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Cash Flow Analysis to Anticipate Potential Bankruptcy in Startup Companies Listed On the Indonesian Stock Exchange

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Abstract: The purpose of this study was to examine the role of cash flow ratios in determining corporate bankruptcy. Tests were conducted on startup companies listed on the Indonesia Stock Exchange for the 2020-2022 period to find out whether cash flow analysis is a significant predictor of potential bankruptcy. This research data analysis method uses Logistic Regression. It is hoped that the results of the study will be able to show that the Liquidity Ratio, Solvency Ratio, and Efficiency Ratio and Profitability Ratio have a significant effect on predicting financial distress. In addition, the results of this study are expected to be useful for companies, investors and other stakeholders in making decisions. Companies should avoid external loans and take advantage of more investment opportunities to avoid financial distress.

Keywords: Cash flow ratio, bankruptcy, startup, logistic regression.

INTRODUCTION

Globalization and technological developments have changed many aspects of life, including the digital shift where economic and social activities with the help of technology have had an impact on the entire economy. Human dependence on technology can be utilized as a business opportunity to improve the economy. This opportunity has been used by some people to establish startups or start-up companies to be able to provide high-tech digital platforms that can make human life easier. McCauley and Gruszka, (2018: 22) define startup as a business that is young, small, high growth, and aims to use technology to gain wider market coverage. From the Forbes page written by Dane Stagler (2019) states that the global startup economy since 2017 has generated more than US$2.8 trillion in economic value. This value has increased by 20% when compared to the previous two year period. This kind of increase is also influenced by the rapid growth of a number of startups that have reached a valuation of more than US$ 1 billion, or commonly referred to as unicorns (Lee, 2017). This phenomenon is very rare and difficult to catch, that's why these companies are nicknamed unicorns.

The growth of startups and the emergence of unicorns is influenced by, among others, the ease of starting a business and the existing business ecosystem in a country. This makes it possible to be used as an excuse that digital startup businesses have good potential not only for business owners, but also for consumers who can get convenience in fulfilling their needs. The development of digital technology is a big reason why technology-based businesses have very rapid growth in the world. The development of digital technology is a big reason why technology-based businesses have very rapid growth in the world. This can be seen from the growth of technology-based companies, which are not a few from various countries. The 2022 startup ranking states that Indonesia is ranked 5th in the world for countries with startup business growth, namely with 2,347 startup companies. This position was occupied after the United States, India, Britain and Canada. Higher ratings indicate better, simpler regulations for businesses and stronger protection of property rights.

List of Indonesian Startups Entering the Southeast Asian Market Based on reports on katadata.co.id on November 22, 2021, there are at least 10 startup companies in Indonesia that are now starting to spread their wings in the Southeast Asian market. On the other hand, there are currently a lot of startups competing and lining up to do an IPO. Initial Public Offering (IPO) is closely related to the Capital Market. IPO can be interpreted as a public offering in which the company makes an offer and sells shares to the general public. In simple terms, an IPO refers to a period in which the company first entered the Indonesian stock exchange to offer initial shares to the public. Startup names such as Gojek, Bukalapak, and Tokopedia are unicorns and these decacorns have a valuation of US$1-10 billion, so it is not impossible that these three startups are included in Indonesian startup companies that have gone IPO.

Bukalapak itself is one of the Indonesian startups that has already gone IPO in 2021 with its share price position at that time being listed on the IDX at IDR 850. Then the startup that recently announced its IPO on the IDX last April is GoTo,

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namely at its launch there were mutual cooperation shares which were divided in the amount of IDR 310 billion.

Another fact cited from gopublic.idx.co.id based on the IDX is that from 2017 to 2019, there were 8 Indonesian startups that had IPOs: Kioson (PT Kioson Komersial Indonesia Tbk.), Mcash (PT M Cash Integrasi Tbk.), NFC Indonesia (PT NFC Indonesia Tbk.), Passpod (PT Yeloo Integra Datanet Tbk.), DIVA (PT Distribution Voucher Nusantara Tbk.), HDI (PT Hensel Davest Indonesia Tbk.), Telefast (PT Telefast Indonesia Tbk.), and Digital Mediatama Maxima (PT Digital Mediatama Maxima Tbk.). Meanwhile, many Indonesian startups with unicorn status are lining up for an IPO on the IDX, as quoted from the databox. They are J&T with a valuation of US$7.8 billion, Traveloka US$3 billion, OVO US$2.9 billion, then Tiket.com, Kredivo, Xendit, Kopi Kenangan, Akulaku and Ajaib with a valuation of US$1 billion.

