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Factors affecting financial distress in Indonesian basic industry and chemicals sector

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Abstract

This research aims to analyse the influence of profitability, leverage, firm size, sales growth, and liquidity on financial distress in companies in the basic industry and chemicals sector listed on the Indonesia Stock Exchange for 2017-2022. The sample for this research is 20 companies in the basic industry and chemicals sector listed on the Indonesia Stock Exchange for 2017-2022 obtained from purposive sampling. The type of data used is quantitative data obtained from secondary data. The data collection technique is a documentation technique obtained from the company's annual financial report from the Indonesia Stock Exchange for 2017 - 2022. The data analysis techniques used are descriptive statistics and logistic regression using SPSS 26. The results of the study show that profitability is proxied by ROA, leverage is proxied by the debt ratio, firm size is proxied by the logarithm of total assets, sales growth is proxied by the sales growth ratio, and liquidity is proxied by the current ratio do not affect financial distress. Advice that can be given to investors and companies is to focus on the five independent variables and internal company factors in looking at the size of financial distress and to consider other possible factors. Apart from that, advice that can be given to future researchers is to use different proxies in carrying out the analysis because different proxies will allow different results to be obtained.

Keywords: firm size; financial distress; leverage; liquidity; profitability; sales growth.

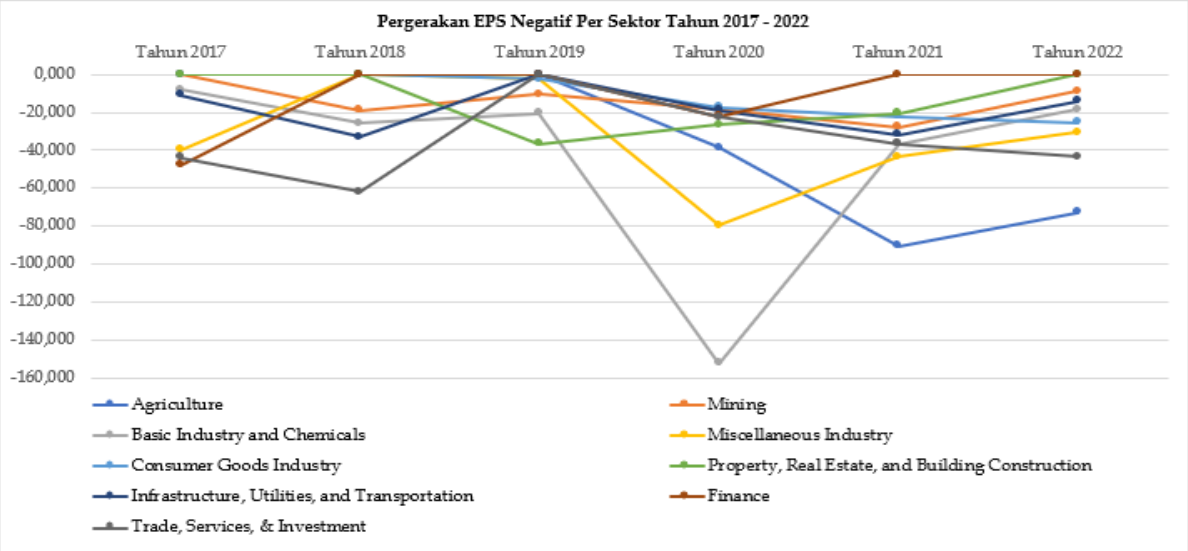
INTRODUCTION

World economic conditions continue to move and change along with the flow of globalisation. Indonesia is no exception; its economic conditions fluctuate. This is evident from the data BPS (2023), which shows fluctuating movements in the economic growth of Indonesia and major world economies such as China, the United States, Japan, India, and South Korea from quarter 2 of 2022 to quarter 2 of 2023. If you look at the conditions of the COVID-19 pandemic and the Russia-Ukraine war in the past, these conditions affect complex situations and challenges for all global businesses (Karmaker et al., 2023). COVID-19 conditions pose a lasting burden on health and education services and challenges to public welfare. In contrast, the conditions of the Russia-Ukraine war cause international tensions that can threaten global economic stability so that regional development influenced by Gross Domestic Product (GDP) decreases sharply quickly and inflation expectations soar (Tong et al., 2023).

