

Fundamental aspects of leverage, profitability and financial distress as mediating variables that influence firm value

Sri Hermuningsih^{1*}, Hadri Kusuma², Teguh Erawati³, Anisya Dewi Rahmawati⁴

^{1,3,4}Faculty of Economics, Universitas Sarjanawiyata Tamansiswa, Yogyakarta, Indonesia

²Accounting Department, Universitas Islam Indonesia, Yogyakarta, Indonesia

*Corresponding author email: hermun_feust@yahoo.co.id

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ABSTRACT

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This research aims to examine how leverage and equity affect firm value and financial distress as mediating factor in listed manufacturing firms on the Indonesia Stock Exchange. Such manufacturing businesses are the research's population. The manufacturing industry is the research sample from 2011 to 2021 periods. Purposive sampling was utilized in the sampling approach, resulting in data availability from 53 firms and 583 financial statement data—a structural equation model with structural equations for hypothesis testing. The test results demonstrate that leverage affects financial distress. Financial distress is negatively impacted by profitability. Leverage and financial distress negatively affect both firm value and financial distress, acting as a mediating factor. Conversely, profitability positively affects both firm value and financial distress, functioning as a mediating factor.

Introduction

The onset of even more advanced manufacturing companies in Indonesia in relevant disciplines indicates the rapid growth of industrial companies in Indonesia, eventually leading to intense competition among manufacturing organizations. This competition compels every business to expand its performance to achieve its objectives. Major corporations that will go public must have objectives, one of which is to enhance the firm's value and increase the welfare of its shareholders (Salvatore, 2005). A rising firm's value demonstrates stability and a better image, making new investors more likely to trust and care about the company. As a result, the company's focus shifts to the interests of shareholders. The firm value reflects the well-being of its shareholders. The higher the stock value, the bigger the firm's value is, and the more affluent the owner is. One of the corporate goals is to maximize wealth, which can be accomplished by increasing the firm earnings. Therefore, one of the most important requirements for companies that go public is to achieve the maximum value of their shares (Aggarwal & Padhan, 2017; Nguyen et al., 2019). In addition, an increase in stock prices can increase the welfare of its shareholders (Ibrahim, 2020; Lestari et al., 2020; Yuniningsih et al., 2019). Previous studies looked into how equity affects economic difficulties (Fajar, 2020) and (Amna et al., 2021). Their findings indicate that equity positively affects financial distress. A high level of equity can result in a high degree of financial risk, as the company also bears a reasonably considerable interest on the loan. It demonstrates that the more outstanding the firm's debt to total assets ratio, the more profitable companies will face financial distress.

Previous researchers examined how investment coincides with financial difficulty (Amna et al., 2021; Rahma, 2020). They discovered through their research that financial distress was negatively impacted by profitability. This showcases the likelihood that a corporation would encounter financial difficulties increases directly to how much it loses. To put it another way, the possibility of an enterprise encountering financial distress rises as its capacity to create profits declines. Investors will be interested in purchasing shares of profitable companies because they exemplify the ability or propensity to expand shareholder wealth through paying dividends. In this scenario, there will be a greater demand for stocks, which will drive up the cost of the preferred equity. Earlier researchers investigated how a financial crisis affected firm value (Devinaya, 2020). The emphasis is on how financial difficulties affect corporate value due to a downside risk, which leads to lower business performance and negatively influences business value. Financial distress seems to be the phenomenon of a company's financial situation deteriorating before it declares bankruptcy or liquidates. Thus, keeping an eye on and preparing for financial distress is vital because it can affect the firm's operations. Prior studies examined how equity affected business value (Lestari et al., 2020; Linawaty & Ekadjaja, 2017; Rejeki & Haryono, 2021). Other researchers argue

that equity is detrimental to firm profitability (Novari & Lestari, 2016; Bachrudin & Ngumar, 2017). In turn, equity had no impact on a firm's profitability. Utilizing a firm's assets to boost shareholder returns is known as leverage. The source of the term loans also includes interest as costs are fixed.

In contrast, the equity ratio assesses a company's debt concerning its overall capitalization. As the ratio increases, the firm's debt burden rises. This circumstance intensifies the financial position and raises the possibility of bankruptcy. Because extending the leverage ratio will enhance financial risk and raise the cost of finance, management choices involving equity are challenging. Therefore, companies must enable to operate financial resources and generate the anticipated earnings (Al-Slehat, 2019)

Erna and Utama (2018) and Pratama et al., (2018) were previous researchers who examined the relationship between profitability and business value. They discovered through their studies that earnings would positively impact firm value, with a relatively high level of investment resulting in a higher firm value. A corporation must be profitable to maintain its revenues, resources, and valuation for an extended period. Profitability is crucial since it demonstrates a company's capacity for making money and the rate of interest that investors can expect. If a company is profitable, that indicates whether or not it will have promising prospects. A business's likelihood to continue to operate increases with earnings (Hermuningsih, 2012). A firm's governance is considered to be more effective the greater its operating profit. The greater the firm's profitability, the more investors will invest in it and the greater the firm will increase its value because of the assets of its owners.