To continue to survive and develop, a company must have a strategy for the long term and the right policies to suit the company's goals. In addition, to be able to survive and develop, digital startup companies need good sources of funding. According to Cb insights, (2021), the biggest factor in the failure of a digital startup business is a lack of funds. The percentage of startup digital companies failing due to lack of funds is 38%, which is then followed by other failures. That's why funding is crucial for digital startup companies. Funding that startup companies can expect is funds from investors because startups are high-risk companies and cannot be financed by banks. Banks will only provide loans to businesses that are already running and have seen profits and are not at risk (Kasali, 2022). Many startup companies today cannot manage their funding properly, causing potential bankruptcy

Formulation of the Problem

1. Is there any influence of Liquidity Ratio from Operational Cash Flow on Financial Distress
2. Is there an effect of the Solvency Ratio of Operational Cash Flow on Financial Distress?
3. Is there an effect of the Efficiency Ratio of Operational Cash Flow on Financial Distress
4. Is there an effect of Profitability Ratio from Operational Cash Flow on Financial Distress

LITERATURE REVIEW

Agency Theory

Jensen and Meckling, (1976), define "agency relationship as a contract under which one or more persons (the principal(s)) engage another person (the agent) to perform some service on their behalf which involves delegating some decision making authority to the agents."

From these financial statements can be used by external parties to assess the company's financial condition. If the profit earned by the company is high in a relatively long period, What can see that the company can carry out its operations well. It also indicates that the company can distribute dividends to each of its investors (Wahyuningtyas, 2010). Companies that regularly distribute dividends every year indicate that the company is protected from financial distress.

In addition, in the financial statements, it can also be seen how a company owns many assets, debts, and profits. Suppose the financial statements show a high debt ratio compared to assets owned by the company. In that case, it reflects that the company will have more outstanding obligations in the future than those who must repay. The company can have a large debt ratio, possibly due to the agent's mistakes in managing the company, or even worse, the agent deliberately takes actions that are only concerned with himself and ignores his interests with the principal. As a result, the high debt ratio owed by the company will increase the company's being trapped in financial difficulty or financial distress.

Financial Distress

Financial distress is a condition where the company's economy is in trouble, where there is a decline in performance that occurred before the company went bankrupt (Vinh, 2015). Financial distress can also be interpreted as a situation where the company's financial capacity gradually deteriorates and the inability to pay its obligations to creditors (Ufo, 2015). Financial difficulties arise when companies have difficulty paying financial commitments (Khaliq, *et al.*, 2014). "Financial distress is a situation in which the operating cash flow of a company is not sufficient for its current obligations, and the company is forced to undertake remedial activities" (Ross, Randolph, and Jeffrey, 2015). Financial distress is the final stage of the company's decline before bankruptcy or liquidation (Nanayakkara & Azeez, 2015).

Measurement of Financial Distress

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This research on bankruptcy prediction was initiated by Beaver, (1966), then continued by Edward Altman (1968), Altman, *et al.*, (1977). Beaver and Altman's research was motivated by the bankruptcy of many companies in their home country, the United States, in the 1960s. Research models on bankruptcy prediction continue to be developed both in the United States and in other countries, for example, the Springate Model by Gordon L.V. Springate (1978) from Canada, Datastream's model by Marais (the UK, 1979), Fulmer Model (the US, 1984), Ca-score (Canada, 1987), logistical regression model by Ohlson (1980), artificial neural network model by Thomaidis, *et al.*, (1998), Hsieh, *et al.*, (2006), and others. (Gamayuni, 2009). However, the research above mainly uses the financial ratio approach.

Cash flow is closely related to the company's ability to pay the company's obligations, both short-term and long-term. Negative cash flow will also disrupt the company's operations and, therefore, will disrupt profitability. The company's failure to pay its obligations and will lead to bankruptcy conditions that can trigger bankruptcy. This study examines whether cash flow ratios prove to be good predictors of financial distress.