Indonesia's economic growth rate calculated based on GDP according to BPS (2023b), the graph shows fluctuating movements where in 2017, it increased by 5,07%; in 2018, it increased again by 5,17%; in 2019, it decreased so that economic growth was only 5,02%; in 2020 experienced a sharp decline to produce a figure of -2,07% due to the pandemic from Covid-19 and simultaneous lockdown regulations that killed many economic players in Indonesia; and in 2021 began to rise from the slump of the Covid-19 pandemic where the economic growth rate reached 3.70%. The economic growth of a country indeed cannot be separated from the participation of companies in the country (Kurpayanidi, 2022). The economic downturn in a country is undoubtedly a concern for entrepreneurs if they fail in business competition and allow their business entities to experience financial distress conditions (Cui & Wang, 2023). Financial distress is when the company experiences difficulties or inability to pay credit obligations or debts on time before the business liquidation (Walela et al., 2022). Financial distress can

arise before the company goes out of business, characterised by a declining financial situation before bankruptcy (Utami & Kartika, 2019).

A company's financial distress is closely related to the company's internal policies (Hidayat & Yuniati, 2024). A company can be classified as experiencing financial distress if the company displays a net profit performance with a minus number (Susdaryo et al., 2021). A company that is indicated by financial distress conditions can be characterised by insufficient liquidity owned (Cui & Wang, 2023). Indications of financial distress can be shown by negative Earnings Per Share (EPS) that occur for two consecutive years (Putri & Kautsar, 2023). Therefore, negative EPS over two successive years is used as a proxy for financial distress. EPS is the ratio between the amount of net profit earned and the number of shares. EPS is the ratio between the amount of net profit earned and the number of shares (Safitri, 2013). EPS is related to the company's internal policies that can generate net profit. Positive EPS describes a good company situation, while negative EPS describes a bad situation because the company has suffered losses (Septiani & Dana, 2019).



Source: IDX Statistics (data processed, 2023)

Figure 1. NEGATIVE EPS MOVEMENT PER SECTOR 2017 - 2022

Figure 1 shows adverse EPS movements in several sectors on the Indonesia Stock Exchange (IDX) in 2017-2022. The basic industry and chemicals sector was chosen because it has a negative EPS value, which indicates financial distress for six consecutive years, while other sectors have negative EPS of less than or equal to 5 years. In addition, the basic and chemical industries have experienced a reasonably sharp/drastic decline in EPS compared to other sectors, as indicated by financial distress conditions.

Research on the topic of financial distress is a fascinating subject for further study, where research on financial distress can provide several benefits, such as helping companies detect financial failure before entering bankruptcy and providing information for decision-makers by providing financial distress measures from the analysis of company financial statements (Hidayat & Yuniati, 2024). The company's financial statements are reports that can inform about financial data or information. These reports can be used to show the performance of the company's finances and notify stakeholders of news (Sari et al., 2022).

The report can be used to review financial ratios and obtain evaluation results regarding the company's performance and financial situation (Kazemian et al., 2017). Therefore, this study uses company financial statements to show the value of profitability, leverage, firm size, sales growth, and liquidity and analyse their relationship with financial distress.

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The first aspect that affects the occurrence of financial distress is profitability. Previous research shows the different relationships between profitability and financial distress; e.g., Putri and Mulyani (2019) and Putri and NR (2020) show that profitability negatively influences financial distress. Saputri and Asrori (2019) show that profitability positively influences financial distress. Hariyanto (2018) and Nurhayati et al. (2021) show no influence of profitability on financial distress.

The second aspect that affects the occurrence of financial distress is leverage. Prior research shows different relationships between leverage and financial distress. Moleong (2018) and Amanda and Tasman (2019) show that leverage positively affects financial distress. Saputri and Asrori (2019) and Syuhada et al. (2020) show a negative effect of leverage on financial distress. Meanwhile, Prasetyo and Fachrurrozie (2016) and Sopian and Rayahu (2017) show no relationship between leverage and financial distress.

The third aspect that affects the occurrence of financial distress is firm size. Previous research shows the different relationships between profitability and financial distress; e.g., Putri and Mulyani (2019) and Syuhada et al. (2020) show that firm size negatively affects financial distress. Abbas and Sari (2019), and Oktasari (2020) prove the positive influence of firm size on financial distress. Prasetyo and Fachrurrozie (2016), Sopian and Rahayu (2017) show no relationship between profitability and financial distress.

The fourth aspect that affects the occurrence of financial distress is sales growth. Prior research shows different relationships between sales growth and financial distress. For example, Amanda and Tasman (2019) show that sales growth negatively influences financial distress, while Sopian and Rahayu (2017) show that sales growth positively influences financial distress. Ramadhani and Nisa (2019) and Saputra and Salim (2020) show no relationship between sales growth and financial distress.

The fifth aspect that affects the occurrence of financial distress is liquidity. Previous research shows different relationships between profitability and financial distress. For example, Stephanie et al. (2020) and Syuhada et al. (2020) prove that liquidity positively affects financial distress. Nugrahanti et al. (2020) and Dwiantari and Artini (2021) show a negative effect of liquidity on financial distress. Prasetyo and Fachrurrozie (2016) and Sopian and Rahayu (2017) show no liquidity effect on financial distress.

