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RATIO ANALYSIS TO FINANCIAL DISTRESS WITH PROFITABILITY AS A MODERATION VARIABLE

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ABSTRACT

Purpose: *This research aims to determine the leverage effect measured by debt to asset ratio and debt to equity ratio, liquidity measured by the current ratio, sales growth, operating cash flow on financial distress with profitability measured by return on assets as a moderating variable.*
Methodology/approach: *Research objects were 54 real estate companies registered with S&P Capital IQ 2017 – 2021. Sample selection used purposive sampling method. Data processing method uses Panel Data Regression with Random Effect Model.*
Findings: *This study proves operating cash flow and leverage has a positive effect on financial distress, leverage and liquidity have a negative effect on financial distress. Sales growth does not affect financial distress. Other results, profitability as a moderating variable strengthens the effect of sales growth and operating cash flow on financial distress and profitability weakens effect of debt to asset ratio and liquidity on financial distress. Meanwhile, profitability does not moderate effect of leverage on financial distress.*
Practical implications*: This research contributes to development of literature on factors influence the occurrence of financial difficulties. Practically, it has implications for companies to analyze, maintain financial ratios in a healthy condition to avoid financial difficulties.*
Originality/value: *This study uses profitability that measured by return on assets as a moderating variable.*

KEYWORDS: *Cash Flow Operating; Financial Distress; Leverage; Liquidity; Sales Growth.*

ABSTRAK

Tujuan Penelitian: Penelitian bertujuan untuk mengetahui pengaruh leverage diukur dengan debt to asset ratio dan debt to equity ratio, likuiditas diukur dengan current ratio, sales growth, dan cash flow operating terhadap financial distress dengan profitabilitas diukur dengan return on asset sebagai variabel moderasi.
Metode/pendekatan: Objek penelitian adalah 54 perusahaan real estate yang terdaftar di S&P Capital IQ tahun 2017 – 2021. Pemilihan sampel menggunakan metode purposive sampling. Metode pengolahan data menggunakan Regresi Data Panel dengan Random Effect Model.
Hasil: Penelitian membuktikan leverage dan cash flow operating berpengaruh positif terhadap financial distress, sedangkan leverage dan likuiditas berpengaruh negatif terhadap financial distress. Sedangkan, sales growth tidak berpengaruh terhadap financial distress. Penelitian ini juga membuktikan profitabilitas sebagai variabel moderasi memperkuat pengaruh sales growth dan cash flow operating terhadap financial distress, sedangkan profitabilitas memperlemah pengaruh debt to asset ratio dan likuiditas terhadap financial distress. Sedangkan, profitabilitas tidak memoderasi pengaruh leverage terhadap financial distress.
Implikasi Praktik: Penelitian ini memberikan kontribusi pada perkembangan literatur tentang faktor-faktor yang mempengaruhi terjadinya kesulitan keuangan. Secara praktis penelitian ini memberi implikasi pada perusahaan perlu menganalisa, mempertahankan, menjaga rasio – rasio keuangan dalam keadaan sehat agar terhindar dari terjadinya kesulitan keuangan.
Orisinalitas/kebaharuan: Penelitian ini menggunakan profitabilitas yang diukur dengan return on asset sebagai variabel moderasi.

KATA KUNCI: *Cash Flow Operating; Financial Distress; Leverage; Likuiditas; Sales Growth.*

INTRODUCTION

The company tries and struggles to create good financial performance in order to be successful in overcoming highly selective competition as long as the company is established from year to year. Poor economic growth conditions can affect business activities and result in the possibility of companies facing financial difficulties due to a decline in financial performance. Financial difficulties indicate the entity's failure to pay off its obligations on time, so the company experiences low liquidity. This situation was experienced by the company before bankruptcy and was marked by the company's declining financial condition. The occurrence of financial difficulties is estimated by analyzing the entity's financial statements, cash flows, and company strategy (Sanbowo & Naibaho, 2021).

According to Wilujeng & Yulianto (2020), financial distress can occur when an entity is unable to manage financial stability so that it can cause operational losses and net losses for the current year. If the company does not make improvements in a better direction in two consecutive years, it will experience bankruptcy. Financial difficulties are caused by failure to pay off maturing debts because the entity is in financial trouble. Several factors cause financial distress, they are the company's failure to minimize operational costs which are getting bigger; liquidity is getting lower; and the uncertainty of receiving corporate income due to dependence on economic conditions (Annisa et al., 2022).

The phenomenon related to financial distress in relation to leverage is that the property giant from China, the Evergrande Group, is threatened with failure to pay off obligations amounting to US$300 billion (Rp 4,275 trillion). In addition, obligations of US$145 million, equivalent to Rp 2 trillion, have failed to be paid off by two of its subsidiaries (Wareza, 2021). Due to the addition of large amounts of debt, it can result in liquidity and cash flow experiencing great pressure. The percentage and decision on the amount of debt taken by the company need to be calculated properly, so the company's capital structure is strictly maintained (Hakim & Naelufar, 2020). Financial leverage arises when a company makes a decision to finance most of its assets with debt, which results in a fixed cost in the form of interest that must be paid by the entity. The company's failure to pay its obligations can be caused by an increasingly large total debt, which can result in the possibility of the company heading for bankruptcy if financial difficulties are not resolved (Juanda & Lamury, 2021).

The crisis of Chinese property giant Evergrande continues now with the Kaisa Group Holdings company, which is the 27th largest real estate company in China and has a large debt. It is said that it is impossible for the company to meet the target time for paying debts of US $ 400 million, which is equivalent to Rp 200.78 billion (Sorongan, 2021). It can occur due to the company being less careful in determining the amount of debt, which creates liquidity and decreases operating cash flow. If not resolved, bankruptcy can occur.

Another phenomenon related to financial distress that led to bankruptcy occurred in a property company from England that experienced a surge in bankruptcy due to rising interest rates and a decrease in potential buyers. Companies that take loans are among the most at risk because they may face financial difficulties and default (Triyani & Setyahuni, 2023). The company experienced a decrease or loss of revenue. Rent arrears reflect a state of financial difficulty, they are failures to pay off obligations due to a lack of prudence in making loan decisions. Companies that have survived to the present day are protected by government authorities (Shehnaz, 2022). In this study, the phenomenon is associated with sales growth because a decrease in sales does not necessarily cause financial distress or bankruptcy. The company can still survive and be sustainable even though there is a decrease in sales growth if it can manage its performance well (Rosyid et al., 2022).

The phenomenon related to the decline in sales growth has an impact on losses, it is the largest developer in Singapore, CapitaLand announced the biggest in 2020. Losses reaching S$1.57 billion, equivalent to US$1.2 billion, were the biggest losses since 2001. The loss was due to the COVID-19 pandemic, especially office and hotel assets. The decline in office rents in the Marina Bay and Raffles Place areas decreased by 10% in 2020, and companies did not continue the lease because several companies implemented a remote operational approach in turn. Citigroup Inc. and Mizuho Financial Group Inc. are two companies that decide employees work from home. In addition, there is a decision from United Overseas Bank Ltd. and DBS Group Holdings Ltd., which is the largest bank in Singapore, that employees will permanently work remotely (Lubis, 2021). Therefore, the revenue from the office rental decreased, which resulted in the company experiencing financial distress and substantial losses.