Liquidity Ratio

Liquidity Ratio is the company's ability to meet its short-term obligations (Bhunia, Khan, & MuKhuti, 2011). The liquidity ratio used in this study uses cash flow indicators from operating activities divided by current liabilities (Fawzi, *et al.*, 2015). Operating cash flow is related to the inflow and outflow of funds from operating activities. The components of cash flow from operating activities used are net cash obtained from operating activities, including cash receipts from customers, cash payments to employees, suppliers, payments for other operating expenses, cash receipts from operating activities, interest income receipts, income tax payments, interest expense payments. And other payments (receipts).

Solvency Ratio

The solvency ratio is also known as the leverage ratio. The solvency ratio is a ratio that measures the company's ability to meet its long-term obligations (Kamaluddin, *et al.*, 2019). The ratio used in this study is the sum of cash flows from operating activities to long-term debt (Kamaluddin, *et al.*, 2019). Cash flows from operating activities used are net cash obtained from operating activities, including cash receipts from customers, cash payments to employees, suppliers, payments for other operating expenses, cash receipts from operating activities, interest income receipts, income tax payments, interest expense payments, and other payments (receipts).

Efficiency Ratio

The efficiency ratio is also known as the activity ratio. Efficiency Ratio is used to measure its ability to use its assets to generate cash in operations (Fawzi, *et al.*, 2015). The ratio used in this study is cash flow from operating activities divided by fixed assets. This shows how much cash is generated using the company's fixed assets (Kamaluddin, *et al.*, 2019). Cash flows from operating activities used are net cash obtained from operating activities, including cash receipts from customers, cash payments to employees, suppliers, payments for other operating expenses, cash receipts from operating activities, interest income receipts, income tax payments, interest expense payments and other payments (receipts).

Profitability Ratio

According to Janjua, *et al.*, (2016), the profitability ratio is the company's ability to generate profits. The ratio used in this study is cash flow from operating activities divided by net income. What can convert net income into cash to generate a sufficient return on investment (Fawzi, *et al.*, 2015). Components of cash flow from operating activities used are net cash obtained from operating activities, including cash receipts from consumers, cash payments to employees, suppliers, payments for other operating expenses, cash receipts from operating activities, interest income receipts, payment of income taxes, payments of interest expenses and other payments (receipts).

Previous Research

Many studies have been conducted to determine the effect of financial ratios on the occurrence of financial distress. In 2014 a research was conducted by Baimwera and Muriuki entitled Analysis of Corporate Financial distress Determinants: A Survey Of Non-Financial Firms Listed In The Nse (2014). This study uses regression analysis to examine the relationship between the company's financial distress factors and financial distress itself. The financial ratio variables used are liquidity, profitability, leverage, and firm growth. The results show that liquidity and leverage have no significant effect in determining financial distress. While growth and profitability have a significant influence in determining the company's financial distress

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Fawzi, *et al.*, (2015) conducted a study entitled Monitoring Distressed Companies through Cash Flow Analysis. The purpose of this study is to determine the importance of cash flow ratios in determining financial distress companies. The sample of this study consisted of 52 companies that experienced financial difficulties and 52 companies that did not experience financial difficulties in the period 2009-2012. Thus, the population in this study were Malaysian companies for the period 2009-2012. The independent variable used is the cash flow ratio, while the dependent variable used is financial distress. This study indicates that the cash flow ratio can be relied upon to predict financial distress in the Malaysian context

Rani, (2017) with the title The Effect of Liquidity, Leverage, Profitability, Agency Cost and Sales Growth on the possibility of financial distress. The purpose of this study is to examine the effect of liquidity, leverage, profitability, agency costs, and sales growth on the possibility of financial distress conditions. The research sample used in this study were 94 manufacturing companies listed on the Indonesia Stock Exchange in 2013-2015. The sampling technique used was purposive sampling. The population used is manufacturing companies listed on the Indonesia Stock Exchange in 2013-2015. The independent variables used are liquidity, leverage, profitability, agency costs, and sales growth. The dependent variable uses financial distress. The results of the study indicate that leverage influences the possibility of financial distress. On the other hand, agency costs and sales growth do not affect the possibility of financial distress