Based on the phenomenon and research gap, this study aims to determine the effect of profitability, leverage, firm size, sales growth, and liquidity on financial distress in basic industry and chemicals sector companies listed on the Indonesia Stock Exchange from 2017 to 2022.

LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

M. J. Gordon Theory

M. J. Gordon's theory discusses the causes and effects of financial distress and the reorganisation needed to overcome financial distress. When financial distress occurs, the company can experience a sharp decline in revenue, as a result of which the company has difficulty paying debts and interest, so the company will find solutions to rise from the slump by reorganising. Financial distress can cause company and stock value to fall, so internal policies related to financial structure become the concern of management and shareholders (Gordon, 1971). So, when reorganising to rise from financial distress, companies must pay attention to company value, optimal financial structure, and how new securities will be distributed to old securities. Another study added that when reorganising due to financial distress, companies need to pay attention to the importance of company funding to avoid financial distress conditions (Hussein & Idris, 2023). This theory is used as a general basis in explaining financial distress.

Pecking Order Theory

The pecking order theory is a theory that explains that companies choose capital structures by funding based on funding priorities from internal to external (Myers, 1984). Companies prefer to make funding from the safest to riskier in the following order: retained earnings, debt, and new shares/securities (Myers & Majluf, 1984). Companies that provide the most substantial profits tend to choose the safest funding first rather than external funding; unless the company has a deficit, other funding will be used (Allini et al., 2018). This theory is used as a theoretical basis for explaining how profitability, leverage, firm size, and liquidity can affect financial distress conditions.

Trade-Off Theory

Trade-off theory is an understanding of capital structure to increase company value. Companies must understand optimal capital selection and the right combination of debt and equity to avoid financial distress (Modigliani & Miller, 1958). Capital optimisation will maximise the benefits and costs arising from debt. In contrast, the benefits obtained are tax shield (tax avoidance), which is tax profit against interest payments by creditors (Modigliani & Miller, 1963). This theory occurs when market conditions are not perfect. One of the characteristics is taxes. The use of debt for companies will cause interest costs to increase, which can be used to reduce taxes, while companies that do not have debt do not have interest costs that reduce taxes. As a result, the amount of income earned by creditors and shareholders in companies with debt will be more significant than in companies that do not have debt (Sudana, 2015). In addition to benefiting the company, using debt can harm the company if it is too much and exceeds its ability to pay it. It can potentially cause financial conditions (Ayinaddis & Tegegne, 2023). The amount of debt has a limit on the health of the company. If there are taxes and bankruptcy costs, the company must consider financial difficulties or bankruptcy resulting from too much debt to optimise the capital structure. If the debt exceeds company capital, it will initially increase the company's value. However, an increase in debt which is more than company capital beyond a certain point can reduce the value of the company because of the effect of tax shields that increase the value of the company more lightly than the effect of bankruptcy costs that reduce the value of the company (Sudana, 2015). This theory explains how leverage and liquidity can affect conditions of financial distress.

Cash Management Theory

Cash management theory deals with the amount of liquid resources owned, the division of liquid resources between cash and securities, and the maturity structure of a portfolio of securities. First, a firm decides on its optimal amount of liquid resources by considering cash budget projections, excessive liquidity costs, and penalties for cash shortages. Second, cash managers must be able to decide the amount of cash stored and invested in securities and the length of maturity. Third, cash managers consider the maturity structure of a portfolio of securities by calculating the expected net profit of fund investments at a certain maturity by taking into account interest rates, transaction costs, and penalty periods for sales before maturity. If the calculation of net profit on investment of funds produces a negative number every maturity, the funds should be kept in cash; If the calculation of net profit on investment of funds produces a positive number every maturity, then the funds should be stored in the form of securities (Mao & Sarndal, 1978). Cash management theory explains that cash in companies helps maintain liquidity, such as financing workers, spending on raw materials, and financing debt and interest. However, if cash is kept in the company's vaults, then cash cannot give results. So, cash management maintains cash balances to be adequately used in business operations (Sudana, 2015). The company's cash procurement is intended for transaction motives, precautions, and speculation (Keynes, 1936). If the amount of cash owned by the company is too small, then opportunity costs will arise; if the amount of cash owned by the company exceeds the minimum requirement, it will potentially run out of cash, which can result in the company having to find funds to cover existing costs. The company should determine the proper cash balance by paying attention to the benefits and costs of cash procurement (Sudana, 2015). Companies must adequately manage cash inflow and outflow to avoid unbalanced funds (Ayinaddis & Tegegne, 2023). Cash inflow and cash outflow imbalances can result in cash management failures that impact the company's inability to pay its financial obligations when due, causing the company to experience financial distress (Laitinen & Laitinen, 1998). This is supported by Aziz and Dar (2006), who state that good cash management is essential to avoid financial distress.