Job Market Signaling Theory sees most of the job market where companies want to select prospective employees who have criteria regarding education, previous work in the form of experience, race, gender, criminal record, etc. to determine the selected employees are qualified, able to work according to their expertise and have a productive ability for the progress of the company. The company or employer will assess and determine prospective workers based on the experience or strengths of the prospective workers. It is a positive signal, so the prospective workers selected by the company can make a positive contribution to the company. The company sees the decision to select prospective employees as an investment decision. Uncertainty in the quality of employees can be experienced by the company. Recruiting prospective employees within the company is like buying a lottery because the selected prospective employees do not necessarily make a positive contribution to the company. In most areas of the job market, the companies still doubt the abilities of their employees. Whereas people who want to apply for a job have uncertainty about the quality of work and work environment. For prospective workers or employees, it requires certainty of the quality of work received and whether the work received is in accordance with their abilities. For prospective workers, a company work environment is also needed that supports the work activities of employees (Spence, 1973).

Entity performance is very necessary, and it can be seen in analyzing useful financial reports regarding taking the right steps. Entities can be used to find out the occurrence of financial difficulties, and by looking at the existing financial statements, signs of financial difficulties experienced by the entity can be known earlier. If a company is in a state of financial difficulty and it is too late to take corrective steps, it may face bankruptcy (Pradana, 2020). Analysis of financial statements through financial ratios can predict the occurrence of financial distress, including through leverage, liquidity, profitability, and sales growth (Kusuma et al., 2022). Ratio analysis is carried out by company managers so that companies can find out earlier before financial distress occurs. For investors, this information can be useful in taking steps to make an investment or not, maintain the investment they already have, or stop investing. A healthy or unhealthy company can be seen by analyzing the ratios and financial performance of the entity.

Signaling theory shows that the steps are taken by management, they are useful in giving signals to investors to see the company's perspective (Brigham & Houston, 2019). Signaling theory is useful for describing information about a company's financial statements where it is expected that the company's financial statements are made according to actual conditions, as a reference for investors or the public who want to invest, and as a reference for seeing the sustainability of a company by calculating the profit and loss statement. The company is expected to know its performance from current and future financial statement

information. Financial distress conditions can be the indication of unfavorable signal by analyzing the company's financial statements. The principle of signaling theory is to prevent companies from carrying out earnings management by providing the company's financial statements to be invalid (Utami & Kartika, 2019).

Based on the opinion of Sanbowo & Naibaho (2021), that financial distress (FD) shows an entity in a weakened financial condition accompanied by a low level of liquidity and faces obstacles in paying off obligations on time. FD can be estimated through analysis of financial statements, company strategy, cash flow, can be used as an early clue before the occurrence of bankruptcy for company management and investors. Early clues are useful for motivating managers to prevent losses before deciding to invest and anticipate bankruptcy.

According to Syuhada et al., (2020), stated that leverage is one of the ratios capable of estimating financial difficulties that may occur. The entities with high debt ratios can be more easily affected by financial distress. The leverage ratio describes the company's success in paying off debt and describes how much the company uses debt. The greater amount of leverage in a company, the greater occurrence of financial difficulties. The results of research by Syuhada et al., (2020) suggest that leverage measurement using DAR proxies has a significant negative effect on financial distress.

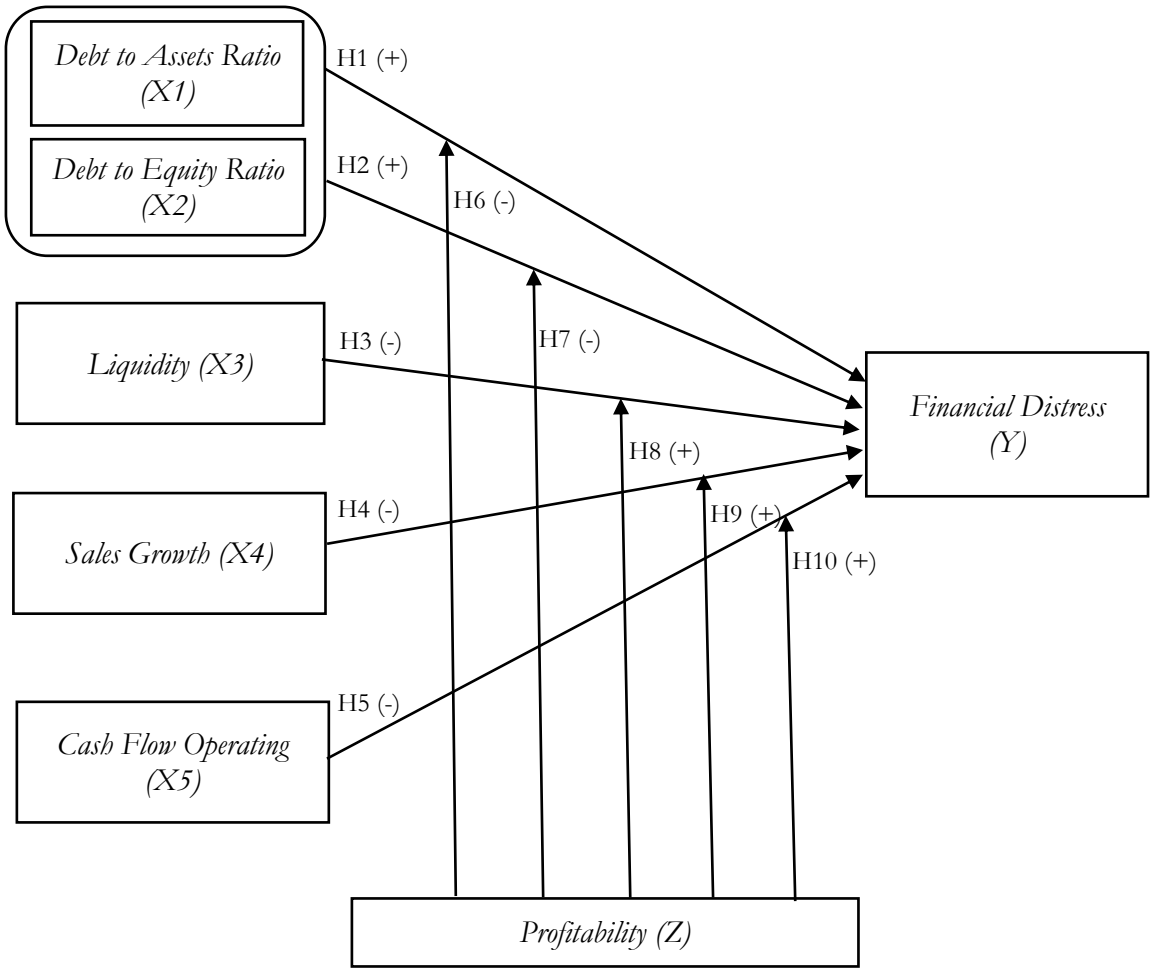
Based on the opinion of Dianova & Nahumury (2019), that leverage is the ratio to calculate how big an entity is to take alternative financing through debt. In measuring the leverage of this study, two proxies were used, they are the debt to equity ratio (DER) and the debt to asset ratio (DAR). DER is a ratio to calculate the entity's success in paying total liabilities to total equity. DAR is a measure to calculate the company's success in paying total liabilities, both short-term and long-term with total assets. Leverage levels above 60% are said to be risky. If the entity does not succeed in obtaining the desired benefits from alternative funding with debt, then the entity may experience the possibility of financial distress because the company must pay high interest as a result of the increase in the amount of debt and the loan principal that must be repaid. The results of research by Dianova & Nahumury (2019) suggest that leverage does not affect financial distress, meaning that the level of leverage does not affect the condition of financial distress.