Total assets, average total assets, total revenue, and the average level of sales are used to calculate the company size. Because the dependent variable influences the independent variable, bias must be avoided by using firm size as a control variable (Silaban et al., 2017). A control variable is an independent variable whose repercussions on a criterion variable are managed by the researcher by maintaining an unbiased impact. The impartial meaning here is that the control variable must first be evaluated for its effectiveness before the significant predictor variables will be included in the analysis. This way, when the main predictor is evaluated, researchers may determine differences in the level of direct impact on the criteria variable. Because of this, firm size is applied in this research as a control variable to decide whether to obliterate, eliminate, or preserve the firm size variable.

Manufacturing enterprises listed on the Indonesia Stock Exchange were used as research samples because they represent a wide range of sub-sectors and general market conditions. Likewise, the highest number of businesses on the list are small and medium enterprises. The description demonstrates how different influences on the company's worth will cause it to rise or fall. The firm's assets, such as securities, might be reflected in the company's value. Numerous variables influence a firm's value, including earnings, leverage, size, financial distress, etc. The firm's value can be used to characterize its current situation. Potential investors will think favorably of the business if it has a high company value, and the opposite is true. As the problem's background confirms, nobody has undertaken analogous studies on the variables that indirectly influence business value. The authors are highly motivated to research because this investigation fills the gaps of earlier studies.

Literature Review

Agency Theory

Jensen and Meckling (1976) argue that a manager and an owner enter into a contract known as agency theory. This contract requires the owner to delegate decision-making capacity to the management in order to it functions correctly. Based on this view, the manager is given the power to intervene in the owner's best interests. In this situation, managers are in charge of reporting on their accomplishments, and they frequently present financial data that demonstrates determinant performance. Nicolin and Sabeni (2013) add that agency theory intends to uphold the owner's and management's interests in a contract to prevent a situation in which there is a conflict of interest that favors one party over the other. Because owners and agents have distinct interests, Reschiwati et al. (2020) discovered that there are still frequent conflicts (agency conflicts) in practice. According to Brigham et al. (2008), interpretation of the agency problem, managers and shareholders' competing interests can lead to agency problems. For example, conflicts may result when business management has extra cash on hand but fails to use it to raise stock values. According to agency theory, the ownership structure (equity and liability) reduces conflicts between interested parties.

Trade-off Theory

The leverage exchange hypothesis, in which the corporation substitutes the initial use of taxes from funds to address issues brought on by the potential for bankruptcy, is another way to interpret the trade-off theory. According to Stewart (2001), the trade-off hypothesis contends that a corporation will only incur debt up to a certain amount, and tax breaks from more debt equal the price of financial distress (financial distress). In the trade-off theory, Scott (1997) contends that excessive debt accumulation increases the likelihood of financial distress. The cost of filing for bankruptcy rises

due to this increasing danger of financial distress, as does the amount of unwarranted debt. Businesses can continue to incur debt but must stop once the expense of bankruptcies has been reached (Umdiana & Claudia, 2020).

The leveraged trade-off hypothesis is a theory that describes how to use debt and equity (favorable corporation tax procedures) in situations whereby interest rates are high, and bankruptcy is a possibility (Brigham & Houston, 2011; Hirdinis, 2019; Brigham et al., 2008). According to the commerce theory of equity, the valuation of a leveraged firm is equal to the value of a corporation unleveraged, defined as the present value of side effects, such as reserved taxes and anticipated costs resulting from financial distress. As for this notion, a corporation can suffer financial distress if capital is provided through mounting debt. This is due to the high amounts of fixed interest paid each year without any assurance of net profitability. Taxes can be reduced by debt interest. However, debt incurs costs that lead to bankruptcy.

Signaling Theory

Signaling theory describes the practice of a corporation that provides informed facts, which are then recognized by investors (Spence, 1973). A corporation that sends out a positive signal will reduce expenses; on the other hand, a company that sends out a negative signal will result in higher costs. Businesses and individuals can utilize information, and governments to initiate decision-making processes (Connelly et al., 2011). Investing and business decision-making can both benefit from this theory. An annual financial report is the firm's primary means of communication (Karasek & Bryant, 2012). Using the notion of signals, managers can shape the organization's future and determine whether they are sufficiently motivated to assist shareholders in carrying out their duties (Bouzzine & Lueg, 2020; Kalbuana et al., 2020; Shahrabaki, 2020). Organizations use signals to acquire data that helps them understand other companies. Brigham and Houston (2008) argue that information asymmetry, a concept from the signaling theory, describes how managers receive valuable information from investors. It influences the capital structure, and managers acquire insights from data that produces trustworthy signals.

Firm Value

The stock price is correlated with firm value. The share market ratio, affected by investment options, is used to generate this ratio. Firm value is very important for an issuer because by maximizing the value of the company, it can be said that the company provides prosperity for shareholders (Brigham & Houston, 2014). High company value is a desire for company owners, because the higher the company value, the greater the welfare of shareholders will be. Firm value in this study uses the Tobin's q proxy. Tobin's q ratio is a comparison of the company's market value with its net investment. If the stock price increases, the company's market value will also increase (Fauziah, 2017).