Julius, (2017), in a study entitled The Effect of Financial Leverage, Firm Growth, Profit and Cash Flow on Financial Distress. The purpose of this study is to examine the effect of financial leverage, firm growth, profit, and cash flow on financial distress in manufacturing companies listed on the Indonesia Stock Exchange. The research sample used was 18 companies on the Indonesia Stock Exchange in 2010-2015. The population used in this study is the population of manufacturing companies on the Indonesia Stock Exchange 2010-2015. The independent variables used are financial leverage, firm growth, profit, and cash flow. At the same time, the dependent variable is financial distress. The results of this study indicate that cash flow influences financial distress. A significant value indicates this in the logistic regression test, namely 0.013.

Masdupi, *et al.*, (2018). "The Influence Of Liquidity, Leverage And Profitability On Financial distress Of Listed Manufacturing Companies In Indonesia." The research variables are Liquidity, Profitability, Leverage, and Financial distress. Using regression analysis method. Explain the result that. Liquidity, leverage, and profitability hurt financial distress.

Kamaluddin, *et al.*, (2019) "Financial distress Prediction Through Cash Flow Ratios Analysis" with research variables Liquidity Ratio, Solvency Ratio, Efficiency Ratio, and Profitability Ratio. Using regression analysis method. Explaining the results that Profitability and Solvency Ratios have an effect on Financial Distress and Efficiency and liquidity ratios have no effect on Financial distress

Research Framework

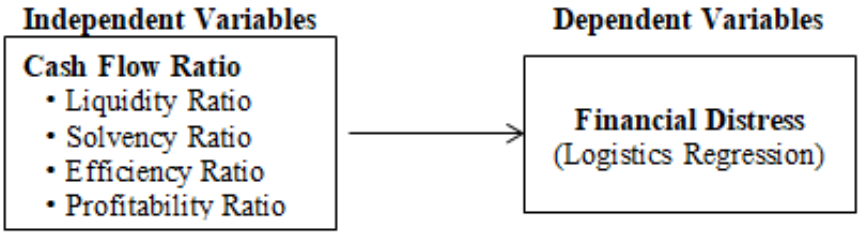


Figure 1: Framework

Research Hypothesis

H1: There is an influence between Liquidity Ratio on Financial Distress

H2: There is an influence between Solvency Ratio on Financial Distress

H3: There is an influence between the Efficiency Ratio on Financial Distress

H4: There is an influence between Profitability Ratio on Financial Distress

RESEARCH METHOD

Population and Research Sample

The sample chosen in this study consisted of startup companies listed on the Indonesia Stock Exchange for the 2020-2022 period. The financial

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data used in this study is taken from the cash flow statement, income statement and balance sheet from 2020 to 2022

Sampling was carried out by purposive sampling which is part of the non-probability sampling method. For members of the population who do not meet the requirements, are not selected as research samples.
Sampling based on the following criteria:

1. Startup companies listed on the Indonesia Stock Exchange for the 2020-2022 period, which are in a condition of financial distress and non-financial distress companies. Companies that experience financial distress are companies that experience negative operating profit in one reporting period.
2. Startup companies that consistently report Financial Statements on the IDX in 2020-2022

Table 1: Operationalization of Variables

Variable	Measurement	Reference
Liquidity Ratio	CFFO/CL	Fawzi ,2015; Kamaluddin,2019
Solvency Ratio	CFFO/TL	Fawzi ,2015 ; Kamaluddin 2019
Efficiency Ratio	CFFO/FA	Fawzi ,2015; Kamaluddin 2019
Profitability Ratio	CFFO/NI	Fawzi ,2015; Kamaluddin 2019

Explanation:
CFFO: *Cash flow* From *Operational*
CL : Current Liabilities
TL : Total Liabilities
FA : Fixed Asset
NI : Net Income

Data Analysis Method
The data analysis method of this research uses Logistic Regression. Logistics Regression Analysis is an appropriate statistical technique if the dependent variable is nominal categorical and non-metric while the independent variable is metric (Hair, *et al.*, 2006). It is also stated that Logistic Regression is more appropriate if the assumption of normality cannot be met. In this study, Dependent Variables were categorized into companies with distress (score 1) and Non-Distress (score 0).