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This theory is used as a theoretical basis for explaining how sales growth can influence financial distress conditions.

Financial Distress

Financial distress is a situation that describes a company experiencing difficulties or inability to pay off debts on time before business liquidation (Walela et al., 2022). Financial distress can arise before the company experiences a bankruptcy situation (Utami & Kartika, 2019). A company's financial distress is closely related to the company's internal policies (Hidayat & Yuniati, 2024). Financial distress in this study is proxied by a negative Earnings Per Share (EPS) ratio that occurs in two consecutive years. The use of negative EPS as an indicator of financial distress is supported by Putri and Kautsar (2023). EPS is the ratio between the amount of net profit earned and the number of shares (Safitri, 2013). Financial distress in this study is a dummy variable that uses category data (1; 0) with the formulation of measuring number 1 (one) is a company that is indicated in financial distress conditions, which is characterised by negative EPS and 0 (zero) is a company that is not indicated in financial distress conditions marked by negative EPS. The EPS is calculated using the following formula (1).

$$\text{EPS} = \frac{\text{net income after interest and tax}}{\text{number of outstanding shares}} \quad \text{.....(1)}$$

Profitability

Profitability is a measure that can show how much the company can benefit in a certain period by utilising all of its potential (Purwanto et al., 2023). This study's return on assets (ROA) ratio is employed to analyse profitability. According to Hery (2018), ROA determines the number of assets contributing to obtaining a company's net profit. The lower the ROA, the lower the net profit received from its total assets, or vice versa. The ROA is calculated using the following formula (2).

$$\text{ROA} = \frac{\text{net income}}{\text{total sssets}} \quad \text{.....(2)}$$

Leverage

Leverage is a measure of the size of debt owned by a company (Ayinaddis & Tegegne, 2023). The debt ratio in this study was utilised to analyse leverage. Lumbantobing (2020) explained that the debt ratio is a ratio that determines the number of assets that can be financed from its debt. The soaring debt ratio indicates that the risk of the company's inability to finance its debt from its assets is increasing, or vice versa (Hidayat & Yuniati, 2024). The debt ratio is calculated using the following formula (3).

$$\text{DR} = \frac{\text{total liabilities}}{\text{total assets}} \quad \text{.....(3)}$$

Firm Size

Firm size is a scale that can show the company's size (Nugrahanti et al., 2020). The larger the firm size, the greater the access to the capital market, making it easier to make additional funding with lower costs and constraints. This will further reduce the potential for the company's funding dependence on internal funds (Hidayat & Yuniati, 2024). Firm size in this study is proxied by the natural logarithm of total assets. The firm size is calculated using the following formula (4).

$$\text{FA} = \ln(\text{total assets}) \quad \text{.....(4)}$$

Sales Growth

Sales growth is a measure that shows sales performance achieved from period to period (Afrianti et al., 2022). The higher the value of sales growth, the higher the prospect of dealing with financial distress (Hidayat & Yuniati, 2024). The sales growth is calculated using the following formula (5).

$$\text{SG} = \frac{\text{sales t} - \text{sales (t}-1)}{\text{sales (t}-1)} \quad \text{.....(5)}$$

Liquidity

Liquidity measures a company's ability to pay its current debt (Hidayat & Yuniati, 2024). The current ratio in this study is utilised to analyse liquidity. The lower current ratio indicates that the company's ability to finance its current debt is decreasing (Dwiantari & Artini, 2021). The current ratio formula is calculated using the following formula (6).

$$\text{CR} = \frac{\text{current assets}}{\text{current liability}} \quad \text{.....(6)}$$

Relationship between Variables

The variable profitability is related to pecking order theory, where the company's funding priority is prioritised from internal funding so that the more excellent profitability value shows the company's ability to finance the business from the results of its profits getting bigger and accompanied by a small potential for financial distress situations (Nugrahanti et al., 2020).

Some research shows that profitability negatively influences financial distress, such as Syuhada et al. (2020), Nugrahanti et al. (2020), and Dwiantari and Artini (2021). Other research shows that profitability positively influences financial distress, e.g., Diyanto (2020), Saputra and Salim (2020), Ceylan (2021), Heliani and Elisah (2022), Ayinaddis and Tegegne (2023), and Purwanto et al. (2023). Meanwhile, Hariyanto (2018) and Nurhayati et al. (2021) failed to show the influence of profitability on financial distress. Thus, this research hypothesises:

H1: Profitability affects financial distress.