This research was conducted to contribute to prevention before the occurrence of financial distress. In addition, the researchers want to know the effect of leverage, liquidity, sales growth, and cash flow operating on financial distress with profitability as a moderating variable. The reason for choosing profitability as the moderating variable is because the profit received by the entity can increase the total assets of the entity. If the company does not get a profit, so the company can pay its obligations using the total existing assets. Profitability is chosen to moderate the effect of leverage, liquidity, sales growth, cash flow operating on financial difficulties. However, the results of the study still have differences in the results.

The difference with previous research by Syuhada et al., (2020) is that researchers only take two independent variables, they are leverage and liquidity, from previous research. The previous studies used debt-to-asset ratio to calculate the leverage. In this study, researchers used two proxies, they are debt-to-asset ratio and debt-to-equity ratio, in calculating leverage. The researchers use additional independent variables, they are sales growth and operating cash flow. In previous studies, the dependent variable used was financial distress. The reference paper calculates financial distress as the dependent variable, it is the dummy variable, and uses logistic regression. The researchers use financial distress calculations as

the dependent variable, they are continuous variables using panel data regression. Calculation of financial difficulties is calculated with the Altman Z-Score. This study differs from previous research, if in this study uses the role of profitability in moderating the effect of leverage on financial distress.

Signaling theory shows that the steps was taken by management, they are useful in giving signals to investors to see the company's perspective (Brigham dan Houston, 2019). According to Isayas (2021), the leverage ratio describes how much an entity uses its obligations. The large amount of liabilities were accompanied by the high fixed cost of interest that must be paid will increase the possibility of financial difficulties occurring. The results of research from Isayas (2021) show that leverage measurement uses a debt to equity ratio (DER) proxy, it positively affects financial distress.



Source: Processed by the author (2022)

Figure 1. Conceptual Framework

According to Giarto & Fachrurrozie (2020), leverage shows how much a company's debt finances the company's operational activities. Total debt has increased, it means that the possibility of financial difficulties has also increased as a result of the company failing to pay its debts. The results of research by Giarto & Fachrurrozie (2020) suggest that measuring leverage using a debt to asset ratio (DAR) proxy positively affects financial distress.

According to Kurniasih et al., (2020), leverage is a ratio used to calculate an entity's success in paying off long-term debts. Financial distress occurs when an entity fails to pay its debts to creditors. The company is unable to maintain financial stability and manage its finances properly. An increase in total debt indicates that the entity is likely to experience financial difficulties. If a company fails to take the appropriate steps and is not careful in managing financial difficulties, it may lead to bankruptcy. The results of the study by Kurniasih et al., (2020) indicate that the measurement of leverage using the DER proxy has a significant positive influence on financial distress. Based on this explanation, the hypothesis is developed as follows :

H_1 : Debt to Asset Ratio has a positive effect on Financial Distress

H_2: Debt to Equity Ratio has a positive effect on Financial Distress

Signaling theory is useful for describing information about a company's financial statements where it is expected that the company's financial statements are made according to actual conditions as a reference for investors or the public who want to invest and as a reference for seeing the sustainability of a company by calculating the profit and loss statement.

Based on the opinion of Isayas (2021), that liquidity describes an entity's ability to pay off short-term debt at a predetermined time. Liquidity is as a sign to ascertain whether the company's finances are experiencing difficulties. The results of research by Isayas (2021) suggest that liquidity affects financial distress negatively and not significantly.

According to Annisa et al., (2022) suggest that liquidity describes a ratio to measure the ability of an entity to successfully repay short-term debts that are maturing. Cash is the most liquid current asset for the success of paying debts quickly. If the liquidity increases, so the entity's ability to pay off debt also increases, so it is a positive signal that the entity is in good health. The results of research by Annisa et al., (2022), liquidity affects financial distress negatively. If the entity's liquidity increases, it means that the possibility of experiencing financial difficulties also decreases. Based on this explanation, the hypothesis is developed as follows :

H_3 : Liquidity has a negative effect on Financial Distress

Signaling theory is useful for describing information about a company's financial statements where it is expected that the company's financial statements are made according to actual conditions as a reference for investors or the public who want to invest and as a reference for seeing the sustainability of a company by calculating the profit and loss statement.

Based on the statement of Giarto & Fachrurrozie (2020), stated that sales growth describes a decrease or increase in company sales in a certain year. The increase in sales growth is achieved by the company, it shows the company's success in performance and good opportunities in the future. The high sales growth can indicate a positive signal for investors when making decisions on their capital investment in the entity. Conversely, if the

company experiences a decline in sales growth, it can indicate a negative signal to investors where the company fails to achieve good company performance. The results of research by Giarto & Fachrurrozie (2020) suggest that sales growth does not significantly affect financial distress. The results of research by Pranita & Kristanti (2020) that sales growth affects financial distress significantly negatively. Based on this explanation, the hypothesis is developed as follows :

H_4 : Sales Growth has a negative effect on Financial Distress

Signaling theory is expected to be useful and show indications of a company in a healthy or unhealthy condition for making investment decisions for investors or potential investors. Signaling theory explains about Financial reports give positive signals and negative signals for the wearer.

The results of research by Phan et al., (2022) that operating cash flow negatively affects financial distress. If the entity's cash flow increases, it means that the greater sustainability of the entity's business and the less likely, it is that financial difficulties will occur. According to Gunawan et al., (2019), cash flow can provide clues to see the possibility of financial distress. If the expenditure in the cash flow exceeds the receipt of the cash flow, it means that an imbalance can result in financial difficulties that are likely to occur. Negative operating cash flows cause the entity to require additional sources of funds. The results of research by Gunawan et al., (2019) that operating cash flow negatively affects financial distress. Increased operating cash flow, which means that the possibility of the entity requiring additional funding costs will also decrease, so there is less possibility of financial difficulties. The results of research by Giarto & Fachrurrozie (2020) that cash flow affects financial distress significantly negatively. The entity's operating cash flow increases, meaning that the possibility of financial difficulties also decreases.

H_5 : Cash Flow Operating has a negative effect on Financial Distress

According to Idawati & Wardhana (2021), leverage shows how much an entity depends on debt in financing company activities. The success of the profitability achieved by the entity can be a signal that it has reduced the leverage level of the entity and reduced the possibility of financial distress. The results of Idawati & Wardhana's research (2021) show that profitability is not able to moderate the influence of leverage as measured through the DER proxy for FD.

If the profitability is greater, it will reduce the possibility of company uses the external sources of funds, it is debt, thereby affecting financial difficulties which are less likely to occur. The profit achieved by the entity is getting lower, meaning that the company is less likely to be able to maintain profits in an effort to increase equity. When there are insufficient internal funding sources, it means that companies must look for alternative external funding, one of which is debt. The greater the obligation, the greater the possibility of financial difficulties (Kurniasih et al., 2020). Great profitability can weaken the effect of leverage on FD.

The leverage ratio describes how much the entity uses its obligations. The higher of the liability, so the higher of the interest expense. The possibility of financial distress is greater when the entity's leverage level increases. The profitability ratio describes the company's achievement in obtaining profits. The declining profitability causes the company to have financial difficulties which can result in the possibility of bankruptcy being greater for the company (Isayas, 2021).

High profitability has been achieved by the company, it is able to describe good financial performance. The great profitability can increase the company's ability to pay its obligations, so there is less possibility of financial difficulties (Wilujeng & Yulianto, 2020). The greater the profitability, the influence of leverage on financial distress decreases.

