

## Effect of Investment, Free Cash Flow, Earnings Management, Interest Coverage Ratio, Liquidity, and Leverage on Financial Distress

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**ABSTRACT:** The purpose of this examination is to empirically evidence the impact of investments, free cash flow, earnings management, interest coverage, liquidity, and leverage on financial distress. The dependent variable is financial distress. Independent variables are investments, free cash flow, earnings management, interest coverage, leverage, and liquidity. I tested this examination using logistic regression. The sample used in this research was manufacturing companies listed on the Indonesian Stock Exchange from 2016 to 2020. Samples for this research were selected using purposive sampling with a total of 392 observations. The results of this research show that free cash flow, interest coverage, and liquidity have a significant influence on financial distress. Investments, earnings management, and leverage have no significant effect on financial distress. The implication of this study is to confirm the signaling theory and the agency theory. A limitation of this research is that there are still Type I and Type II errors in classifying companies in financial distress and those in non-financial distress.

**Keywords:** Financial Distress, Investment, Free Cash Flow, Earnings Management, Interest Coverage, Liquidity, Leverage



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## INTRODUCTION

A firm can be in financial distress when it is having financial difficulties. There are numerous circumstances in which the business could be in financial distress. Financial distress, according to (Ghazali et al., 2015), occurs when an agreement or contract between a business and a creditor does not go as planned or is in a challenging state. A situation where a business is unable to pay off its short-term debt with the money it makes. According to (Piatt & Piatt, 2002), financial distress is a period of poor financial condition before a company enters bankruptcy or liquidation. Finally, as described by (Almilia & Kristijadi, 2003; Hofer, 1980; Whitaker, 1999), financial distress refers to a situation in which a firm has negative net income.

Financial difficulties result from a series of poor choices and connected flaws that can affect management directly or indirectly, as well as from a lack of efforts to monitor the company's financial situation so that its use is not as required. As such, many researchers have created alternate

models of financial distress. Z-scores, zetas, O-scores, Zmijewski, and camel ratios are just a few of the models that can be used to determine financial distress. According to ([Gamayuni, 2011](#)), the Z-score is the greatest indicator of bankruptcy, particularly for businesses engaged in manufacturing. Because it is known that Indonesia's stock market has delisted manufacturers with Z-Scores below 1.81. The Altman Z-Score is also very effective at predicting financial difficulties, according to Tanjung (2020), so it is still very pertinent to use as a proxy for determining financial difficulties.

Several research findings have explored the relationship between financial distress and various factors such as leverage, liquidity, interest coverage ratio, free cash flow, earnings management, and investment decisions ([Desai & Dharmapala, 2009](#); [Suk et al., 2021](#); [Xue et al., 2021](#)). However, the results have been inconsistent. This study seeks to replicate the findings of two previous investigations conducted by ([A. Dewanti et al., 2018](#); [Setiany, 2021](#)) combined. ([A. Dewanti et al., 2018](#)) conducted a study on the influence of liquidity and leverage on financial distress, whereas ([Setiany, 2021](#)) investigated the impact of investment, free cash flow, earnings management, and interest coverage ratio on financial distress. Setiany's findings suggest that only free cash flow and interest coverage ratio have a significant effect on financial distress for healthy companies, while Dewanti et al.'s research reveals that leverage has a positive effect on financial distress, whereas liquidity has a negative effect.

The difference between this study and ([Setiany, 2021](#)) is that adding liquidity and leverage variables based on previous research suggestions requires finding new additional variables to detect financial distress and according to ([A. Dewanti et al., 2018](#)) liquidity and leverage can explain the condition of companies in financial distress. The next difference is using the Altman Z-Score as a measure of the financial hardship of the manufacturing company. In fact, according to Wild (2005), Altman's Z-score is a powerful tool for determining whether firms are in financial distress and is well suited for this study and comparison of firms. As in Setiany's 2021 survey, not only are healthy businesses dependent on his Z-score results, but so are those in financial distress ([Dudley et al., 2022](#); [Febriml Dwijayanti Universitas Katolik Widya Mandala Surabaya, 2010](#); [A. Kartika et al., 2020](#); [López-Gutiérrez et al., 2015](#)).