Logistic regression analysis allows users to classify companies as Distressed or Non Distressed according to probability estimates. Probability estimates were calculated using the estimated coefficients of the independent variables in the logistic regression model. Companies with probability estimates above the selected cut-off point will be classified as Distress companies. The use of cut-off points is to minimize the level of misclassification. This study uses a cut-off point of 0.5 for the probability of financial distress, which is in line with Tew and Enylina (2005), which means that the company is classified as a Distress company if the calculated probability is the same more than 0.5. The company is classified as a non-distress company if the calculated probability is less than 0.5.

Data for the prediction model year 1, year two, and year three each lag one, two, and three years before the year of financial distress. Therefore, the following financial distress prediction model was developed for the current study:

P (DISTRESS) = 1/ {1 + exp [- (β0 + β1 (CFFO/CL) + β2 (CFFO/TL) + β3 (CFFO/FA) + β4(CFFO/NI))]}
dimana:
P (DISTRESS) = exp = CFFO/CL = CFFO/TL = CFFO/FA = CFFO/NI

RESULTS AND DISCUSSION

OVERVIEW OF RESEARCH OBJECTS

Based on the sample selection criteria, namely 10 startup companies that are consistently listed on the IDX, the research sample companies are obtained as follows:

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Table 2: Company Sample

No	Company Sample
1	BUKA (PT Bukalapak Tbk)
2	GOTO (PT Gojek Tokopedia Tbk)
3	KIOS (PT Kioson Komersial Indonesia Tbk.)
4	MCAS (PT M Cash Integrasi Tbk.)
5	NFCX (PT NFC Indonesia Tbk.)
6	YELO (PT Yeloo Integra Datanet Tbk.)
7	DIVA (PT Distribusi Voucher Nusantara Tbk.)
8	HDIT (PT Hensel Davest Indonesia Tbk.)
9	TFAS (PT Telefast Indonesia Tbk.)
10	DMMX (PT Digital Mediatama Maxima Tbk.)

Source: processed data (2023)

DATA ANALYSIS RESULTS

Feasibility Test of Logistics Regression Model

The Feasibility Test of the logistic regression model is used to determine whether the model is feasible and can be used for further analysis. The feasibility test of the regression model consists of 3 tests: (1) assessing the feasibility of the regression model: Hosmer and Lemeshow's Goodness of Fit Test, which is a test to determine whether the model formed is correct or not. It is said to be appropriate if there is no significant difference between the model and the value of the observations. (2) Testing the Overall Model (overall model fit): from the number -2LogLikehood, where at the beginning (Block number = 0) the -2LogLikehood number must decrease to Block Number = 1. The existence of a reduction in the value indicates that the model fits the data. (3) The coefficient of determination test with Nagelkerke R Square is used to measure the ability of the logistic regression model to fit the data. In other words, the statistical value of Nagelkerke's can be interpreted as a value that measures the ability of the independent variables to explain or explain the variation of the dependent variable.

Hosmer and Lemeshow's Goodness of Fit Test

From the Hosmer and Lemeshow Test table below, the Chi-square value is 8.195 with a significant value of 0.415 and df 8. From these results, it can see that the significant value is greater than 0.05, so it can be concluded. **The logistic regression model used can predict the value of the observations or be said to have met the adequacy of the data (fit) and is suitable for further analysis**

Table 3: Hosmer and Lemeshow Test

Step	Chi-square	df	Sig.
1	8,195	8	,415

Source: processed data (2023)

Overall Model Fit Test

From the IteRation History Block 0 table: Beginning Block, the first model only with constants without any independent variables below shows the value of -2LogLikehood of 232.893.

Table 4: Ite*Ration* History Block 0

Block 0: Beginning Block **Ite*Ration* History[a,b,c]**			
Ite*Ration*		-2 Log likelihood	Coefficients
			Constant
Step 0	1	232,897	,000
a. Constant is included in the model.			
b. Initial -2 Log Likelihood: 232.897			
c. Estimation terminated at ite*Ration* number 1 because parameter estimates changed by less than .001.			