H_6 : Profitability weakens the effect of the Debt to Asset Ratio on Financial Distress

H_7 : Profitability weakens the effect of the Debt to Equity Ratio on Financial Distress

Signaling theory can provide an overview of signals by analyzing ratios in order to be able to predict or find out whether a company enters a state of financial distress or is headed for bankruptcy by conducting ratio analysis to determine the health condition of the company. According to Idawati & Wardhana (2021), liquidity is a ratio to calculate how much the company is liquid, which means that it shows the success of entity in paying off short-term debt. The higher of liquidity is achieved by the entity, the better company's financial performance and the lower the possibility of financial difficulties. Large profitability can be used by the company for success in paying obligations, operating activities and paying company dividends, so financial distress may decrease. Idawati & Wardhana (2021) suggest that profitability weakens the effect of liquidity on financial distress (FD).

The liquidity ratio is a measure of entity's ability to pay off short-term debt and looks at the health condition of entity (Syuhada et al., 2020). The profitability shows the company's success in getting profits. A decrease in company profits can result in a smaller company being able to maintain profits to increase equity. When the company does not have sufficient internal funding sources, it means that the company must find alternative external funding sources, it is with debt. If an entity increases debt, it will affect a decrease in company liquidity where the company can fail to pay off short-term debt which results in more likely financial difficulties to occur (Kurniasih et al., 2020). Great profitability supports higher company liquidity so that there is a possibility of a decrease in financial distress.

H_8 : Profitability strengthens the effect of Liquidity on Financial Distress

The profitability principle of signaling theory to avoid companies doing earnings management by providing company financial reports is invalid describes the success of entity in achieving the desired profit, so there is a possibility of a decrease in financial distress (Agustini & Wirawati, 2019). The increase in profitability can be used by the company to increase sales growth by innovating, developing, and product differentiation, so the company can compete and survive in its business. The higher of sales growth that can be achieved by the company, it means that a decrease in financial distress is likely to occur. Profitability is able to strengthen the influence of sales growth on financial distress (FD).

The growth ratio describes the number of sales achieved by the company. If sales growth increases, it means that indicates that the profits achieved have increased, it has an impact on company stability and financial distress is also getting smaller. Low profitability shows that the company's achievements in management efficiency and asset management are not good, it has an impact on the profits achieved and does not cover investment expenses. The companies will experience greater financial distress (Kusuma et al., 2022). The great profitability can support increased sales and decrease the occurrence of financial distress. The profitability is able to strengthen the effect of sales growth on financial distress.

H_9 : Profitability strengthens the effect of Sales Growth on Financial Distress

Operating cash flow can be seen to assess the company's financial health. Meanwhile, signaling theory is useful for describing information about the company's financial statements, where the company's financial statements should be made in accordance with actual conditions. It is a reference for investors or the public who want to invest, and besides that, it is useful as a reference to see the sustainability of a company by calculating the state of the income statement. If there is an increase in operational cash flow, it means that financial health will be better and the company will reduce the amount of credit taken. Cash flows from operating activities can be seen from the impact of possibility from financial distress (FD). The company's operating cash flow increases, so the company manages to pay its current liabilities, it causes FD to decrease (Phan et al., 2022). The profitability ratio describes the company's success in making profits, low profitability will result in a higher possibility of financial distress and increase the chance of bankruptcy (Isayas, 2021). Large profitability can increase operating cash flow, so the financial distress is less likely to occur. Large profitability can strengthen the effect of operating cash flow on financial distress.

Operating cash flow is an indication of whether the entity is successful in paying debts, dividends, carrying out operational activities, and carrying out new investments from operational activities. The operating cash flow describes the company's ability to pay off current debt by utilizing net cash flow. If operating cash flow increases, it means that the company is increasingly successful in paying off all its obligations, so the possibility of financial distress decreases. The profitability ratio is a ratio for calculating management effectiveness by looking at the profit achieved by the entity. If the achievement of company profitability increases, it means that the company's financial ability to pay off all its obligations and operational needs also increases, thus financial distress is also getting smaller (Sudaryanti & Dinar, 2019). Profitability strengthens the effect of operating cash flow on financial distress.

H_{10} : Profitability strengthens the influence of Cash Flow Operating on Financial Distress.

METHOD

This research is quantitative research. This study uses secondary data sources in the form company financial statements. Data related to financial performance taken from S&P Capital IQ. The study uses a population of real estate sector companies listed on S&P Capital IQ for 2017–2021. The criteria for selecting the research sample using the purposive sampling method were: (1) Companies in the ASEAN real estate sector listed on S&P Capital IQ in the period 2017 – 2021. (2) Companies in the real estate sector that have an IPO Date. (3) Companies in the real estate sector that have exist financial data throughout the period 2017 – 2021. The sample selection result in 270 samples from 54 companies consist of 22 Singaporean, 22 Malaysian, 4 Indonesian, 3 Thailand, 2 Philippines, and 1 Vietnam.

The research model uses random effect model (REM) with panel data regression analysis which involves one dependent variable, five independent variables, and four controls variables. This study uses 4 methods which as follows: (1) Descriptive Statistics Test, (2) Pairwise Correlation Analysis, (3) Classical Assumption Test, (4) Determination Coefficient Test (R^2), F Statistics Test, and T Statistics Test. The research model uses two regression

models to be estimated. The first regression model is used to test the effect of leverage, liquidity, sales growth, and cash flow operating on financial distress without a moderating effect:

Model 1

$$FD_{it} = \alpha_0 + \beta_1 DAR_{it} + \beta_2 DER_{it} + \beta_3 LIQ_{it} + \beta_4 SG_{it} + \beta_5 CFO_{it} + \beta_6 EPS_{it} + \beta_7 SIZE_{it} + \beta_8 AGE_{it} + \beta_9 COVID_{it} + e_{it}$$

Meanwhile, the second regression model is used to test the effect of leverage, liquidity, sales growth, and cash flow operating on financial distress with profitability as moderating.

Model 2

$$FD_{it} = \alpha_0 + \beta_1 DAR_{it} + \beta_2 DER_{it} + \beta_3 LIQ_{it} + \beta_4 SG_{it} + \beta_5 CFO_{it} + \beta_6 PROF_{it} + \beta_7 DAR^{*}PROF_{it} + \beta_8 DER^{*}PROF_{it} + \beta_9 LIQ^{*}PROF_{it} + \beta_{10} SG^{*}PROF_{it} + \beta_{11} CFO^{*}PROF_{it} + \beta_{12} EPS_{it} + \beta_{13} SIZE_{it} + \beta_{14} AGE_{it} + \beta_{15} COVID_{it} + e_{it}$$

Description:

α	: *Constant*
$\beta_{1,2\ldots,15}$	: *Coefficient Regression*
FD	: *Financial Distress*
DAR	: *Debt to Asset Ratio*
DER	: *Debt to Equity Ratio*
LIQ	: *Liquidity*
SG	: *Sales Growth*
CFO	: *Cash Flow Operating*
PROF	: *Profitability*
$DAR^{*}PROF$	: *Interaction between Debt to Asset Ratio and Profitability*
$DER^{*}PROF$	: *Interaction between Debt to Equity Ratio and Profitability*
$LIQ^{*}PROF$	: *Interaction between Liquidity and Profitability*
$SG^{*}PROF$	: *Interaction between Sales Growth and Profitability*
$CFO^{*}PROF$	: *Interaction between Cash Flow Operating and Profitability*
EPS	: *Earnings per share*
AGE	: *Company Age*
SIZE	: *Company Size*
COVID	: *Covid-19 for dummy variable*
E	: *Error*

The following mentions how to measure the variables used in this study.