### Signalling Theory

Signaling theory describes how companies work to provide investors with guidance on how management views the company's prospects. Signal theory helps companies (agents) and owners (principals) and outsiders reduce information asymmetries by producing high-quality or consolidated financial reporting information. Healthy companies are more likely to disclose than financially distressed companies. Financial difficulties refer to situations in which a company's business performance deteriorated due to poor management and faced a financial crisis. Ross (1977) states that when a firm is in financial trouble, it has bad news, a negative signal to investors that affects disclosure. Companies that have good news, which means that the company is financially healthy, influence management by providing company information, but management does not want information that can enhance the company's success. This information is not required.

Signal theory in financial distress research explains that if the financial condition and prospects of an entity are good, managers will give a signal by carrying out liberal accounting. Conversely, if the entity is in a state of financial distress and has poor prospects, the manager will give a signal by doing conservative accounting. Signal theory can therefore be used to provide managers with signals about good and bad news for the company. This allows the authority to take action or take immediate action to resolve the issue.

Signals about the condition of companies that are experiencing financial distress can be obtained by agents and principals through financial reports which are illustrated through financial ratios. The financial ratios used are the ratio of liquidity and leverage. Liquidity can indicate a company's ability to meet its short-term obligations. Leverage, on the other hand, shows how much of a company's money comes from debt and company stock. When a company obtains more debt financing, when the debt exceeds the equity, the dangerous problem of future payment difficulties arises. The interest coverage ratio can also be used as a signal of whether a company is in financial distress. If a company has a negative interest coverage ratio, it means that the company cannot cover its interest costs, which is a bad sign ([I. G. Dewanti & Sujana, 2019](#); [Maharani & Baroroh, 2020](#); [Yarba & Güner, 2020](#)).

In addition, investment decisions can also be a signal that can be used in assessing the condition of a company. The investment decision described by the investment opportunity set can use a total asset growth (TAG) proxy where the growth in the total asset value of a company indicates that the company is in a condition to add asset value through investment decisions made by the company. Investment financing is also closely related to available free cash flow. If a company's free cash flow is positive, that's a promising sign, indicating that it's operating well. On the flip side, a negative free cash flow reflects the same thing: negative operating cash flow. Without proper vigilance, the company may end up facing financial problems ([Abu et al., 2022](#); [Ramli & Yekini, 2022](#); [Vatamanyuk-Zelinska & Melnychenko, 2020](#)).

#### The Effect of Investment Decisions on Financial Distress

The decision to invest is linked to the proxy of investment opportunity set, which employs a Total Assets Growth approach in its calculation. As per (Eliu, 2014), the growth of total assets can lead to increased company size and activity in the long term. A higher growth rate in a company's total assets indicates better management of fixed assets and greater potential for future growth. Consequently, the chances of the company facing financial difficulties are reduced.

([Epato, 2020](#)) shows that financial difficulties have a negative impact on investment decisions. ([Almilia & Kristijadi, 2003](#)), on the other hand, found that wealth growth has a significant negative impact on financial hardship. Because healthy companies tend to invest effectively in real and financial assets to streamline their business operations. Based on this evidence, the proposed hypothesis:

H1: Financial distress is negatively impacted by investment choices

#### Effect of Free Cash Flow on Financial Distress

Free cash flow is the free cash flow that a company has. A company in secure financial standing indicates that its free cash flow can support the investor's cost of capital. Of course, this is a positive signal for the company. If the company has good free cash flow, the company is not in financial problems and the company can run smoothly.

According to ([Diana & Hutasoit, 2017](#)), a high level of free cash signifies that a company has significant internal cash reserves, which improves its capacity to meet both short-term and long-term obligations. This indicates strong performance, particularly during times of financial difficulty. A favorable free cash flow indicates a positive operating cash flow and negative investing cash flow. However, if a company's operating cash flow is negative and its investing cash flow is also negative, it suggests that the company is making additional investments that are funded by debt. This could result in financial difficulties for the company in the future.

([Setiany, 2021](#)) proves that free cash flow has significant positive influence facing healthy companies. Conversely, firms that have free cash flow in firms experiencing financial distress will focus more on solving financial problems such as paying debts that are due and not using this free cash flow to pay dividends or make investments. Even if the operating cash flow is negative, this allows the company to borrow additional capital from outside. If this situation continues, the debt will continue to grow, interest payments will increase, and the company will continue to face financial difficulties in the future. Based on this explanation, the proposed hypothesis:

H2: Financial distress is negatively impacted by free cash flow

#### Effect of Earnings Management on Financial Distress

Earnings management is management's pursuit to manipulate earnings by making financial reports attractive to investors and other users of financial reports. Cause this case, of course, this is a sign or signal that the company is in financial trouble, so management should ensure that the earnings reported in the financial statements are consistent with the wishes of stakeholders. is required. Take steps to control Another thing is agency competition due to information asymmetry. In this case, the manager has more information than the principal, and the company confuses earnings management. The motive for revenue management when the company is in financial problems is the motive for the debt agreement. ([Nikolaiev et al., 2021](#)) explains that debt agreements greatly affect the state of a company. Losing companies do revenue management in their financial statements so as not to violate contractual financial metrics. The motivation comes from companies struggling financially to not cancel debt agreements with creditors. Therefore, financially challenged companies tend to manage earnings through an accrual basis in the accounting policies used to avoid covenant violations.

([Bisogno & Luca, 2015](#)) found that boards must enhance financial statements as agents, so companies in severe financial distress must take out loans to finance the company operations. indicates what it means. This allows creditors to confidently extend credit to the company and revenue management positively impacts financial emergencies. Based on this explanation, the proposed hypothesis:

H3: Financial distress is positively impacted by earnings management

#### Effect of Interest Coverage Ratio on Financial Distress

The interest coverage ratio (ICR) is a metric that assesses a company's capacity to pay short-term and long-term interest-bearing debt through the pre-tax income it generates. ([Setiany, 2021](#)) has demonstrated that the ICR has a noteworthy and favorable influence on financial distress, which implies that a low ICR ratio is an indication of negative impact. A higher ICR ratio suggests that the company can more effectively pay off the interest on its debt. In contrast, a low or negative ICR ratio implies that the company is experiencing financial distress. Based on this explanation, the proposed hypothesis:

H4: Financial distress is negatively impacted by Interest coverage ratio

#### Effect of Liquidity on Financial Distress

Liquidity is a measure of a firm's ability to source its operations and pay its current liabilities. This signals when the company can cash out and raise funds from working capital, the company is in a healthy financial position, and conversely, when the company is unable to fund its operations and

has short-term obligations. If unable to meet, the company will show signs of financial difficulty. Therefore, this ratio minimizes information asymmetry between agents and principals. Because the liquidity ratio can assess the manager's performance according to the goals desired by the shareholders to generate profits.

([A. Dewanti et al., 2018](#)) research proves that liquidity has a negative impact on firms' financial distress and that a firm's likelihood of experiencing financial distress decreases as current interest rises. As a result, a business with a high cash ratio is one that can use capital and short-term debt to finance its operations. In light of this justification, the suggested theory is:

H5: Financial distress is negatively impacted by liquidity

#### Effect of Leverage on Financial Distress

The leverage ratio can be used to determine a business's debt ratio and to evaluate the financial risk that the company has assumed. This leverage ratio may indicate the health of the company. This is because the higher the leverage ratio, the more difficult it is for a company to manage its capital structure, leading to financial difficulties. Leverage in agency theory is used as the shareholder's control over the manager. This is because managers tend to be more cautious when making decisions when a company's level of debt is high. A larger debt-to-equity ratio indicates that a company is more dependent on debt financing, which is risky for the company. Every liability has a maturity date, with the exception of interest expense.

([A. Dewanti et al., 2018](#); [R. Kartika & Hasanudin, 2019](#)) show that leverage has a large positive impact on financial hardship. This shows that the effect of a high leverage ratio can be used as a negative signal to outside parties that the company is in financial trouble. Based on this description, the proposed hypotheses are:

H6: Financial distress is positively impacted by leverage

## METHOD

### Sample Selection Method

Purposive sampling is the type of non-random sampling that is used in this study. It is a strategy that relies on judgemental sampling, where information is gathered using specific considerations. (Sekaran, 2006). This study utilized a population of manufacturing companies that were listed on the IDX (Indonesia Stock Exchange) during the period of 2016-2020, with 2015 serving as the base year.

### Data Collection Methods

Secondary data from manufacturing companies listed on the IDX are used in this study. The financial report data for manufacturing companies from 2016 to 2020 was received from the IDX through the websites ([www.idx.co.id](http://www.idx.co.id), 2019 and [www.sahamok.com](http://www.sahamok.com), 2019) and used in this study.