Variable leverage is related to pecking order theory, where the company's second funding priority is suggested to come from debt funding so that the greater the leverage value indicates the company's inability to pay off its debts and the lower the confidence of creditors will provide loans again. As a result, the risk of financial distress will be higher. In addition, variable leverage is also related to the trade-off theory, where the debt owned by the company can provide benefits in the form of additional funds for the company and can minimise the costs incurred, but this certainly has a risk of decreasing the value of the company if the debt is too much and beyond reasonable limits, thus risking causing financial distress conditions. This condition is supported by Nugrahanti et al. (2020) and Moleong (2018).

The positive influence of leverage on financial distress is shown by the research of Putri and Mulyani (2019), Putri and NR (2020), Diyanto (2020), Giarto and Fachrurrozie (2020), Nugrahanti et al. (2020), Dwiantari and Artini (2021), Wangsih et al. (2021), Ceylan (2021), and Purwanto et al. (2023). The negative influence of leverage on financial distress is shown by the research of Saputri and Asrori (2019), Syuhada et al. (2020), Santosa et al. (2020), and Hidayat and Yuniati (2024). Meanwhile, Stephanie et al. (2020), Oktasari (2020), Nurhayati et al. (2021), and Ayinaddis and Tegegne (2023) prove that the is no relationship between leverage and financial distress. Thus, this research hypothesises:

H2: Leverage affects financial distress.

The firm size variable is related to the pecking order theory, where companies with large firm sizes tend to have considerable internal funds to finance their business and get external funding sources. Good funding allows the company to avoid financial distress (Nugrahanti et al., 2020).

Nugrahanti et al. (2020), Wangsih et al. (2021), and Ayinaddis and Tegegne (2023) show that firm size negatively affects financial distress. The positive influence is demonstrated by the research of Abbas and Sari (2019) and Oktasari (2020), which prove the positive influence of firm size on financial distress. Meanwhile, other research shows that there is the influence of firm size on financial distress, e.g., Putri and NR (2020), Saputra and Salim (2020), Stephanie et al. (2020), Adiyanto (2021), Heliani and Elisah (2022), Pandapotan and Puspitasari (2022), Hidayat and Yuniati (2024). Thus, this research hypothesises:

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H3: Firm size affects financial distress.

The variable sales growth is related to cash management theory, where sales growth can affect the management of cash in and out of sales results. If cash flow management is good, it also has the potential for a good sales growth ratio; as a result, the possibility of financial distress conditions is lower (Amanda & Tasman, 2019).

The negative influence of sales growth on financial distress is shown by the research of Amanda and Tasman (2019). Sopian and Rahayu (2017) show that sales growth positively influences financial distress. Meanwhile, different results that show no influence of sales growth on financial distress are shown in the research of Giarto and Fachrurrozie (2020), Wangsih et al. (2021), Sugiana and Hidayat (2023), Ayinaddis and Tegegne (2023), and Hidayat and Yuniati (2024). Thus, this research hypothesises:

H4: Sales growth affects financial distress.

The liquidity variable is related to pecking order theory, where the company's second funding priority is suggested to come from debt funding, so that the greater liquidity has the potential to be, the more able the company is to finance obligations and the greater the confidence of creditors to be able to provide loans again. As a result, the company will likely avoid financial distress conditions. In addition, liquidity variables are also related to the trade-off theory, where the debt owned by the company can provide benefits in the form of additional funds for the company and can minimise the costs incurred, but this certainly has a risk of decreasing the liquidity ratio and value of the company if the debt is too much and beyond reasonable limits so that the increase in debt will result in the company being more unable to pay debts. The more likely it is, the more likely the company is experiencing financial distress. This condition is supported by Nugrahanti et al. (2020).

Previous research shows that liquidity positively affects financial distress, e.g., Diyanto (2020), Oktasari (2020), Adiyanto (2021), Ceylan (2021), Ayinaddis and Tegegne (2023), and Purwanto et al. (2023). Nugrahanti et al. (2020) and Dwiantari and Artini (2021) show a negative effect of liquidity on financial distress. Meanwhile, other research shows no effect of liquidity on financial distress, e.g., Abbas and Sari (2019), Amanda and Tasman (2019), Saputri and Asrori (2019), Putri and NR (2020), Santosa et al. (2020), Nurhayati et al. (2021), and Hidayat and Yuniati (2024). Thus, this research hypothesises:

H5: Liquidity affects financial distress.