Leverage

Utilizing assets and capital sources in businesses with fixed costs is known as leverage. These funds come from loans with an interest-only component for fixed costs, so profits can keep increasing. According to Kasmir (2019), leverage is a solvency ratio or leverage ratio is a ratio used to measure the extent to which a company's activities are financed with debt. The high leverage will increase the company's risk, but the increased risk is a reflection of a larger beta coefficient (Suripto, 2015). In this study, leverage uses the Debt to Equity Ratio (DER) proxy. The DER ratio is the ratio between the entire company's debt, both long-term debt and short-term debt, with the company's own capital. The higher the DER, the greater the total debt equity and vice versa.

Profitability

Profitability is the firm's ability to earn. Profitability is important because in general companies have the main goal of generating profits (Heriyanti, 2017). A profit using the proxy of return on assets (ROA), a ratio that measures its profit from the assets it owns. The firm's assets are used to carry out its operations. Therefore, this ratio can be a success factor for a company's advancement in the eyes of investors. According to Fahmi (2014), this ratio looks at the extent to which the investments that have been invested are able to provide a return of profits as expected. The investment is the same as the company's assets that are invested or placed. The increasing return on assets indicates that the company will get better. Conversely, if the profitability of the company is low, it is possible that the company is less effective in managing its assets to generate profits so that it can cause losses that result in negative cash flows.

Financial Distress

Financial distress evolves when a corporation endures a sustained fall in business performance for a particular amount of time before going bankrupt. Bankruptcy-affected companies can also cause liquidity issues. Furthermore, the company will file for bankruptcy if it can neither perform its responsibilities nor address them immediately. According

to Carolina et al. (2017) financial distress is a stage of decline in financial conditions that occurs before bankruptcy or liquidation. A company at a high level of sales does not necessarily have a small burden, where if the burden is large enough, it can cause only a small profit to be generated due to the company's income has been used to cover the company's expenses so that the possibility of the company experiencing financial distress will be even greater (Agustini & Wirawati, 2019). There are three causes of financial distress, namely the factor of insufficient capital or lack of capital, the amount of debt and interest expenses and suffering losses (Carolina et al., 2017).

Hypothesis Development

Effect of Leverage on financial distress

Faldiansyah et al. (2020) assert that the corporation uses leverage properties and sources of financing (sources of funds) and has fixed costs to enhance shareholder profits. This activity is financed by debt, both in the short term and the long term, and leverage is a financial ratio that determines the size of the firm's assets. A company's likelihood of encountering financial difficulties will rise if it borrows excessively to fuel its operations (Aggarwal & Padhan, 2017; Nguyen et al., 2019; Yuniningsih et al., 2019; Lucky & Michael, 2019; Agustini & Wirawati, 2019; Fajar, 2020; Ibrahim, 2020; Lestari et al., 2020; Amna et al., 2021; Wangsih et al., 2021). The easier a corporation will withstand a financial distress situation, the smaller the cost of equity will be (Finishtya, 2019). Companies that have a high leverage ratio, the higher the possibility of financial distress conditions will be (Azalia & Rahayu, 2019; Lubis & Patrisia, 2019; Fitri & Dillak, 2020; Nilasari, 2021). Total debt/ total assets and debt equity ratios have a positive effect on changes in operating profit while short and long-term debt have a negative effect on changes in operating profit for manufacturing companies (Lucky & Michael, 2019). Financial turmoil will be worse for companies with high financial equity. Because the quantity of debt is more than the overall value of the firm's assets, if a company employs an increasing amount of both short-term and long-term debt, it will not be easy to make payments at a particular moment in the future. As a result, it causes frustration to potential investors because high debt levels indicate that a firm has the cash to back up its total assets. As a result, investors can become reluctant to engage in such a company. Moleong (2018), Azalia (2019), Susanti et al. (2020), Arifin et al. (2021), and Rieska and Luh (2021) shows that financial distress is lessened through leverage.

H₁: Leverage positively affects financial distress

The profitability affects financial distress

All enterprises operationally anticipate making large profits. A profitability ratio indicates that a company manager determines whether a company is profitable. High profitability indicates a high level of efficiency, so that profits are often used as a determinant of business success within a certain period of time (Gunawan et al., 2020). In this study, profitability is approximated by ROA, a financial parameter that designates the ability of all assets to generate a profit. The greater the ROA value indicates that the better the company's financial performance, because the rate of return will be greater (Dewi et al., 2019 ; Kartika & Hasanudin, 2019 ; Sutra & Mais, 2019; Agustini & Wirawati, 2019; Andika, 2021). If the profit margin is high, there is no risk of the company going into financial difficulties. This is because a company that has a high ROA level indicates that the company is able to generate profits that can be used to finance operational activities and pay company obligations so that the company can avoid financial distress (Masdupi et al., 2018; Finishtya, 2019; Dirman, 2020; Rieska & Luh, 2021; Arifin et al., 2021). In addition, Restianti and Agustina (2018), Fajar (2020), Rahma (2020), and Amna et al. (2021) assert that a business has the potential to avoid bankruptcy by enhancing its level of profitability.