### Operational Definition and Variable Measurement

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Table 1. Variable and Measurement Item

Variabels		Measurement	Sources
<b>Dependent Variable</b>	Financial Distress	Z-Score = $1,2X_1+1,4X_2+3,3X_3+0,06X_4+1,0X_5$	(Altman, 1968)
<b>Independent Variable</b>	Investation decision	AG= $(\text{Total Aset}_t-\text{Total Aset}_{t-1})/(\text{Total Aset}_{t-1})$	(Epto, 2020)
	Free Cash Flow	FCF= $(\text{AKO}-\text{PM})/\text{Total Aset}$	(Diana & Hutasoit, 2017)
Earning Management		TAC <sub>it</sub> = NI <sub>it</sub> - CFO <sub>it</sub> . (1)	Dechow et al, (1995)
		TAC/(TA <sub>t-1</sub> ) = $\alpha_1 1/(\text{TA}_{t-1})+\alpha_2 \Delta\text{sales}/(\text{TA}_{t-1})+\alpha_3 \text{PPE}/(\text{TA}_{t-1})$ .. (2)	
		NDAC = $\alpha_1 1/(\text{TA}_{t-1})+\alpha_2((\Delta\text{sales}-\Delta\text{rec})/(\text{TA}_{t-1})+\alpha_3 \text{PPE}/(\text{TA}_{t-1}))$ .. (3)	
		DAC = TAC/(TA <sub>t-1</sub> ) - NDAC .. (4)	
Interest Coverage Ratio		ICR = EBIT / Biaya Bunga	(Dewanti et al., 2018)
Liquidity		CR=(Current Asets)/(Current Liabilities)	(Dewanti et al., 2018)
Leverage		DER =(Total debt)/(Total Equity)	(Dewanti et al., 2018)

**RESULT AND DISCUSSION**

Overall Fit Model

Model testing was performed using the chi-square test shown in Table 2 below. A test was performed on the data for the entire model by comparing the initial log-likelihood value of -2 (result from block number 0) with the log-likelihood value of -2 (result from block number 1). If there is a reduction, the model shows a good regression.

Table 2 Overall Fit Model

Regression Models	Model	-2 Log Likelihood	Chi-Square (Omnibus Test Coefficient & Variables)	df	Sig
Logistics	Intercept Only	503.521			
	Final	264.404	239.117	6	0.000

Based on Table 2, the logistic regression results show only a -2LL (-2 log-likelihood) intercept of 503.521 with a final -2LL (log-2 likelihood) of 264,404, indicating a significance level. The decrease in the value is  $\alpha < 5\%$ , so it can be concluded that the logistic regression model used is the adjusted model.

Test for Determination Coefficient

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The findings of calculating the Nagelkerke R square to test the coefficient of determination are shown in table 3 below:

Table 3 Test of the Coefficient of Determination

Equation Models	Nagelkerke R Square
$PROB ZSC = \alpha + \beta_1 TAG + \beta_2 FCF + \beta_3 DAC + \beta_4 ICR + \beta_5 CR + \beta_6 LEV + \epsilon$	0.631

The Nagelkerke r-squared value is 0.631. This means the independent variables explained 63.1% of his financial difficulties and the other variables explained 37.9% not included in this study variable.

Table 4 Classification Table

Prediction Models		Non financial distress	Financial Distress	Percentage
Altman Z-Score	Non financial distress	94	40	70.1 %
	Financial Distress	12	246	95.3 %
	Overall			86.7 %

Table 4 shows a classification of bankruptcy prediction models using the Altman Z-Score model showing a value of 86.7%. The classification table for companies that are not in trouble shows a value of 70.1%. Table 4 shows that of the 134 observations classified as not in financial distress, only 94 observations are financially distressed and all 40 observations are not financially distressed. This indicates that there is still a Type I error in Altman's model for predicting financial distress. Similarly, financial distress firms rankings show a value of 95.3%. The table shows that while 258 observations are identified as being in financial distress, 12 firms are also found to not be in financial distress, demonstrating that the prediction model used in this research still includes type II errors.