Type of Variable	Name of Variable	Formula	References
Dependent Variable	Financial Distress (FD)	Z = 1.2X1 + 1.4X2 + 3.3X3 + 0.6X4 + 1.0X5 Cut-off Value: Z > 2.99 : *Safe Zone* 1.81 < Z < 2.99 : *Grey Area* Z > 1.81 = *Distress Zone*	(Gunawan et al., 2019)
Independent Variable	Debt to Asset Ratio	$DAR = \frac{Total\ Liabilities}{Total\ Assets}$	(Wilujeng & Yulianto, 2020)
	Debt to Equity Ratio (DER)	$DER = \frac{Total\ Liabilities}{Total\ Equity}$	(Idawati & Wardhana, 2021)
	Liquidity (LIQ)	$CR = \frac{Current\ Assets}{Current\ Liabilities}$	(Dianova & Nahumury, 2019)
	Sales Growth (SG)	$SG = \frac{Sales_t - Sales_{t-1}}{Sales_{t-1}}$	(Dianova & Nahumury, 2019)
	Cash Flow Operating (CFO)	$CFO = \frac{Cash\ Flow\ Operating}{Current\ Liabilities}$	(Sudaryanti & Dinar, 2019)
Moderating Variable	Profitability (PROF)	$ROA = \frac{Earnings\ After\ Tax}{Total\ Assets}$	(Wilujeng & Yulianto, 2020)
Control Variable	Earnings per Share (EPS)	$EPS = \frac{Net\ Income}{Shares\ Outstanding}$	(Murni, 2018)
	Company Size	*SIZE* = *Ln* (*Total Assets*)	(Syuhada et al., 2020)
	Company Age	*AGE* = Research Year –Company's IPO Year	(Sanbowo & Naibaho, 2021)
	COVID	Periods of financial statement that are included during the period of COVID-19 (2020 – 2021) will be given value of 1, while for periods of financial statement that are not included in the period of COVID-19 (2017 – 2019) will be given value of 0.	(Wang et al., 2020)

Source: Processed by the author (2022)

Table 1. Operational Variable

RESULTS AND DISCUSSION

Description of Research Data

Criteria	Amount
Companies real estate in ASEAN countries listed on S&P Capital IQ 2017 - 2021.	556
(-) Real estate sector company whose IPO date is unknown	(303)
(-) Real estate sector companies that do not have complete financial data	(193)
The number of sample companies	60
The number of years of observation (5 Years)	300
(-) Data *Outlier*	(30)
The number of data samples	**270**

Table 2. Research Data Selection

Source: Processed by the author (2022)

Descriptive Statistics Test

Variable	Obs	Mean	Std. Dev.	Min	Max
FD	270	1.5162	1.1246	-0.8879	7.9986
DAR	270	0.3413	0.1168	0.0488	0.6290
DER	270	0.7254	0.4880	0.0788	2.9241
LIQ	270	1.6697	1.4705	0.0229	9.6647
SG	270	0.3129	2.8082	-1.0153	37.7434
CFO	270	0.8946	2.5739	-3.2026	21.2477
PROF	270	0.0284	0.0482	-0.3363	0.2033
EPS	270	0.0376	0.0703	-0.3199	0.4086
SIZE	270	20.6219	1.2768	16.4428	23.9143
AGE	270	10.2037	5.6390	0.0000	28.0000
COVID	270	0.4000	0.4908	0.0000	1.0000

Table 3. Descriptive Statistics Test Result

Source: Processed by the author using STATA 16 (2022)

Correlation Test Analysis

Correlation analysis is used to see the relationship between the independent and independent variables, and the relationship between the independent and dependent variables studied in this study with the Altman Z-Score value which is a proxy for the Financial Distress (FD) variable.

	FD	DAR	DER	LIQ	SG	CFO	PROF
FD	1.0000						
DAR	-0.5768***	1.0000					
DER	-0.4462***	0.8532***	1.0000				
LIQ	0.2851***	-0.2162***	-0.0981	1.0000			
SG	0.0559	0.0215	0.0215	0.0353	1.0000		
CFO	-0.0477	-0.1229**	-0.1619***	0.2647***	-0.0036	1.0000	
PROF	0.5007***	-0.2571***	-0.2809***	0.0896	0.0995	0.1333**	1.0000
EPS	0.2838***	-0.1407**	-0.1381**	-0.0865	0.0162	0.0101	0.5537***
SIZE	-0.1692***	0.1270**	0.1250**	-0.2319***	-0.1455**	-0.1750***	0.0446
AGE	-0.1748***	0.0811	0.1390**	-0.0750	-0.0639	-0.1951***	-0.1561**
COVID	-0.2087***	0.0867	0.0937	-0.1065*	-0.0616	-0.0191	-0.3127***

	EPS	SIZE	AGE	COVID
EPS	1.0000			
SIZE	0.3795***	1.0000		
AGE	0.1301**	0.2852***	1.0000	
COVID	-0.1489**	0.0481	-0.2176***	1.0000

***, **, *, significant at the 0.01 (1%), 0.05 (5%), and 0.10 (10%) levels respectively.

Table 4. Correlation Test (Pairwise Correlation)

Source: Processed by the author using STATA 16 (2022)

Referring the results, the correlation coefficient value of DAR is -0.5768, DER is -0.4462, and LIQ is 0.2851 on Financial Distress (FD) which is significant at the 0.01 level (1%), whereas SG has a correlation coefficient is 0.0559 and CFO has a correlation coefficient is -0.0477 on Financial Distress (FD) but does not show significant at the 0.10 level (10%). Based on the results, it indicates there is no multicollinearity problem because the correlation coefficient of independent variable with independent variable no exceeds > 0.85.

Panel Regression Model Selection Test

There are three model approaches in panel regression analysis, they include the Common Effect Model (Pooled Least Square), Fixed Effect Model (FEM), and Random Effect Model (REM). The three model choices, the most appropriate model is determined to predict the parameters in the regression model (Trisnawati, 2021). Determination of the best regression model approach is the one that fits the research data through several tests such as the Chow Test, Hausman Test and Lagrange Multiplier Test.

No	Testing	Test Result	Conclusion	Selected Models
Regression Model 1				
1	Uji *Chow*	Prob = 0.0000	Between CE and FE, choose FE	*RE (Random Effect)*
2	Uji *Hausman*	Prob = 0.0823	Between RE and FE, choose RE	
3	Uji Lagrange Multiplier	Prob = 0.0000	Between CE and RE, choose RE	
Regression Model 2				
1	Uji *Chow*	Prob = 0.0000	Between CE and FE, choose FE	*RE (Random Effect)*
2	Uji *Hausman*	Prob = 0.9927	Between RE and FE, choose RE	
3	Uji Lagrange Multiplier	Prob = 0.0000	Between CE and RE, choose RE	

Table 5. Results of Testing The Regression Model

Source: Processed by the author using STATA 16 (2022)

According to the summary of results from the regression model selection test using the Chow Test, Hausman Test, and Lagrange Multiplier Test, it is found that in both 1 and 2 regression equations, the best model for estimating the parameters of the 1 and 2 regression models is the Random Effect Model. Thus, testing the influence between variables in the 1 and 2 regression models will be carried out referring to the results of the 1 and 2 regression models.

Classical Assumption Test

The classical assumption test in panel regression analysis aims to make the regression model meet the BLUE (Best Linear Unbiased Estimate) assumption or the regression model produces unbiased analysis results.

Normality Test

The distribution of residual regression data is not normal in panel regression, normality is not a normality requirement. However, if researchers want to see the distribution of data, then this test can be done.