H₂: Profitability negatively affects financial distress

The financial distress affects firm value

The valuation of desired future revenues is the firm's value. As a result, the corporation manages the prospect of a business as a benchmark for its evaluation, in which the company must have benefits of business and high asset management standards. Investors typically demand a high investment return, but this is only useful when a company is not in financial trouble. Bastomi (2015), Devinaya, (2020) and Dewi et al., (2021) argue that financial difficulty lowers a firm's value. Financial distresses are caused by capital losses resulting in a decrease in financial performance which results in a decrease in company value (Murtadha et al., 2018). Capital losses result in financial distress even though they decrease the effectiveness of financial performance, which lowers the organization's value.

H₃: Financial distress negatively affects firm value.

The leverage affects firm value

Leverage serves as an indicator of the firm's inherent risks. If investors observe businesses not only with high assets but also high leverage risk, they can consider investing since substantial assets are being achieved through debt,

which raise the risk of the investment. The leverage ratio compares total debt with the accumulation if the company does not make timely debt payments. Brigham et al. (2008) highlight that within the notion of leverage trade-off, a firm's value with equity is equal to its value without leveraging, as well as the value of any adverse effects, such as tax reserves and anticipated costs associated with financial troubles. Previous researchers who examined the effect of leverage on firm value (Linawaty & Ekadjaja, 2017; Lestari et al., 2020; Rejeki & Haryono, 2021), they found that leverage has a negative effect on firm value. According to this argument, businesses that get into debt-financed contracts deliberately put themselves in a challenging financial situation. This results from the yearly fixed interest payments and the uncertainty of net revenue, impacting debt growth and decline can be seen clearly. The value of the business is impacted negatively by excessive debt.

H₄: Leverage negatively affects firm value

The profitability affects firm value

Profitability serves as a bargain for investors to purchase firm stock. Investors will first consider profitability to determine the firm's value. High profitability will make investors invest in the company and provide added value to the value of the company (Saputri & Bahri, 2021). Agus Sartono (2011) states that profit maximization is essential for increasing the firm's value, which is influenced by many profitability theories. If the level of profit in financial performance achieved by the company is getting better, it will have a positive effect on increasing the value of the company (Huda et al., 2020; Putri & Budyastuti, 2021; Sylvia, 2021). A high level of profit achievement in a company indicates the existence of dividend payments so that it affects the increase in stock prices caused by the company's positive signal on its ability. An increase in dividend payments indicates a better prospect for the company so that investors will respond positively and the value of the company will increase (Sari, 2020; Kanta et al., 2021). Several previous studies identified the effect of profitability on firm value (Erna & Sutarna, 2018; Angga Pratama et al., 2018; Sukmawardini & Ardiansari, 2018); Septiana & Gustiana, 2021). High profitability will help to persuade investors to purchase the remaining shares, and the business's value will rise as share prices rise (Angga Pratama et al., 2018; Erna & Sutarna, 2018).

H₅: Profitability positively affects firm value

The theoretical research framework is as follows:

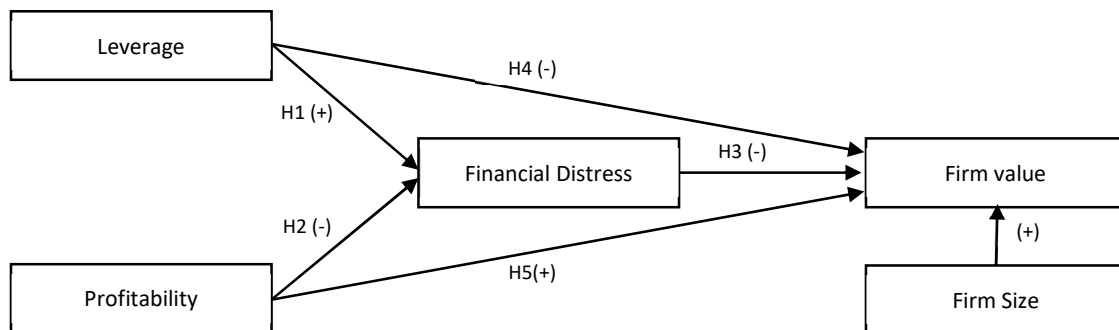


Figure 1. Research Framework

Research Method

Data and Sample

The target population for this research consists of manufacturing firms registered on the Indonesia Stock Exchange between 2011 and 2021. Therefore, purposive random sampling was applied in the sampling process. The criteria for the sampling technique includes companies engaged in manufacturing that were listed on the Indonesia Stock Exchange from 2011 to 2021, were not incurring losses, and had financial statements released from 2011 to 2021 as the information source. With these parameters, the research involved 53 companies for 11 years, processing 583 data.