Hypothesis test

The results of logistic regression analysis are shown in Table 5 below:

$PROB ZSC = \alpha + \beta_1 TAG + \beta_2 FCF + \beta_3 DAC + \beta_4 ICR + \beta_5 CR + \beta_6 LEV + \epsilon$			
Variable	Coefficient	Wald	Sig
Constant	2.748	87.143	0.000
Total Aset Growth (TAG)	0.034	0.055	0.814
Free Cash Flow (FCF)	-9.960	23.122	0.000
Earnings Management (DAC)	0.286	0.063	0.802
Interest Coverage Ratio (ICR)	-0.061	17.727	0.000
Liquidity (CR)	-0.383	15.021	0.000
Leverage (DER)	0.008	0.109	0.741

First Hypothesis Testing and Discussion

The coefficient value of the total assets growth (TAG) variable is 2,748 with a significance level of 0.841 ( $\alpha > 5\%$ ), which means hypothesis 1, which posits that investment decisions have a negative impact on financial distress, is rejected, indicating that the total asset growth (TAG) variable has no significant effect on financial distress. Signal theory states that an increase in asset value reflects the firm's growth phase, indicating that the company has sufficient funds and significant profits, which sends a positive signal to investors. Nonetheless, total asset growth does not have a significant impact on financial distress, indicating that asset value growth is not a reliable indicator of a company's financial difficulties. According to agency theory, managers have greater information and control over the company than investors, leading investors to hope that managers will act as stewards and make profitable investment decisions with a positive net present value. The investment opportunity set is a representation of the most profitable investment that a company will choose using total asset growth as a proxy. However, issues arise if firms continually fund investments with debt. As a result, companies that are in financial distress often experience an increase in assets since they finance their investment decisions using debt.

([Almilia & Kristijadi, 2003](#); [Epato, 2020](#)) found different results where financial distress has a negative effect on investment decisions. Meanwhile ([Almilia & Kristijadi, 2003](#)) stated that asset growth has a negative and significant effect on financial distress. Because a healthy firm tends to invest in real and financial assets effectively to expedite the firm's operating activities. However, these results are consistent with the research by ([Audina, 2018](#); [Fadhilah, 2020](#)) which state that total assets growth does not affect the financial distress of a company because adding asset value is a long-term investment for the company which is expected to increase company activity in the future. come so that companies experiencing financial distress also try to increase their firm's activities to get out of this financial distress condition

## Second Hypothesis Testing and Discussion

The coefficient value for the free cash flow variable is -9,960 with a significance level of  $\alpha < 5\%$ . Hence, hypothesis 2 which posits that free cash flow has a negative effect on financial distress is accepted. The logistic regression findings reveal that the FCF variable has a significant adverse effect on financial distress, meaning that a higher free cash flow leads to lower levels of financial distress for the company.

Signal theory suggests that having a high free cash flow is a positive indicator for investors as it indicates that the company has excess cash that can be utilized for external business expansion or paying dividends to investors. The agency theory relates to free cash flow in the sense that managers, attempting to increase their personal wealth, may prioritize free cash flow. As a result, companies with high free cash flow are less likely to experience financial distress. However, under the free cash flow hypothesis, the firm may encounter an agency problem when investors anticipate dividends from the free cash flow available, but the company tends to choose business expansion instead.

This research supports the findings of ([Setiany, 2021](#)) which suggest that free cash flow is an indicator of a company's financial situation. A company with good financial health will typically have a high free cash flow, while a company with poor financial health will have a low free cash flow. This further affirms that free cash flow can serve as a signal to assess the financial condition of a company, determining whether or not the company is experiencing financial distress.



### Results of Testing the Third Hypothesis and Discussion

The earnings management variable has a coefficient value of 0.286 with the significance level  $\alpha > 5\%$ , so hypothesis 3 is rejected, that is, the earnings management variable has no significant impact on financial distress. Earnings management if it is connected with agency theory, of course there is motivation that is owned by the manager (agent) so that he does earnings management. One of the motivations is to enter into a debt agreement. By carrying out earnings management, firm managers try to increase firm earnings so that the debt terms agreed upon by creditors are not violated. However, the practice of earnings manipulation does not affect the condition of a company that is in a state of financial difficulty or not so that earnings management does not significantly affect financial distress. In relation to the signaling theory, this earnings management practice is a signal that the company is experiencing financial difficulties, so that the firm tries to make reported earnings consistent with previous years, which is an inaccurate theory. Because this earnings management practice is not only carried out in companies experiencing financial distress.

These results are inconsistent with the results of (Bisogno & Luca, 2015) which in their research shows that earnings management has a significant effect on financial distress. These results are consistent with research conducted by (Sayidah et al., 2020; Setiany, 2021) that earnings management is not one of the motivations for companies to manipulate financial reports for firms that are experiencing financial distress.