Table 6. Normality Test Results

Model	Variable	Obs	Pr(Skewness)	Pr(Kurtosis)	adj chi2(2)	Prob>chi2
1	FD	270	0.0000	0.0000	.	0.0000
2	FD	270	0.0000	0.0000	.	0.0000

Source: Processed by the author using STATA 16 (2022)

Table 7. Normality Test Results With Box-Cox Treatment

Model	Variable	Obs	Pr(Skewness)	Pr(Kurtosis)	adj chi2(2)	Prob>chi2
1	bc_FD	270	0.9999	0.0217	5.31	0.0705
2	bc_FD	270	0.9999	0.0217	5.31	0.0705

Source: Processed by the author using STATA 16 (2022)

In this study using Skewness/Kurtosis Test for Normality. Referring the result Table 6 shows that Prob>chi2 = 0.0000 which indicates the data, it is not normally distributed. The researcher conducted a Box-Cox Treatment of the dependent variable, so the skewness of the dependent variable became 0. Based on Table 7, the first and second regression models show that the dependent variable has a probability value of 0.0705. This illustrates that after doing Box-Cox Treatment, the data has been normally distributed because the value (prob > chi2) is more than 0.05 (> 0.05).

Multicollinearity Test

The multicollinearity test aims to detect correlations between independent variables by measuring the VIF value. The multicollinearity test table is shown in Table 8 below:
Based on Table 8, regression model 1 has an average VIF (mean VIF) of 9.67. This value is on average VIF < 10, but for each variable, namely DAR, SIZE, and DER there is a VIF > 10 so that multicollinearity problem.

Table 8. Multicollinearity Test Results Model 1

Model	Variable	VIF	1/VIF
1	DAR	37.49	0.0267
	SIZE	23.84	0.0419
	DER	12.37	0.0809
	AGE	5.07	0.1971
	LIQ	2.62	0.3815
	COVID	1.85	0.5416
	EPS	1.48	0.6742
	CFO	1.28	0.7797
	SG	1.02	0.9782
Mean VIF		**9.67**	

Source: Processed by the author using STATA 16 (2022)

Model	Variable	VIF	1/VIF
2	DAR	47.22	0.0212
	DAR*PROF	44.61	0.0224
	SIZE	31.09	0.0322
	PROF	21.76	0.0460
	DER*PROF	16.59	0.0603
	DER	13.85	0.0722
	CFO*PROF	12.66	0.0790
	CFO	12.46	0.0802
	AGE	5.26	0.1902
	SG*PROF	5.22	0.1916
	SG	5.16	0.1940
	LIQ*PROF	4.77	0.2098
	LIQ	4.54	0.2205
	EPS	2.29	0.4373
	COVID	1.97	0.5071
Mean VIF		**15.30**	

Source: Processed by the author using STATA 16 (2022)

Table 9. Multicollinearity Test Results Model 2

According to Table 9, it is known that regression model 2 with the moderating variable has an average VIF (mean VIF) of 15.30. Researchers use the Random Effect, namely "vif, uncentered". This value is on average VIF > 10, resulting in a multicollinearity problem. Regression model 2 the occurrence of interaction variables that can result in high multicollinearity. Therefore, researchers use the centering process with the syntax "generate a new variable name = variable name - r(mean)".

Model	Variabel	VIF	1/VIF
2	DAR*PROF_C	36.79	0.0272
	PROF_C	16.48	0.0607
	DER*PROF_C	15.07	0.0663
	CFO*PROF_C	11.55	0.0866
	CFO_C	11.19	0.0893
	SG*PROF	5.24	0.1909
	SG	5.15	0.1941
	DAR_C	4.92	0.2034
	LIQ*PROF	4.78	0.2091
	DER_C	4.28	0.2335
	LIQ	4.20	0.2382
	AGE	3.19	0.3136
	EPS	2.46	0.4066
	COVID	1.86	0.5363
	SIZE_C	1.39	0.7207
Mean VIF		**8.57**	

Table 10. Multicollinearity Test Results Model 2 With Centering Treatment

Source: Processed by the author using STATA 16 (2022)

Researchers carried out the centering treatment process in multicollinearity testing. Based on Table 10, regression model 2 with moderating variables after the centering process has an average VIF (mean VIF) of 8.57. This value is on average VIF < 10, but for each variable, namely DAR*PROF_C, PROF_C, DER*PROF_C, CFO*PROF_C, and CFO_C, there is a VIF > 10 so that after the centering treatment, multicollinearity problems occur.

Heteroscedasticity Test

The heteroscedasticity test uses the Wald test. This model contains heteroscedasticity if probability < 0.05, but if probability > 0.05, it means that the model does not have heteroscedasticity problems.

Regression Model	Results	Conclusion
1	Prob = 0.0000; Chibar2 = 78007.13	Heteroskedasticity
2	Prob = 0.0000; Chibar2 = 10877.13	Heteroskedasticity

Description:

Regression Model 1 : $\boldsymbol{FD_{it}} = \boldsymbol{\alpha_0} + \boldsymbol{\beta_1 DAR_{it}} + \boldsymbol{\beta_2 DER_{it}} + \boldsymbol{\beta_3 LIQ_{it}} + \boldsymbol{\beta_4 SG_{it}} + \boldsymbol{\beta_5 CFO_{it}} + \boldsymbol{\beta_6 EPS_{it}} + \boldsymbol{\beta_7 SIZE_{it}} + \boldsymbol{\beta_8 AGE_{it}} + \boldsymbol{\beta_9 COVID_{it}} + \boldsymbol{e_{it}}$

Regression Model 2 : $\boldsymbol{FD_{it}} = \boldsymbol{\alpha_0} + \boldsymbol{\beta_1 DAR_{it}} + \boldsymbol{\beta_2 DER_{it}} + \boldsymbol{\beta_3 LIQ_{it}} + \boldsymbol{\beta_4 SG_{it}} + \boldsymbol{\beta_5 CFO_{it}} + \boldsymbol{\beta_6 PROF_{it}} + \boldsymbol{\beta_7 DAR^{*} PROF_{it}} + \boldsymbol{\beta_8 DER^{*} PROF_{it}} + \boldsymbol{\beta_9 LIQ^{*} PROF_{it}} + \boldsymbol{\beta_{10} SG^{*} PROF_{it}} + \boldsymbol{\beta_{11} CFO^{*} PROF_{it}} + \boldsymbol{\beta_{12} EPS_{it}} + \boldsymbol{\beta_{13} SIZE_{it}} + \boldsymbol{\beta_{14} AGE_{it}} + \boldsymbol{\beta_{15} COVID_{it}} + \boldsymbol{e_{it}}$

Table 11. Heteroskedasticity Test Results

Source: Processed by the author using STATA 16 (2022)

Regression Model	Results	Conclusion
1	Prob = 0.0018; F [1,53] = 10.751	Autocorrelation
2	Prob = 0.0000; F [1,53] = 25.807	Autocorrelation

Description :

Regression Model 1 : $\boldsymbol{FD_{it}} = \boldsymbol{\alpha_0} + \boldsymbol{\beta_1 DAR_{it}} + \boldsymbol{\beta_2 DER_{it}} + \boldsymbol{\beta_3 LIQ_{it}} + \boldsymbol{\beta_4 SG_{it}} + \boldsymbol{\beta_5 CFO_{it}} + \boldsymbol{\beta_6 EPS_{it}} + \boldsymbol{\beta_7 SIZE_{it}} + \boldsymbol{\beta_8 AGE_{it}} + \boldsymbol{\beta_9 COVID_{it}} + \boldsymbol{e_{it}}$