Source: processed data (2021)

And in Table Block 1, which includes constants and all independent variables, the results show the value of -2LogLikehood of 121.865. With a decrease in the value of -2LogLikehood, it shows

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that the model used is a good regression model and is feasible to use

Table 5: Table Block 1

Block 1: Method = Enter **Ite*Ration* History[a,b,c,d]**							
Ite*Ration*		-2 Log likelihood	Coefficients				
			Constant	Liquidty*Ratio*	*SolvencyRatio*	*EfficiencyRatio*	Profitability*Ratio*
Step 1	1	169,262	-,796	1,507	,008	1,467	-,006
	2	152,977	-1,034	1,934	1,531	-,181	-,008
	3	136,611	-1,208	1,020	7,589	-7,633	-,010
	4	125,199	-1,440	,385	15,837	-18,124	-,013
	5	122,124	-1,590	,178	21,883	-25,782	-,016
	6	121,868	-1,633	,100	24,194	-28,684	-,019
	7	121,865	-1,637	,091	24,442	-28,995	-,019
	8	121,865	-1,637	,091	24,445	-28,998	-,019
	9	121,865	-1,637	,091	24,445	-28,998	-,019
a. Method: Enter							
b. Constant is included in the model.							
c. Initial -2 Log Likelihood: 232.897							
d. Estimation terminated at ite*Ration* number 9 because parameter estimates changed by less than .001.							

Source: processed data (2023)

Table 6- Coefficient of Determination Test with Nagelkarke R Square

Table. Model Summary			
Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	121,865[a]	,484	,645
a. Estimation terminated at ite*Ration* number 9 because parameter estimates changed by less than .001.			

Source: processed data (2023)

From the Model Summary table above, the results show that:

1. The chi-square value is the difference in the value of -2LogLikehood before the independent variable enters, and -2LogLikehood after the independent variable enters the model is 121.865. The value of chi-square = 121.865 > from the chi-square table of 9.4877 on df 4 (the number of independent variables 4) with a significance of 0.05, which indicates that the addition of independent variables can have a significant effect simultaneously on the model. This shows that the cash flow ratio can be used to predict the financial distress of a company.
2. The Nagelkerke R Square value of 0.645 indicates that the variability of the dependent variable that can be presented by independent variability is 64.5%, or in other words, that 64.5% percent of the dependent variable (financial distress and non-distress) can be predicted by the independent variable. In the form of cash flow ratio (Liquidity, Solvency, Efficiency, and profitability Ratio). At the same time, the remaining 35.5% can be predicted and explained by other independent variables that are not included in the model.

Model Classification Accuracy

The classification of the model's accuracy shows the accuracy of the model in predicting the company's finances; the results of the classification of the model's accuracy are presented in the table below.

Table 7: Classification Table

Classification Table[a]					
	Observed		Predicted		
			FinancialDistress		Percentage Correct
			0	1	
Step 1	FinancialDistress	0	78	6	92,9
		1	18	66	78,6
	Overall Percentage				85,7

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a. The cut value is .500

Source: processed data (2023)

Number 0 shows companies experiencing financial distress, while 1 indicates companies that are not experiencing financial distress. The table above informs that the model can predict companies that experience financial distress by 92.9% and companies that do not experience financial distress by 78.6%. So that the accuracy of the model predicting the company's financial distress in the research period is 85.7%, i.e., 144 observations are correctly predicted, and 24 observations are predicted otherwise.

Logistics Regression Analysis Test

Based on the table below, the logistic regression model obtained is as follows:

Y = -1,637 + 0,091 Liquidty *Ratio* + 24,445 *Solvency Ratio* + (-28,998) *Efficiency Ratio* + (-0,019) Proffitability *Ratio*

Table 8 Analisis Regresi Logistik

Variables in the Equation							
		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	LiquidtyRatio	,091	1,379	,004	1	,947	1,096
	SolvencyRatio	24,445	5,742	18,127	1	,000	41338124997,882
	EfficiencyRatio	-28,998	7,166	16,375	1	,000	,000
	ProfitabilityRatio	-,019	,013	2,004	1	,157	,981
	Constant	-1,637	,293	31,197	1	,000	,195
a. Variable(s) entered on step 1: LiquidtyRatio, SolvencyRatio, EfficiencyRatio, ProfitabilityRatio.							

Source: processed data (2023)

To test the hypothesis, it is used to determine the effect of the independent variable (cash flow ratio) on the dependent (financial distress and non-distress) by using an error tolerance value of 5%. So the research hypothesis is accepted if the significance of the independent variable is <0.05.