### Fourth Hypothesis Testing and Discussion

The ICR variable has a coefficient value of -0.061 and a significance level of 0.000 ( $\alpha < 5\%$ ), which confirms hypothesis 4. The logistic regression analysis reveals that the ICR variable has a significant negative impact on financial distress. A higher ICR indicates a lower financial distress condition for the company. Signal theory posits that a company will provide a signal to investors through its financial statements about its condition. The Interest Coverage Ratio is one of the ratios that can be used to evaluate a company's health or financial difficulties. If a company is unable to pay interest charges on its debt, it is in a state of financial distress, which can be seen from its ICR ratio being below 1. Agency theory suggests that managers' interests play a role in determining a company's funding policies, and one way to finance firm activities is through debt. However, if managers do not handle the company's debt wisely, it can lead to financial burdens and obligations that may cause financial difficulties in the future. Investors hope that managers will make sensible decisions in this regard.

These results are consistent with (Setiany, 2021), which explains that the interest coverage ratio has a significant effect on financial distress, because companies that have difficulty meeting debt obligations will be affected by debt interest. If the company's management can manage debt obligations well, then the debt interest that must be paid also does not have a major impact on the company's cash flow so that the company avoids financial problems.

### Fifth Hypothesis Testing Results and Discussion

The coefficient value for the Liquidity variable (CR) is -0.383, with a significance level of 0.000 ( $\alpha < 5\%$ ). Therefore, hypothesis 5 is accepted, and the logistic regression results indicate that the CR variable has a significant negative impact on financial distress. The higher the Liquidity, the lower the likelihood of a company experiencing financial distress. Financial statements serve as a means for external parties to evaluate a company's financial condition. One way to evaluate this condition is through the use of financial ratios. The current ratio is a financial ratio that measures a company's

ability to meet its short-term obligations using its current assets. Investors can use this ratio as a signal to assess a company's liquidity. A high current ratio indicates that a company has good liquidity, and is therefore less likely to experience financial difficulties.

This study is in consistency with ([A. Dewanti et al., 2018](#)) explains that a company with a high liquidity ratio means that it is more liquid, that is, it is able to pay short-term obligations and is able to finance futures. company activities. With enough costs to finance the operation of the business, the enterprise will be able to produce goods and carry out its business activities, while at the same time, the business will face financial difficulties (financial distress). main) will be lower.

#### Sixth Hypothesis Testing Results and Discussion

The coefficient value for the leverage variables is 0.008, with a significance level of 0.741 ( $\alpha > 5\%$ ), so hypothesis 6 is rejected, which means that the leverage variable (does not affect financial distress). The debt-to-equity ratio is a measure of how well a company is financed with debt. A high level of debt in signal theory gives a negative signal to investors. A high level of debt will cause problems in the future, namely paying off debts that have matured and facing financial burdens. However, the research results show that leverage does not have an impact on financial distress because companies experiencing financial difficulties will be faced with settling short-term obligations first to avoid financial distress so that if short-term liabilities have problems, it will cause long-term problems in the form of bankruptcy faced by the company in the future. The agency theory also explains that the company's activities will certainly be influenced by the capital owned by the company itself. If the company receives more capital or equity from investors, of course, this will become a separate burden for management where there is an obligation to manage company resources and the obligation to pay dividends. Therefore, companies will tend to borrow debt to avoid this responsibility. However, the agency theory in this study does not explain the relationship between leverage and financial distress.

The results of this study are consistent with those of ([Budiarso, 2014](#)), who found that leverage has no effect on the occurrence of financial distress in firms, since large firms tend to rely heavily on bank loans or creditors. Consequently, it can be said that big businesses usually have a high leverage ratio. However, although large companies have high debt levels, it can also be said that large companies are better able to avoid financial difficulties by diversifying their operations. However, the results of this study contradict the results of ([A. Dewanti et al., 2018](#)). The risk of financial distress can be assessed using leverage. Since the number of shares owned does not guarantee the debt the business owns, a company with a large amount of debt may breach its debt agreements with creditors. The high-interest rates will apply to businesses that have a significant amount of debt. Meanwhile, the company's book value for its shares is negative because its total debt is higher than its total equity.

## CONCLUSION

Leverage, earnings management, and investment decisions have no effect on financial distress. Liquidity, free cash flow, and the interest coverage ratio all have a negative effect on financial distress. Interest coverage ratio and free cash flow are used in relation to the theory of signaling variables of liquidity to determine whether the company is in financial distress or not. The free cash flow hypothesis is supported by this study and is related to agency theory, although agency theory is not supported by earnings management or investing. According to the free cash flow

hypothesis, managers will generally prioritize business growth over paying dividends to investors in agency theory.

