannah & Sartika (2022) and Arora & Saurabh (2022). The results of this study also support the agency theory carried out by Jensen & Meckling (1976), which that contracts between parties who give authority (principals) to parties who obtain authority (agents) by delegating decision-making authority to agents, one of which is the policy of obtaining financing/ debt. So management tends to practice earnings management which aims to achieve profitability ratios and increase the predictability of reported earnings. In addition, this study supports the signal theory that was carried out (Scott, 2015) that (financial) information published by company management will improve the company's reputation, which is reflected in the company's value.

The limitations of this study are helpful for future researchers. The limitation in question is that the results of this study can only be generalized to some countries. The results of this study only apply to publicly traded manufacturing sector companies listed on the Indonesia Stock Exchange (IDX) for the 2017-2021 period. Suggestions for further research are as follows: (1) expanding the sample of companies based on industry categories. This study only uses companies in the manufacturing sector. Future research can use a sample of companies for all industry categories, except for the financial industry, such as banking and non-bank financial institutions, because of their different characteristics. (2) considering other new measurements as moderating variables and control variables such as information asymmetry, profit transparency, firm performance, liquidity, and revenue growth, because this study only uses firm size as a moderating variable. (3) increasing the observation period and research samples from ASEAN countries because this research is limited to Indonesia. Future research can add ASEAN countries with Gross Domestic Product (GDP) data as an indicator for determining the size of a country's economy that can be used as a research sample. Using samples from other ASEAN countries, further research is expected to be more comprehensive.

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