Based on the table above, the results show that the liquidity ratio has a regression coefficient of 0.091; the coefficient is positive, which means that the higher the level of liquidity, the greater the prediction of the company experiencing financial distress. However, the significant level is 0.947 > 0.05, which means that the liquidity ratio has no significant effect in predicting financial distress conditions in this study. Therefore, who can conclude that H1 is rejected

In the second hypothesis, the results show that the solvency ratio has a regression coefficient of 24,445. The coefficient is positive, which means that the higher the company's solvency ratio, the greater the prediction of the company experiencing financial distress. The significant level is 0.000 <0.05, so the Solvency Ratio has a significant positive effect in predicting financial distress conditions in this study. Therefore, it can conclude that H2 is accepted.

The third hypothesis of the research shows that the efficiency ratio has a regression coefficient of -28,998; the coefficient is negative, which means that the higher the company's efficiency ratio, the lower the prediction of the company experiencing financial distress. The significant level is 0.000 <0.05, so the efficiency ratio has a significant negative effect in predicting financial distress conditions in this study. Therefore, it can be concluded that H3 is accepted.

The results for the fourth hypothesis indicate that the profitability ratio has a regression coefficient of -0.019; the coefficient is negative, which means that the higher the profitability ratio of the company, the lower the prediction of the company experiencing financial distress. However, the significant level is 0.157 > 0.05, so the profitability ratio has no significant effect in predicting financial distress conditions in this study. Therefore, it can be concluded that H4 is rejected.

DISCUSSION

Effect of Liquidity Ratio on Financial Distress

The liquidity ratio describes the company's ability to meet its short-term obligations and finance its operational activities. Based on this research model, the liquidity ratio cannot be used to evaluate risk and predict to prevent a company's bankruptcy. This is in line with research by Mas'ud & Srengga (2015) and Kamaluddin, *et al.*, (2019), where the liquidity ratio has no significant effect on financial distress.

A high liquidity ratio does not necessarily guarantee that the company's debts that are due. Financial distress that occurs in the company is not

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only determined by the company's high or low value of liquidity. Companies with high liquidity values will not necessarily avoid financial distress, and companies with low liquidity will not always experience financial distress. This is because many companies rely on corporate funding to pay their short-term obligations. Because the company has good corporate funding, the company will not be careless in selling or liquidating its current assets to pay its obligations.

For creditors, the higher the current ratio means, the safer it is for them. However, for certain companies, it can mean. Otherwise, we should use many aspects as a reference in investing, not just focusing on liquidity. For example, companies experiencing financial distress have to fulfill their short-term obligations and have to fulfill their long-term obligations; liquidity only calculates the company's ability to pay its short-term obligations.

However, there are also research results that contradict the results of this study. The results of other studies indicate that the liquidity ratio has a negative and significant effect on financial distress. For example, the results of research by Thai & Abdollahi (2011), Amarilla, *et al.,* (2017), and Manab, Theng & Md-Rus (2015) found that the liquidity ratio hurts financial distress. Based on these results, it can be explained that the higher the ratio, the higher the company's ability to pay its short-term obligations, so this indicates that the company is experiencing financial distress. In other words, the higher the cash flow from operating activities generated, the lower the possibility of the company experiencing financial distress (Amarilla, *et al.,* 2017). Meanwhile, if the ratio is lower, the chances of the company experiencing financial distress will be higher because the company is unable to pay its short-term obligations, which will affect its operations. Companies with higher levels of liquidity can be a positive signal for external parties, especially creditors, because they can guarantee the company.

Effect of Solvency Ratio on Financial Distress

The solvency ratio is a ratio that measures the company's ability to meet its short-term and long-term obligations. Based on this research model, the solvency ratio has a significant and positive effect on financial distress, thus indicating that the greater the solvency ratio value, the greater the probability that the company will experience financial distress. When the operating cash flow value is negative, it will be difficult for the company to obtain additional loans from outside parties because it is feared that the company will not be able to cover its debts with cash from operating activities.