## REFERENCE

- Abu, M., Ibrahim, U. A., & Muritala, T. A. (2022). Effect of board characteristics and risk management practices on the financial performance of listed non-financial firms in Nigeria. *Problems and Perspectives in Management*, 20(3), 285–296. [https://doi.org/10.21511/ppm.20\(3\).2022.23](https://doi.org/10.21511/ppm.20(3).2022.23)
- Almilia, L. S., & Kristijadi, K. (2003). Analisis Rasio Keuangan Untuk Memprediksi Kondisi Ffianancial Distress Perusahaan Manufaktur Yang Terdaftar Di Bursa Efek Jakarta. *Jurnal Akuntansi Dan Auditing Indonesia*, 7(2), 183–210. <http://www.jurnal.uui.ac.id/index.php/JAAI/article/view/846>.
- Audina, B. P. (2018). *Pengaruh Financial Leverage, Struktur Modal Dan Total Asset Growth Terhadap Financial Distress Pada Perusahaan Subsektor Pulp Dan Kertas Yang Terdaftar Di Bursa Efek Indonesia* (Vol. 14, Issue 1, pp. 76–90).
- Bisogno, M., & Luca, R. (2015). Financial Distress and Earnings Manipulation: Evidence from Italia SMEs. *Journal of Accounting and Finance*, 4(1), 42–51.
- Budiarso, N. S. (2014). Pengaruh Struktur Kepemilikan, Likuiditas Dan Leverage Terhadap Financial Distress. *Accountability*, 3(2), 40. <https://doi.org/10.32400/ja.6423.3.2.2014.40-50>.
- Desai, M. A., & Dharmapala, D. (2009). Earnings management, corporate tax shelters, and book-tax alignment. *National Tax Journal*, 62(1), 169–186. <https://doi.org/10.17310/ntj.2009.1.08>.
- Dewanti, A., Ardana Putra, I. N. N., & Hidayati, S. A. (2018). Pengaruh Likuiditas Dan Leverage Terhadap Financial Distress Pada Perusahaan Perdagangan, Pelayanan Jasa Dan Investasi Yang Terdaftar Di BEI Tahun 2016-2017. *JMM UNRAM - Master Of Management Journal*, 7(3), 78. <https://doi.org/10.29303/jmm.v7i3.341>.
- Dewanti, I. G., & Sujana, I. K. (2019). Pengaruh Ukuran Perusahaan, Corporate Social Responsibility, Profitabilitas dan Leverage Pada Tax Avoidance. *E-Jurnal Akuntansi*, 28(1), 377–406.
- Diana, N., & Hutasoit, H. (2017). Pengaruh Free Cash Flow dan Kepemilikan Institusional Terhadap Kebijakan Dividen dengan Profitabilitas sebagai Variabel Moderating. *Jurnal Akuntansi Manajerial*, 2(2), 77–89.
- Dudley, E., Andrén, N., & Jankensgård, H. (2022). How do firms hedge in financial distress? *Journal of Futures Markets*, 42(7), 1324–1351. <https://doi.org/10.1002/fut.22336>
- Epato, M. (2020). *Pengaruh Financial Distress Terhadap Keputusan Investasi Dengan Peluang Investasi Sebagai Variabel Moderasi Pada Perusahaan Manufaktur Yang Terdaftar Di Bursa Efek Indonesia Periode*.
- Fadhilah, S. N. (2020). Pengaruh Financial Leverage, Struktur Modal, dan Total Asset Growth Terhadap Financial Distress. *Prosiding Manajemen*, 6(2), 865–871.

## Effect of Investment, Free Cash Flow, Earnings Management, Interest Coverage Ratio, Liquidity, and Leverage on Financial Distress