Variable Definition and Measurement

Endogenous variables

Exogenous variables influence endogenous variables. This variable is also referred to as a "dependent variable." The independent variable is firm value, which reflects how investors perceive a company concerning stock prices, as the following formula elaborates (Dzahabiyya et al., 2020):

$$\text{Tobin's } Q = (\text{Price of shares} \times \text{outstanding shares} + \text{debt}) / \text{Total Assets.}$$

Exogenous Variable

Independent variables not included in a model are known as exogenous variables. Leverage and profitability were the exogenous factors used in this investigation. The ratio known as leverage calculates the proportion of a company's assets and operations supported by short- or long-term debt. The Debt to Equity Ratio (DER) ratio is used as the leverage variable, and its formula is as follows (Kasmir, 2019):

$DER = (\text{Total Debt}) / (\text{Total Capital}) \times 100\%$. The profitability variable, however, utilizes a ratio to calculate the amount of profit the company makes. This research used the ratio of return on assets (ROA) as calculated below (Manyo & Ike, 2013):

$ROA = (\text{Profit Before Tax}) / (\text{Total Assets}) \times 100\%$

Intervening Variables

Variables that indirectly affect the dependent variable are referred to as intervening variables. Financial difficulty serves as the research's intervening variable. When a business has an asset crisis and cannot meet its obligations because it lacks assets, it is said to be in financial difficulty. In this study, financial distress was measured using the Altman method as follows:

$$Z = 1,21X_1 + 1,4X_2 + 3,3X_3 + 0,064X_4 + 1,0X_5$$

Information:

Z = Financial distress

X₁ = Working Capital/Total Assets

X₂ = Retained Earnings/Total Assets

X₃ = EBIT/Total Assets

X₄ = Book Value of Equity/Book Value of Debt

X₅ = Sales / Total Assets

With the Z-score assessment criteria:

Z-score > 2.99 category very healthy company

1.81 < Z-Score < 2.99 then it is in the gray area which has the potential for financial difficulties to bankruptcy

Z-Score < 1.81 category of companies experiencing major financial difficulties and bankruptcy

The score obtained is a combination of five different elements, therefore it is very important to understand the meaning of each of these elements (Rudianto, 2013).

Analysis Technique

Secondary data is used in this quantitative research. The following technical analysis is highlighted:

1. Descriptive Statistical Analysis

An overview of the impact of leverage and profitability on business value is given using descriptive statistical analysis, with financial distress as an intermediary variable. The lowest value, maximum value, average, and standard deviation are all included in the descriptive statistical analysis.

2. Structural Equation Modeling Analysis

Analyzing the data and calculating the direct and indirect impacts, this research uses the statistical technique known as structural equation modeling (SEM). Amos Version 18.00 and SPSS Version 18 are used to process the data. The following structural equation is used to test the hypothesis:

Structural Equation 1

The effect of leverage on financial distress

$$\text{Finc Distress} = + 1 \text{ Lev} + 4 \text{Size} + \varepsilon \quad (1)$$

Information:

Find distress = Financial distress

Lev = Leverage

Size = Size

ε = Error

Structural Equation 2

The effect of profitability on financial distress

$$\text{Finc Distress} = - 2 \text{ Profit} + 4 \text{Size} + \varepsilon \quad (2)$$

Information:

Find distress = Financial distress
 Profit = Profitability
 Size = Size
 ϵ = Error

Structural Equation 3

The effect of financial distress on firm value

$$\text{Firm value} = - \text{Find distress} + 4\text{Size} + \epsilon \quad (3)$$

Information:

Firm Value = Firm value
 Find distress = Financial distress
 Size = Size
 ϵ = Error

Structural Equation 4

The effect of leverage on firm value

$$\text{Firm value} = - \text{Lev} + 4\text{Size} + \epsilon \quad (4)$$

Information:

Firm Value = Firm value
 Lev = Leverage
 Size = Size
 ϵ = Error

Structural Equation 5

The effect of Profitability on firm value

$$\text{Firm value} = + \text{Profit} + 4\text{Size} + \epsilon \quad (5)$$

Information:

Firm Value = Firm value
 Profit = Profitability
 Size = Size
 ϵ = Error

Results and Discussion

Table 1 displays the findings of each variable's descriptive statistics.

Table 1. Descriptive Statistics Test Results

	N	Minimum	Maximum	Mean	Std. Deviation
Leverage	583	0.00	7.40	1.0259	0.91472
Profitability	583	0.00	3.81	0.3266	0.26315
Financial Distress	583	0.28	10.80	1.2103	0.86788
Firm Value	583	0.04	146.38	4.3704	14.26652
Firm Size	583	17.78	33.54	27.0649	3.73969
Valid N (listwise)	583				

Source: processed data

Table 1 shows that descriptive statistics from 583 research samples provide the following information: The profitability variable ranges from 0.00 to 7.40, with an average value of 1.0259 and a standard deviation of 0.91472. Leverage variable's values range from 0.00 to 3.8, with an average of 0.3266 and a standard deviation of 0.26315. The financial distress variable ranges from 0.28 to 10.80, with an average value of 1.2103 and a standard deviation of 0.86788. The firm value variable ranges from 0.04 to 146.38, with an average value of 4.3704 and a standard deviation of 14.2662. Finally, the firm size variable ranges from 17.78 to 33.54, with an average of 27.0649, and a standard deviation of 3.73969.