Regression Model 2 : $\boldsymbol{FD_{it}} = \boldsymbol{\alpha_0} + \boldsymbol{\beta_1 DAR_{it}} + \boldsymbol{\beta_2 DER_{it}} + \boldsymbol{\beta_3 LIQ_{it}} + \boldsymbol{\beta_4 SG_{it}} + \boldsymbol{\beta_5 CFO_{it}} + \boldsymbol{\beta_6 PROF_{it}} + \boldsymbol{\beta_7 DAR^{*} PROF_{it}} + \boldsymbol{\beta_8 DER^{*} PROF_{it}} + \boldsymbol{\beta_9 LIQ^{*} PROF_{it}} + \boldsymbol{\beta_{10} SG^{*} PROF_{it}} + \boldsymbol{\beta_{11} CFO^{*} PROF_{it}} + \boldsymbol{\beta_{12} EPS_{it}} + \boldsymbol{\beta_{13} SIZE_{it}} + \boldsymbol{\beta_{14} AGE_{it}} + \boldsymbol{\beta_{15} COVID_{it}} + \boldsymbol{e_{it}}$

Table 12. Autocorrelation Test Results

Source: Processed by the author using STATA 16 (2022)

It is known that regression model 1 and regression model 2 occur heteroscedasticity. It is indicated by the probability value of the Wald test in regression model 1 of 0.0000 and in regression model 2 of 0.0000. According to the results of heteroscedasticity test above, the conclusion is that the regression model does not meet the heteroscedasticity test, so in this study, both regression model 1 and 2 will be estimated using the Random Effects model uses the GLS technique which will be carried out in the T test (Hoechle, 2007).

Autocorrelation Test

The autocorrelation test uses the Wooldridge test. The regression model states that there is no autocorrelation problem if the probability value is > 0.05.

According to the results of the autocorrelation test in Table 12, it is known that the regression model 1 and regression model 2 have autocorrelation. It is shown from the probability value of the Wooldridge test in the first regression model of 0.0018 and in the second regression model of 0.0000. The conclusion is that the regression model does not fulfill the autocorrelation test, so in this study both regression models 1 and 2 will be estimated using the Random Effects model which is carried out using the GLS technique which will be carried out in the T test (Hoechle, 2007).

The results of R-Squared is 52.07% which means company's FD variance is influenced by all the independent variables selected in this model, the remaining 47.93% of the FD variance is influenced by other factors beyond all the independent variables in this model, while the R-Squared after the moderating variable is 57.31%, it means that the company's FD variance is influenced by all the independent variables selected in this model, the remaining 42.69% of the FD variance is influenced by other factors of all the independent variables in this model.

Determination Coefficient Test (R^2)

Table 13. Determination Coefficient Test (R2)

Regression Model	*R-Squared*
1	R-sq = 0.5207
2	R-sq = 0.5731

Source: Processed by the author using STATA 16 (2022)

F Statistic Test

Table 14. F Statistic Test

Regression Model	Prob *Wald Test*
1	Prob > chi2 = 0.0000
2	Prob > chi2 = 0.0000

Source: Processed by the author using STATA 16 (2022)

The results of Prob Wald Test before moderating variable (Regression Model 1) and after moderating variable (Regression Model 2) is 0.0000 less than 0.01 (< 0.01), it means that the simultaneous effect of all independent variables on the dependent variable is significant at α = 1%, it means this research model valid.

T Statistic Test

Testing the influence between variables will be tested using panel regression analysis uses the Random Effects model, which is carried out using the GLS (Generalized Least Squares) technique. The results of selection from the regression model chose Random Effect as the best model. However, violations of the heteroscedasticity test and autocorrelation test occurred. Thus, it is necessary to do treatment in the form of FGLS (Feasible Generalized Least Squares) technique with xtgls syntax (Hoechle, 2007). The results of analysis include the results of partial effect test (T test).

Model 1 was conducted to examine the leverage relationship measured using the debt-to-asset ratio and debt-to-equity ratio, liquidity, sales growth, and cash flow operating in financial distress (hypotheses 1, 2, 3, 4, and 5). The focus of the discussion is on the DAR variable for Hypothesis 1, the DER variable for Hypothesis 2, the LIQ variable for Hypothesis 3, the SG variable for Hypothesis 4, and the CFO variable for Hypothesis 5.

Model 2 was carried out to examine profitability as a moderating variable for the influence of leverage as measured using the debt-to-asset ratio and debt-to-equity ratio, liquidity, sales growth, and cash flow operating in financial distress (hypotheses 6, 7, 8, 9, and 10). The focus of the discussion is on the DAR*PROF variable for Hypothesis 6, the DER*PROF variable for Hypothesis 7, the LIQ*PROF variable for Hypothesis 8, the SG*PROF variable for Hypothesis 9, and the CFO*PROF variable for Hypothesis 10.

Table 15. Summary of Hypothesis Test Results

Hypothesis	Coef.	P > | z | *Two-Tailed*	P > | z | *One-Tailed*	Conclusion	Sig.
H1	-5.7144	0.000	0.000	Accepted	***α*** = 1%
H2	0.3138	0.109	0.0545	Rejected	***α*** = 10%
H3	0.1490	0.000	0.000	Accepted	***α*** = 1%
H4	0.0056	0.746	0.373	Rejected	No Significant
H5	-0.0936	0.000	0.000	Rejected	***α*** = 1%
H6	-48.3361	0.001	0.0005	Accepted	***α*** = 1%
H7	3.1836	0.395	0.1976	Rejected	No Significant
H8	-1.1622	0.124	0.062	Rejected	***α*** = 10%
H9	0.6395	0.193	0.0965	Accepted	***α*** = 10%
H10	3.5743	0.002	0.001	Accepted	***α*** = 1%

Sorce: Processed by the author (2022)

DISCUSSION

The Effect of Leverage on Financial Distress

The greater company's total debt, the greater bank loan interest expense, which becomes the company's fixed cost. It will increase the possibility of the company experiencing financial distress. If there is a recession, a pandemic, or other factors that cause a company to fail to achieve its sales target, thereby affecting the stability of earning profits, then companies that have substantial debt will be affected first because of the loan interest expense that must be paid. The company tries to avoid the occurrence of FD because it realizes that the company's debt-to-asset ratio has a significant influence on the occurrence of FD. Judging from the phenomenon that occurs, companies experience FD due to having a very large amount of debt. If it cannot be resolved, the company will go bankrupt.

The results of this study show that DAR affects FD positively. The results of this study strengthen the research of Giarto & Fachrurrozie (2020) and Agustini & Wirawati (2019) which say that leverage affects FD positively; thus if the company's debt-to-asset ratio increases, the possibility of FD also increases.

The results of this study state that the debt to equity ratio has a negative effect on financial distress. The results of this study strengthen the research of Wilujeng & Yulianto (2020) and Syuhada et al., (2020) which says that leverage affects FD negatively, which means that if the company's total debt increases, it means that the possibility of financial distress will decrease.

The Effect of Liquidity on Financial Distress

Liquidity (LIQ) has a negative effect on financial distress (FD), it means that the higher the company's liquidity, the lower probability that the company will experience FD. Companies with healthy liquidity are seen from the current ratio, so the company is considered capable of paying off its current liabilities so that the possibility of the company experiencing financial distress will be low.

The results of this study indicate that liquidity affects financial distress negatively. The results of this study strengthen the research of Annisa et al., (2022) and Kurniasih et al., (2020) which says that liquidity has a negative effect on financial distress.

The Effect of Sales Growth on Financial Distress

Sales growth (SG) does not affect financial distress (FD). The decline in sales growth does not necessarily affect the occurrence of FD. It is possible that the company is still able to pay current liabilities with a good current ratio and sufficient equity. A decrease in sales growth can be seen in a declining profit level, but the company does not necessarily experience financial distress.

The results of this study state that sales growth does not affect financial distress. Thus the results of the study corroborate the research by Agustini & Wirawati (2019), Oktaviani & Lisiantara (2022), Dianova & Nahumury (2019), and Giarto & Fachrurrozie (2020) stating that sales growth does not affect financial distress.