RESEARCH METHODS

This research uses quantitative data and statistical analysis. Based on its purpose, this study belongs to the type of causal research because the hypothesis examines the influence of the independent variable on the dependent variable. Quantitative data is obtained from secondary data sourced from the company's annual financial statements. The study population is basic industry and chemicals sector companies listed on the Indonesia Stock Exchange for 2017-2022. The research sample consisted of 20 companies obtained from purposive sampling techniques. Data analysis techniques using descriptive statistical analysis and logistic regression analysis using IBM SPSS 26.

RESULTS AND DISCUSSION

Statistical Descriptive Results

Table 1 shows descriptive statistical results after outliers. Financial distress showed a mean of 0.63; the average company that experienced financial distress amounted to 63% of the total sample, and the remaining 27% did not experience financial distress. ROA shows a mean of -0.04; the average company earns a net profit of -4% of its total assets. The lowest ROA value of -1.43 was occupied by Tirta Mahakam Resources Tbk in 2020, and the highest ROA value of 0.36 was occupied by Central Proteina

Prima Tbk in 2021. The debt ratio shows a mean of 0.82; the average company has a total debt of 82% of its total assets. The lowest debt ratio value of 0.15 was occupied by Polychem Indonesia Tbk in 2020, and the highest debt ratio value of 3.95 was occupied by Jakarta Kyoei Steel Works Tbk in 2022. The FA indicates a mean of 7.64. The lowest FA value of 4.90 was occupied by Lionmesh Prima Tbk in 2020, and the highest FA value of 11.02 was occupied by Krakatau Steel (Persero) Tbk in 2019. SG indicates a mean of 0.57; the average company experiences annual sales growth of 57%. The lowest SG value of -1 was occupied by Jakarta Kyoei Steel Works Tbk in 2020, and the highest SG value of 60.54 was occupied by Eterindo Wahanatama Tbk in 2022. CR indicates a mean of 1.40; the average company can finance its current debt of 140% of its current assets. The lowest CR value of 0.02 was occupied by Eterindo Wahanatama Tbk in 2018, and Lionmesh Prima Tbk had the highest CR value of 6.29 in 2022.

Table 1.
DESCRIPTIVE STATISTICS

Variable	N	Min	Max	Mean	Std. Deviation
FD	118	0	1	0,63	0,486
ROA	118	-1,4270	0,3532	-0,036011	0,1516155
DR	118	0,1502	3,9464	0,823131	0,7085964
FA	118	4,9053	11,0175	7,638938	1,4899776
SG	118	-1,0000	60,5385	0,568147	5,6268568
CR	118	0,0241	6,2862	1,404503	1,1255701

Source: Output SPSS (data processed, 2024)

Overall Model Fit Results

Based on the test results, there was a decrease in the number of -2 Log Likelihood; the decrease illustrates a better regression model (Ghozali, 2018). Initially, the value of -2 Log Likelihood Block Number 0 (155,871) was more significant than the value of the Chi-Square Table (145,461), so the model before the inclusion of independent variables still did not qualify for the test. Furthermore, the value of -2 Log Likelihood Block Number 1 (0,007) is smaller than the value of the Chi-Square Table (137,701), so the model, after entering the independent variable, already meets the test requirements.

Negelkerke's R Square Results

This test shows whether or not the dependent variable can get the influence of the independent variable; the value is from 0 (zero) to 1 (one). A value close to zero indicates that the less fit means that the dependent variable is less able to be explained by its independent variable, or vice versa (Ghozali, 2018). Based on the test results, the value of Nagelkerke R Square is 1, meaning that the model has goodness of fit and the independent variable can simultaneously explain and influence the dependent variable by 100%.

Goodness of Fit Test Results

This test is used to obtain information related to how able the model is to predict the value of its observations so that the model can be called fit (Ghozali, 2018). Based on the test results, the probability value of Hosmer and Lemeshow significance (P-value) is 1 (higher than 0.05). The results show that the model is fit because it matches the observation value, so The Goodness of Fit Test can predict the observation value.

Classification Matrix Results

This test is used to determine how strong the regression model is in predicting the occurrence of financial distress by providing results for overall accuracy (Ghozali, 2018). Based on the test results, 44 objects were not in distress, and 74 were in distress. The accuracy of data classification predictions is 100%, so the level of data accuracy is very high.