Structural Equation Modeling Analysis

The goodness of Fit Model Test Results
 The table below displays the quality of fit indices.

Table 2. The Quality of Fit of Index results

Quality of Fit	Analysis Results	Cut-off Value	Note
χ ² (Chi-Square)	1.962	≤ 3.841	Fit
Probability	0.161	≥ 0.05	Fit
The Minimum Sample Discrepancy Function (CMIN/DF)	1.962	< 2.00	Fit
Goodness-of-fit (GFI)	0.999	≥ 0.90	Fit
adjusted goodness-of-fit (AGFI)	0.980	≥ 0.90	Fit
Normed-fit index (NFI)	0.991	≥ 0.90	Fit
Comparative fit index (CFI)	0.995	≥ 0.95	Fit
Tucker Lewis Index (TLI)	0.954	≥ 0.95	Fit
Root mean square error of approximation (RMSEA)	0.041	≤ 0.08	Fit

Source: Goodness of Fit calculation results

Table 2 displays the chi-square value of 1.962 with a probability of 0.161. To see the quality of the fit model, the other fit criteria, GFI, AGFI, NFI, CFI, TLI, and RMSEA, must be viewed. The fit model is in line with the recommended value, less than 2, according to the CMIN/DF value of 1.962. The GFI value is 0.999, the AGFI value is 0.980, the NFI value is 0.991, the CFI value is 0.995, the TLI value is 0.954, and the RMSEA value is 0.041 fit since it is in line with the suggested value. As a result, the model can undergo additional testing to determine its applicability because it has a high level of compatibility.

Table 3. Output Regression Weights

		Estimate	S.E.	C.R.	P
Financial_Distress	← Leverage	0.149	0.016	9.054	0.000
Financial_Distress	← Profitability	-0.296	0.035	-8.434	0.000
Firm Value	← Leverage	-0.525	0.254	-2.063	0.039
Firm Value	← Profitability	1.066	0.533	2.001	0.045
Firm Value	← Financial_Distress	-4.054	.592	-6.842	0.000
Firm Value	← Firm Size	0.181	0.073	2.483	0.013

Source: processed data

Table 4. Output Standardized Regression Weights

		Estimate
Financial_Distress	← Leverage	0.333
Financial_Distress	← Profitability	-0.310
Firm Value	← Leverage	-0.087
Firm Value	← Profitability	0.082
Firm Value	← Financial_Distress	-0.299
Firm Value	← Firm Size	0.098

Source: processed data

Based on tables 3 and 4, the results of hypothesis testing can be known through the following structural equations:

The Leverage Affects Financial Distress

Hypothesis 1 proves that equity directly correlates with financial distress, meaning that the more leverage, the more financial distress is. The following structural equations can be used to determine hypothesis testing results.

$$\begin{aligned}
 \text{Financial distress} &= 0.333 \text{ Leverage} + 0.098 \text{ Size} && (1) \\
 \text{P} & && (0.000) \quad (0.013) \\
 \text{CR} & && (9.054) \quad (2.483)
 \end{aligned}$$

Equation 1 shows that leverage has a positive and substantial impact on financial distress, which demonstrates that it does so with a significance value of $0.000 < 0.05$ for the C.R value of 9.054 and a value of 0.333 for Standardized Regression Weights. This shows a higher likelihood of future payment troubles in Indonesia since manufacturing enterprises there are more likely to employ debt that is not effectively managed. In actuality, the debt exceeds the value of the assets.

Because the debt is more than the company's assets, whether it represents short-term or long-term debt more frequently, there is a danger that it will be difficult to repay when required. Consequently, the business cannot earn enough money to pay the loan and the interest. Therefore, the company's likelihood of facing financial difficulties increases as leverage increases because the total assets are insufficient to meet obligations and cover the business's costs, and the risk of financial distress increases as the leverage ratio rises (Lienanda & Ekadjaja, 2020).

The study's findings are consistent with the trade-off theory of Brigham et al. (2008), which claim that a firm's value with equity is equal to its value without leverage, defined as the current value of side effects, such as tax reserves and anticipated costs from financial issues. Companies that enter into contracts with debt financing run the risk of running into financial trouble. The findings of this study provide factual evidence to previous studies by Amna et al., (2021); Azalia, (2019); Fajar, (2020) which demonstrate how equity favorably affects financial distress circumstances. Faldiansyah et al., (2020) add that the likelihood of the company going into financial difficulties will rise if it uses too much debt to finance itself (Wangsih et al., 2021). The faster it adheres to the business to avoid financial trouble, the smaller the financial leverage of the business. Companies with significant debt will produce higher financial distress in economically tricky circumstances (Finishtya, 2019).

When a firm borrows additional money, whether it is short-term or long-term, there is a chance that it will not pay it back when it is due or in the future since the debt is greater than the assets it has, and it will be impossible for it to make more money to cover the principal and interest. Therefore, the size coefficient value is 0.232, and the p-value is 0.000 C.R. 5.516, indicating that size is a significant control variable and provides information about the impact of equity on financial distress.