The Effect of Cash Flow Operating on Financial Distress

The CFO variable shows the results of testing from the fifth hypothesis, it happens because the effect of operating cash flow (CFO) that affects financial distress (FD) positively, it means that an increase in operating cash flow causes the possibility of a company experiencing financial distress also increases. The greater of operating cash flow, it means that the likelihood of FD also increases. The price per share becomes non-existent, it could be because the company may not trade for several years. In addition, there is also unhealthy liquidity as seen from the decreasing current ratio, which can result in the company being less able to pay off its current obligations within a predetermined period of time. When a company is less able to meet its current obligations, the likelihood of company experiencing financial difficulties also increases.

The results of this study indicate that operating cash flow affects financial distress positively. The results of this study differ from those of Syuhada et al., (2020), Phan et al., (2022), Gunawan et al., (2019), and Giarto & Fachrurrozie (2020) who say cash flow affects financial distress significantly negatively. Sudaryanti & Dinar (2019) said that cash flow had no significant effect on financial distress.

The Role of Profitability in Moderating the Effect of Leverage on Financial Distress

Based on the results of testing from the sixth hypothesis of DAR*PROF variable, it shows that profitability (PROF) weakens the effect of the debt to asset ratio (DAR) on financial distress (FD). In addition, the profitability generated by the company, it can reduce the influence of DAR on FD. The resulting profitability is expected to be able to pay the total short-term and long-term liabilities along with the loan interest that must be paid, so that the possibility for companies to add financial distress loans is reduced. High profitability weakens the effect that a smaller DAR will result in a smaller probability of FD.

The results of this study state that profitability, as a moderating variable weakens the effect of DAR on FD. The results of this study strengthen the research of Wilujeng & Yulianto (2020) that profitability can moderate leverage that affects FD. This study differs from Kristiana (2021) that profitability does not have the ability to moderate leverage as measured using DAR against FD.

The DER*PROF variable shows that the results of testing the seventh hypothesis, namely profitability (PROF), do not moderate the effect of DER on FD. Profitability generated from the company does not have the DER effect on FD. The size of profitability will not have an impact on strengthening or weakening the influence of DER on FD. Profitability cannot weaken or strengthen the effect of DER on FD. The possible profits that the company has achieved are not supportive in terms of paying off the company's obligations. It is possible, if the company cannot make payments using current assets, then the company may use equity. A decrease in total equity from year to year can be expected that the company will experience the possibility of financial distress. Big or small profitability does not moderate that profitability does not affect the size of DER on FD.

The results of this study indicate that profitability does not moderate the effect of DER on FD. The results of this study are in line with the research of Idawati & Wardhana (2021) who said that profitability cannot moderate leverage that affecting FD.

The Role of Profitability in Moderating the Effect of Liquidity on Financial Distress

LIQ*PROF indicates that the results of testing from the eighth hypothesis, the profitability (PROF) weakens the effect of liquidity (LIQ) on financial distress (FD). The company profits achieved may not be used to support the payment of company obligations. Most likely, the profitability is obtained by the company, it is used to expand, for example buying new machines or adding new branches. Another thing is that companies can use existing profitability for the development of product innovation. Another possibility is the profitability that has been achieved, it is included in equity, so the total equity increases.

The results of this study state that profitability is as a moderating variable weakens the influence of liquidity on FD. The results of this study support the research of Idawati & Wardhana (2021), which states that profitability weakens the influence of liquidity on financial distress. It is different from the research of Kristiana (2021) which suggests that profitability does not have the ability to moderate liquidity against financial distress.

The Role of Profitability in Moderating the Effect of Sales Growth on Financial Distress

The results of testing from the ninth hypothesis of SG*PROF variable show that profitability (PROF) strengthens the effect of sales growth (SG) on financial distress (FD). So, it is in line with the research of Indira & Dilasari (2023), which states that the profitability variable strengthens the influence of liquidity and sales growth in predicting financial distress but weakens leverage in predicting financial distress. Furthermore, the achievement of profits by entities is used to increase sales growth by carrying out product innovation, developing research and development, and performing product differentiation so that companies can produce unique products and maintain their operations in intense competition in the business world, avoiding the possibility of financial difficulties.

The results of this study state that profitability is as a moderating variable, it strengthens the influence of SG on FD. This study results are different from the research of Mulyatiningsih & Atiningsih (2021) which argues that profitability cannot moderate sales growth that affecting financial distress.

The Role of Profitability in Moderating the Effect of Cash Flow Operating on Financial Distress

The profitability that is achieved by the company, it supports the company in paying off current liabilities, paying dividends, making new investments from operational activities, and running operations. The great profitability will affect the higher operating cash flow which affects the smaller of FD.

The results of this study show that profitability, is as a moderating variable, strengthens the effect of operating cash flow on FD. The results of Kristiana's (2021) research suggest that profitability cannot moderate the relationship between cash flow and FD.

Cash flow operating with almost the same value, they are cash flow operating CapitaLand China Trust (SGX: AU8U) of 0.1812 and cash flow operating First Sponsor Group Limited (SGX: ADN) of 0.1820, it can be seen that with greater profitability it can strengthen the influence of operating cash flow against financial distress. The profitability ratio value for CapitaLand China Trust (SGX:AU8U) is -0.0027, while the profitability ratio value for First Sponsor Group Limited (SGX:ADN) is 0.0283. Then the higher profitability value, namely the First Sponsor Group Limited company (SGX: ADN), namely 0.0283, has a higher Altman Z-Score value of 1.76. The profitability ratio value for the CapitaLand China Trust (SGX: AU8U) company is -0.0027 resulting in a lower Altman Z-Score value of only 1.51 compared to the Altman Z-Score value of First Sponsor Group Limited (SGX: ADN). The higher the Altman Z-Score, the less likely financial distress will occur. The increase in Altman Z-Score can be seen, but the company is still in a Distress Zone.

CONCLUSION

Based on the results of data analysis and panel data regression testing related to the influence of leverage, liquidity, sales growth, and cash flow operating with profitability as a moderating variable on financial distress, the conclusions are: Variable leverage measurement uses the debt-to-asset ratio positively to affect financial distress. Variable leverage measurement uses the debt-to-equity ratio negatively to affect financial distress. Measurement of the liquidity variable uses the current ratio negatively to affect financial distress. The sales growth variable does not affect financial distress. Cash flow operating variables positively affect financial distress. Profitability weakens the effect of the debt-to-asset ratio on financial distress. Profitability does not have the ability to moderate the effect of the debt-to-equity ratio on financial distress. Profitability weakens the effect of liquidity on financial distress. Profitability strengthens the effect of sales growth on financial distress. Profitability strengthens the influence of cash flow operations on financial distress.

This research has some limitations. S&P Capital IQ has not displayed the price per share for several years. The researcher considers that there is no trading, which makes it difficult for researchers to find the price per share using the Altman Z-Score to calculate financial distress. The independent variables of this study are limited to leverage proxies using the debt-to-asset ratio and debt-to-equity ratio, liquidity, sales growth, and cash flow operating. The moderating variable is used limited to profitability. Some of the variables in this study still did not meet the classical assumption test, which is multicollinearity.

The researcher hopes that further research can find and test other independent variables that affect financial distress and also hopes that the next researcher will increase the sample size of companies and the number of observations for the company period so that a larger number of research samples can be obtained. Besides that, it is hoped this research will provide more accurate results. The researcher hopes that further researchers will examine other moderating variables, it is Good Corporate Governance.

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