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- Febriml Dwijayanti Universitas Katolik Widya Mandala Surabaya, P. (2010). *Penyebab, Dampak, Dan Prediksi Dari Financial Distress Serta Solusi Untuk Mengatasi Financial Distress* (J.U.L.I., Ed.; Vol. 2, Issue ue 2)). <http://www.bi.go.id>.
- Gamayuni, R. R. (2011). Analisis Ketepatan Model Altman sebagai Alat untuk Memprediksi Kebangkrutan. *Jurnal Akuntansi Dan Keuangan*, 16(2), 158–176.
- Ghazali, A. W., Shafie, N. A., & Sanusi, Z. M. (2015). Earnings Management: An Analysis of Opportunistic Behaviour, Monitoring Mechanism and Financial Distress. *Procedia Economics and Finance*, 28(April), 190–201. [https://doi.org/10.1016/s2212-5671\(15\)01100-4](https://doi.org/10.1016/s2212-5671(15)01100-4)
- Hofer. (1980). Turnaround strategies. *Trustee : The Journal for Hospital Governing Boards*, 63(6), 19–31. <https://doi.org/10.4324/9781315738116-8>
- Kartika, A., Abdul Rozak, H., Nurhayat, I., Daniel Bagana, B., Studi Manajemen, P., Bisnis, F., Stikubank, U., & Studi Akuntansi, P. (2020). *Rasio Keuangan Sebagai Prediksi Financial Distress*. Prosiding Sendi.
- Kartika, R., & Hasanudin, H. (2019). Analisis Pengaruh Likuiditas, Leverage, Aktivitas, Dan Profitabilitas Terhadap Financial Distress Pada Perusahaan Terbuka Sektor Infrastruktur, Utilitas, Dan Transportasi Periode 2011-2015. *Oikonomia: Jurnal Manajemen*, 15(1), 1–16. <https://doi.org/10.47313/oikonomia.v15i1.640>
- López-Gutiérrez, C., Sanfilippo-Azofra, S., & Torre-Olmo, B. (2015). Investment decisions of companies in financial distress. *BRQ Business Research Quarterly*, 18(3), 174–187. <https://doi.org/10.1016/j.brq.2014.09.001>
- Maharani, F. S., & Baroroh, N. (2020). The Effect of Leverage, Executive Characters, and Institutional Ownership to Tax Avoidance with Political Connection as Moderation. *Accounting Analysis Journal*, 8(2), 81–87.
- Nikolaiev, V., Shcherbyna, A., Siniak, N., & Nikolaieva, T. (2021). Different Management Functions in Housing Operation Practice: Ukrainian Case Study. *Real Estate Management and Valuation*, 29(2), 29–37. <https://doi.org/10.2478/remav-2021-0011>
- Piatt, H. D., & Piatt, M. B. (n.d.). Predicting corporate financial distress: Reflections on choice-based sample bias. *Journal of Economics and Finance*, 26(2), 184–199. <https://doi.org/10.1007/bf02755985>.
- Ramli, A., & Yekini, L. S. (2022). Cash Flow Management among Micro-Traders: Responses to the COVID-19 Pandemic. *Sustainability (Switzerland)*, 14(17). <https://doi.org/10.3390/su141710931>
- Sayidah, N., Assagaf, A., & Faiz, Z. (2020). Does earning management affect financial distress? Evidence from state-owned enterprises in Indonesia. *Cogent Business and Management*, 7(1), 0–14. <https://doi.org/10.1080/23311975.2020.1832826>
- Setiany, E. (2021). *The Effect of Investment, Free Cash Flow, Earnings Management, and Interest Coverage Ratio on Financial Distress* ARTICLE INFO ABSTRACT.

- Suk, I., Lee, S., & Kross, W. (2021). CEO turnover and accounting earnings: The role of earnings persistence. *Management Science*, 67(5), 3195–3218. <https://doi.org/10.1287/mnsc.2019.3559>
- Vatamanyuk-Zelinska, U. Z., & Melnychenko, O. V. (2020). The effectiveness of financial and economic regulation of land relations in the context of stimulating entrepreneurial activity in the regions of Ukraine. *Problems and Perspectives in Management*, 18(3), 11–27. [https://doi.org/10.21511/ppm.18\(3\).2020.02](https://doi.org/10.21511/ppm.18(3).2020.02)
- Whitaker, R. B. (1999). The early stages of financial distress. *Journal of Economics and Finance*, 23(2), 123–132. <https://doi.org/10.1007/bf02745946>
- Xue, L., Mithas, S., & Ray, G. (2021). Commitment to it investment plans: The interplay of real earnings, management, it decentralization, and corporate governance. *MIS Quarterly: Management Information Systems*, 45(1), 193–224. <https://doi.org/10.25300/MISQ/2021/14970>
- Yarba, İ., & Güner, Z. N. (2020). Leverage dynamics: Do financial development and government leverage matter? Evidence from a major developing economy. *Empirical Economics*, 59(5), 2473–2507. <https://doi.org/10.1007/s00181-019-01705-5>