The Profitability Affects Financial Distress

Hypothesis 2 claims that profitability negatively correlates with financial distress; hence the lower the financial difficulties, the higher profitability is. The following structural equations provide a means of knowing the outcome of hypothesis testing,

$$\begin{array}{l} \text{Financial distress} = -0.310 \text{ Profitability} -0.098 \text{ Size} \\ \text{P} \quad \quad \quad (0.000) \quad \quad (0.013) \\ \text{CR} \quad \quad \quad (-8.434) \quad \quad (2.483) \end{array} \quad (2)$$

Equation 2 reveals that the Standardized Regression Weights has a value of -0.310, the C.R value is -8.434 with a significance value of $0.000 < 0.05$, and the profitability has negatively affected financial distress. This demonstrates how manufacturing companies in Indonesia can utilize their resources efficiently and effectively by lowering their costs to produce high profits and equity. Reducing costs or expenses will affect savings and the sufficiency of finances to carry out businesses or activities to prevent economic hardship. The likelihood of financial distress for a corporation is inversely correlated with profitability.

In contrast, if a firm's profitability is insufficient owing to ineffective asset management that fails to produce profits, it will suffer losses, resulting in negative cash flow, and it may eventually endure financial troubles. According to the findings, financial distress is negatively impacted by the profitability variable. The likelihood of financial trouble increases with a firm's degree of profitability since poor profitability shows that the company cannot turn cash inflows into profits (Rahma, 2020).

The results of this study are corroborated by Fajar (2020) and Fatmawati & Rihardjo (2017) which demonstrate that profitability detrimentally affects financial difficulties. Finishtya (2019) discovers that a company will find it simpler to recover from financial challenges with the larger its profitability ratio. The p-value is 0.024, and the size coefficient value is -0.095. The firm size is an essential control variable with a C.R. of 5.516, implying that profitability affects financial troubles.

The Financial Distress Affects Firm Value

Hypothesis 3 claims that financial distress positively affects firm value; hence the more financially distressed a company undergoes, the greater its value is. The following structural equations provide a means of knowing the outcome of hypothesis testing.

$$\begin{array}{l} \text{Firm value} = -0.299 \text{ Financial distress} -0.098 \text{ Size} \\ \text{P} \quad \quad \quad (0.000) \quad \quad (0.013) \\ \text{CR} \quad \quad \quad (-6.842) \quad \quad (2.483) \end{array} \quad (3)$$

Equation 3 shows that the Standardized Regression Value is -6.842, the C.R value is -6.842 with a significance value of 0.000 <0.05 indicating that financial distress negatively affects firm value. This implies that the value of Indonesian manufacturing firms will decrease. The greater the risk of financial difficulties, the better the capital structure and asset quality are managed. Financial distress is more concerned with the ratio of debt and income divided by total assets, so the firm focuses more on the prospects for economic income flow. The company is challenged to make comparisons within the context of financial distress.

Investors will lose trust in investing in a company if they see it encountering financial difficulties in its annual financial statements. As a result, the firm's value will be affected by a decline in the price of the firm's shares. Financial distress negatively affected business value (Devinaya, 2020; Linawaty & Ekadjaja, 2017; Rejeki & Haryono, 2021). These findings support the findings of this study. A p-value of 0.004 and a size coefficient of -0.086 are used. Size is a significant control variable with a C.R of -2.246, showing that the firm size can be used to predict how profitability would affect firm value.

The Leverage Affects Firm Value

Hypothesis 4 claims that leverage detrimentally affects firm value, meaning that the more leverage, the lower the firm value is. The following structural equations can be used to determine hypothesis testing results.

$$\begin{array}{l} \text{Firm value} = -0.087 \text{ leverage} -0.098 \text{ Size} \\ \text{P} \quad \quad \quad (0.009) \quad \quad (0.013) \\ \text{CR} \quad \quad \quad (-2.063) \quad \quad (2.483) \end{array} \tag{4}$$

Equation 4 demonstrates that the leverage hypothesis significantly and negatively affects firm value, with the C.R value being -2.063 and a significance value of -0.009 <0.05. The Standardized Regression Weights value is -0.087. This shows that Indonesian manufacturing enterprises run a significant risk for investors due to their difficulties in using their degree of leverage as a source of assets and cash when it is not effectively managed. Low stock prices imply low investor valuation, which lowers the company's value. We can draw the following conclusion: The business value decreases as corporate leverage increases. The results of the present study, according to Evania & Widyastuti (2018), Linawaty & Ekadjaja (2017) and Rejeki & Haryono (2021) are reflected in the fact that leverage negatively affects firm value. The size coefficient is -0.097, and the p-value is 0.025. Size is a significant control variable with a C.R. of -2.246, signifying that it may be used to predict how leverage will affect a firm's value.