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Estimation and Interpretation of Parameters Results

This test is used to determine the level of significance of each variable in the model so that researchers can identify the influence of the independent variable on the dependent. The following equation shows the logistic regression model (7). Furthermore, based on Table 2, all variables exhibit significance levels higher than 0.05, so profitability, leverage, firm size, sales growth, and liquidity do not affect financial distress.

$$Ln\left(\frac{p}{1-p}\right) = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + e \quad (7)$$

Table 2.
VARIABLES IN THE EQUATION

Variable	β	Sig.
ROA	-88336,299	0,666
DR	14,144	0,864
FA	1,356	0,964
SG	31,699	0,894
CR	2,284	0,917
Constant	-30,711	0,862

Source: Output SPSS (data processed, 2024)

The Effect of Profitability on Financial Distress

Based on the test results, profitability proxied with ROA cannot affect financial distress. The factor determining the absence of the effect of profitability on financial distress is the possibility that the total assets owned by the company are pretty significant in controlling the expenses owned (Nurhayati et al., 2021). When viewed from the research data, the mean profitability calculation shows a minus number, but the mean total assets are more significant than the mean total debt. As a result, the total assets owned by the company are relatively large in controlling its total debt.

The study's results are contrary to the pecking order theory, which explains that the company's funding priority is prioritised from internal funding. The higher the profitability, the greater the company can fund its business from its profits and the smaller the company experiences financial distress. This is supported by the statement that the existence of profitability does not necessarily cause financial distress because there is the possibility of internal factors outside the company's profits (Hariyanto, 2018). Companies need to pay attention to asset health and ownership by maximising asset ownership and minimising debt to prevent a crisis or financial difficulties by utilising the assets owned to fund their operational activities if the profits generated are insufficient.

The Effect of Leverage on Financial Distress

Based on the test results, leverage proxied with debt ratio cannot affect financial distress. The determining factor in the absence of leverage on financial distress is the possibility that the company's total assets are sufficient to cover its total debt (Nurhayati et al., 2021). The result also shows that the company does not exceed available assets, which indicates company health.

The study results contradict the pecking order theory, which explains that the company's second funding priority is recommended to come from debt funding. The higher the leverage value results in the company being more unable to pay off its debts, and the smaller the confidence of creditors will provide loans again. As a result, the company experiences more financial distress. In addition, variable leverage is also contrary to the trade-off theory, which explains that the debt owned by the company can provide benefits in the form of additional funds for the company and can minimise the costs incurred, but this certainly has a risk of decreasing the company's value if the debt is too much and beyond reasonable limits, thus risking causing financial distress. This research supports Nurhayati et al. (2021), Sopian and Rahayu (2017), Saputra and Salim (2020), Stephanie et al. (2020), Oktasari (2020), Ayinaddis and Tegegne (2023), Prasetyo and Fachrurrozie (2016). Companies must prioritise asset health and ownership to avoid financial crises and ensure asset availability for debt financing.

The Effect of Firm Size on Financial Distress

Based on the test results, firm size proxied with the natural logarithm of total assets cannot affect financial distress. The factor that determines the absence of firm size influence on financial distress is the possibility of poor management by the company so that the company runs less well and efficiently (Hidayat & Yuniati, 2024). Company size is not the main factor that triggers companies to experience financial distress; companies with small, medium, or large sizes can still be threatened by financial distress conditions (Pandapotan & Puspitasari, 2022). Large companies generally also have a significant risk, so the company will still have the potential to have large debts compared to the assets owned. As a result, the company still has a considerable risk of financial distress due to failing to pay off its debts (Rahayu & Sopian, 2017).

The highest company size, total asset, and risk percentage level of Krakatau Steel (Persero) Tbk in 2019 shows that the company cannot avoid financial distress conditions. Meanwhile, Lionmesh Prima Tbk, in 2020, showed that it has the lowest company size and is still unable to carry out good management. Hence, this condition still indicates that the company cannot avoid financial distress conditions. Therefore, the firm size cannot prove the company can avoid financial distress.

The results of the study are contrary to the pecking order theory, where companies with large firm sizes tend to have internal funds and extensive access to finance their business and obtain external funding sources, so with good funding, it is likely that the company will not be in a financial distress situation. This research supports Amanda and Tasman (2019), Heliani and Elisah (2022), Putri and NR (2020), Sopian and Rahayu (2017), Saputra and Salim (2020), Stephanie et al. (2020), Adiyanto (2021), Pandapotan and Puspitasari (2022), Hidayat and Yuniati (2024), and Prasetyo and Fachrurrozie (2016). The size of the company's assets cannot be used as a reference for whether the company can avoid financial distress. Companies must maintain good management so their operations can run optimally and efficiently.