The Profitability Affects Firm Value

Hypothesis 5 proposes a direct correlation between profitability and firm value, so the more profitable a company, the more valuable is. The ensuing structural equations can be used to determine hypothesis testing results,

$$\begin{array}{l} \text{Firm_value} = 0.082 \text{ Profitability} -0.013 \text{ Size} \\ \text{P} \quad \quad \quad (0.045) \quad \quad (0.004) \\ \text{CR} \quad \quad \quad (2.001) \quad \quad (2.483) \end{array} \tag{5}$$

Equation 5 displays a C.R value of 2.001 with a significance value of 0.045 <0.05 and a value of 0.082 for Standardized Regression Weights. It is confirmed that the profitability hypothesis considerably affects firm performance. This underlines that manufacturing companies in Indonesia are experiencing more substantial profitability growth, which improves investors' perceptions of the company's prospects. This is demonstrated by the business' capacity to increase profits, which will raise the stock price. Supporting the findings of this study, Erna & Sutama (2018) and Pratama et al. (2018) find that profitability significantly affects firm value. The size coefficient value is -0.123, while 0.004 is the p-value. Size is a significant control variable, as evidenced by the C.R. of -2.246, which means that the firm size indicates how profitability affects firm value.

Table 5. Result of direct and indirect impacts

Direct impact	Indirect impact
Leverage → Financial distress = 0.333	-
Profitability → Financial distress = - 0.310	-
Leverage → Firm Value = - 0.087	Leverage → Financial distress → Firm Value = 0.333 x (- 0.299) = - 0.100
Profitability → Firm Value = 0.082	Profitability → Financial distress → Firm Value = (- 0.310) x (- 0.299) = 0.093
Financial distress → Firm Value = - 0.299	-
Firm Size → Firm Value = 0.098	-

Source: Direct and indirect impacts of calculation results

Leverage Affects Firm Value and Financial Distress as an Intervening Variable

Based on Table 3, the value of the direct impact of leverage on firm value is 0.087, whereas the indirect impact of leverage on firm value due to financial distress is 0.100. Because the direct impact of leverage on firm value (0.087) is smaller than the indirect impact of leverage on firm value via financial distress, it may be stated that financial distress is an intervening variable of leverage on firm value (0.100). This conclusion demonstrates how higher debt levels used for company financing increase the likelihood of future payment issues. The danger that arises due to the company having more debt than assets put it in a precarious financial situation. Thus, leverage increases the likelihood of a company getting into financial difficulties.

The findings of this study are compatible with the trade-off theory, which holds that an increase in excessive debt might raise the likelihood of financial trouble. The cost of filing for bankruptcy rises due to this increasing danger of financial distress, as does the amount of unwarranted debt (Scott, 1997). Relevant studies by Amna et al., (2021); Azalia (2019); Fajar (2020) prove that leverage has a favorable impact on financial distress circumstances. In this sense, Faldiansyah et al., (2020) argue that using too much debt for financing will raise the likelihood of the company going into financial difficulties (Wangsih et al., 2021). Financial distress creates a greater risk for investors to choose not to invest their funds, which lowers the firm value (Bastomi, 2015).

Profitability Affects Firm Value and Financial Distress as an Intervening Variable

Table 3 shows that the value of profitability's direct influence on company value is 0.082, and the value of profitability's indirect effect on firm value through financial distress is 0.093. Because the direct effect of leveraging profitability on firm value (0.082) is smaller than the indirect effect of profitability on firm value through financial distress, it may be stated that financial distress is an intervening variable of profitability on firm value (0.093). This conclusion demonstrates that businesses with high levels of profitability can successfully manage and utilize their assets, ensuring that business operations go as planned and averting financial distress. Conversely, the company is at risk of financial distress if its ineffective asset management leads to losses and negative cash flows. Companies in financial trouble risk declaring bankruptcy and receiving unfavorable investor responses, lowering the company's value. Studies by Ayuningtiyas & Suryono (2019); Fajar (2020); Fatmawati & Rihardjo (2017) verify that profitability has a detrimental impact on financial instability. Finishtya (2019) adds that a corporation can more easily recover from financial challenges the larger its profitability ratio.

Conclusion

Financial distress is significantly influenced by leverage. This demonstrates that increased debt will result in an increased risk that the corporation must handle. High risk is since the company's debt cannot be paid off with its cash. If a company's leverage is high without being accompanied by a substantial burden, it can avoid financial distress. Financial distress is negatively and significantly impacted by profitability, so the more money a company makes, the lower its likelihood of experiencing financial difficulty is.

In contrast, as a company's profitability declines, its risk rises, and it faces financial difficulty. Increased financial distress can lower firm value because it positively affects firm value. The investor value of the firm will decline as the likelihood of facing financial troubles increases. Leverage negatively affects the firm value, but profitability positively and significantly affects the firm value. In short, profitability increases business value, and a financial crisis is not a moderating factor.

The findings of this study can be used as guidance for businesses in implementing corporate policies that may impact the likelihood that a company will experience financial distress and file for bankruptcy. They can also be used as additional information by investors to determine the viability of an investment.

This study only involves limited samples. It is advised that future researchers add the sample they utilized to obtain better data and select the company sector that frequently faces financial difficulties. In addition, the study's variables were restricted to a few ratios. Other ratios used to measure financial distress, such as economic growth and inflation rates, are suggested for future research to add or employ. Finally, techniques for predicting financial difficulty are rarely used. Instead, researchers can employ various techniques for the best and most meaningful comparison to predict financial trouble in businesses.

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