The Effect of Sales Growth on Financial Distress

Based on the test results, sales growth proxied with the sales growth ratio cannot affect financial distress. The determining factor of the absence of the influence of sales growth on financial distress is the possibility of movement in the value of sales growth not accompanied by an increase or decrease in operational costs. Besides that, the movement of sales growth value can also cause it to be safe and stable in obtaining loan funds that can potentially cause default if the company's management is poor (Hidayat & Yuniati, 2024). In addition, sales growth does not influence financial distress due to the possibility of high sales growth value accompanied by a high cost of goods sold, resulting in low profits (Giarto & Fachrurrozie, 2020). Eterindo Wahanatama Tbk in 2022 manifests the highest sales growth ratio value of the sample company; this condition was followed by growth in the cost of goods sold, which caused the company to experience losses, so the high sales growth value was unable to prove that the company could be free from financial distress.

Jakarta Kyoei Steel Works Tbk 2020 had the lowest sales growth ratio value of the sample company, followed by a decreased cost of goods sold growth. However, the company suffered a loss, so the low sales growth value could not prove that the company could be free from financial distress conditions. Therefore, the size of sales growth cannot provide evidence that financial distress can be avoided.

The results of this study are contrary to cash management theory, where sales growth can affect cash management in and out of sales results; if cash flow management is good, the potential for a good sales growth ratio as well, as a result, the potential for companies to experience financial distress will be smaller. This result is in line with Ramadhani and Nisa (2019), Saputra and Salim (2020), Giarto and Fachrurrozie (2020), Sugiana and Hidayat (2023), Wangsih et al. (2021), Hidayat and Yuniati (2024), Ayinaddis and Tegegne (2023). Good governance is the best way for companies to avoid financial distress. Maximising the value of sales growth and minimising the cost of goods sold will result in a high net profit.

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The Effect of Liquidity on Financial Distress

Based on the test results, liquidity proxied with the current ratio cannot affect financial distress. The statement indicates that whatever the current ratio in the company is, it will not significantly impact the financial distress situation. The factor determining the absence of liquidity in financial distress is the possibility of the company's ability to finance its operations by meeting its short-term debt with available current assets to avoid financial distress (Hidayat & Yuniati, 2024). Research data from Lionmesh Prima Tbk evidence this in 2022, which has the highest liquidity ratio value of the sample company, but this shows that the company is experiencing financial distress. Meanwhile, Eterindo Wahanatama Tbk 2018 had the lowest liquidity ratio value of the sample company but also showed that the company could not avoid financial distress situations. Other data that shows that liquidity does not affect financial distress can be seen from the mean value of the current ratio calculation, which means that the average sample company is reasonably able to meet its current debt from its current assets so that the company is said to be able to avoid financial distress.

The results of the study are contrary to the pecking order theory, which explains that the company's second funding priority is recommended to come from debt funding, so the higher the liquidity value shows, the more able the company is to pay its debts and the higher the creditor's confidence to provide loans again. As a result, the more likely the company is to avoid financial distress conditions. In addition, liquidity variables are also contrary to the trade-off theory, which explains that the debt owned by the company can provide benefits in the form of additional funds for the company and minimise the costs incurred, but this certainly has a risk of decreasing the liquidity ratio and value of the company if the debt is too much and beyond reasonable limits, thus risking causing financial distress. This result supports Abbas and Sari (2019), Amanda and Tasman (2019), Nurhayati et al. (2021), Putri and NR (2020), Sopian and Rahayu (2017), Saputri and Asrori (2019), Hidayat and Yuniati (2024), Santosa et al. (2020), and Prasetyo and Fachrurrozie (2016). Companies should maximise their current assets and minimise debt to avoid financial distress.

CONCLUSIONS

The results showed that profitability, leverage, firm size, sales growth, and liquidity did not affect financial distress in basic industry and chemicals sector companies listed on the Indonesia Stock Exchange for 2017-2022. Based on the test results, investors who make investment decisions should not only refer to one of the independent variables but also consider all aspects of profitability, leverage, firm size, sales growth, and liquidity in looking at the overall information on the company's operational continuity. Investors must also consider other aspects beyond these five to determine good investment decisions to maximise returns and minimise risks. In addition, companies should not only focus on internal factors such as profitability, leverage, firm size, sales growth, and liquidity to prepare for good decision-making to increase their operating profits. Companies must also consider external factors such as gross domestic product and inflation for better financial conditions in the future.

This research implies that companies should improve risk management by considering factors influencing financial distress. This research can also inform policymakers about the vulnerabilities of the basic industry and chemicals sector, leading to more effective regulations that balance industrial growth with financial stability. This research also implies that investors can make more informed decisions regarding their investments in the basic industry and chemicals sector by identifying firms with vital financial health and robust risk management practices.

The following research is expected to improve and strengthen literacy about financial hardship and use different proxies for each variable. Further research can include advanced predictive models such as machine learning and hybrid models. Cross-country comparison is also a call for further research. Further research can also investigate the role of corporate governance practices and management quality in mitigating financial distress.

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