The results of this study are in line with research conducted by Kamaluddin, *et al.,* (2019) and Fawzi, *et al.,* (2015), where the solvency ratio has a positive effect on financial distress when measured by cash flow from operating activities to long-term debt. Based on these results, it can be explained that there is a possibility that the company has high cash flow, but the company invests in unprofitable projects. Another possibility is that operational activities are financed with long-term debt so that as operational activities increase, debts that are not paid will increase and cause financial distress.

Effect of Efficiency Ratio on Financial Distress.

The efficiency ratio is used to measure its ability to use its assets to generate cash in operations. The results of this study indicate that the efficiency ratio has a significant and negative effect in predicting financial distress. Companies with a high-efficiency ratio have assets that can turn around more quickly and earn profits; this also shows the more efficient use of all assets in generating sales. As a result, the company is less likely to experience financial distress.

This study is in line with research conducted by Atmaja, (2012) and Fawzi, *et al.,* (2015), which said a negative influence between the efficiency ratio and financial distress conditions. In addition, the research of Kartika & Hasanudin (2019) also found a negative effect. So it can be concluded that the higher the efficiency ratio, the lower the possibility of financial distress in the company. Based on these results, who can explain that the use of fixed assets of the company is getting bigger, indicating the more influential the use of fixed assets in generating operating cash flow. However, if the company cannot maximize the use of fixed assets to generate cash, then the possibility of the company experiencing financial distress will be higher (Kamaluddin, *et al.,* 2019). Therefore, this study is not in line with the research conducted by Kamaluddin, *et al.,* (2019), which did not find the effect of the efficiency ratio on financial distress.

Effect of Profitability Ratio on Financial Distress.

This profitability ratio shows the company's ability to generate profits. The results of this test indicate

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that the profitability ratio has no significant effect on financial distress. The results of this study are in line with Orchid, (2014), which found that the profitability ratio calculated using operating cash flow to net income has no significant effect on predicting a company's financial distress. Companies that experience financial distress generally have negative profitability. Profitability shows the efficient and effective use of assets in generating company profits. Negative company profitability indicates the absence of effectiveness of the use of company assets to generate net income. Profitability is the net result of various policies and decisions. This ratio is used to measure the company's ability to profit from every rupiah of sales generated. The greater the profitability, the smaller the probability of the company experiencing financial distress (Orchid, 2014).

This study is not in line with the research conducted by Kamaluddin, *et al.*, (2019) and Fawzi, *et al.*, (2015), which found that the profitability ratio hurt financial distress. In addition, research conducted by Lawrence, *et al.*, (2015) also found that the profitability ratio hurts financial distress. Based on these results, it can be explained that the higher the profitability ratio, the lower the probability that the company will experience financial distress. Companies can avoid financial distress if net income can be converted into operating activity cash flows to generate profits from reinvested income (Fawzi, *et al.*, 2015). If the receipt of payment for the sale proceeds has been received, it will be recorded in cash inflows to increase cash flow from the company's operating activities. Therefore, a high profitability ratio positively impacts the company's cash flow to avoid payment difficulties and avoid financial distress conditions.

CONCLUSIONS AND SUGGESTIONS

Conclusion

Based on the results of the analysis that has been carried out in this study, it can be concluded that:

1. Liquidity Ratio has no significant effect in predicting financial distress.
2. Solvency Ratio has a significant positive effect in predicting financial distress
3. Efficiency Ratio has a significant positive effect in predicting financial distress
4. Profitability Ratio has no significant effect in predicting financial distress.

SUGGESTION

For companies to avoid financial distress conditions, they should avoid borrowing from outside, leading to financial distress due to their inability to cover their debts. For investors, before investing in a company, investors should pay more attention to several factors that can predict the company's financial condition in a healthy condition or tend to experience financial distress.

REFERENCES

1. Agustini, N. W. & Wirawati, N. G. P. "Pengaruh Rasio Keuangan Pada Financial distress Perusahaan Ritel Yang Terdaftar di Bursa Efek Indonesia (BEI)." *E-Jurnal Akuntansi*, 26(2019): 251.
2. Ahmad, A. H. & Abdullah, N. A. H. "Debt and firm value in Malaysia: A panel threshold regression analysis." *ISBEIA 2011 - 2011 IEEE Symposium on Business, Engineering and Industrial Applications* (2011): 144–147.Issues
3. Alatas, A.O. "An Empirical Study On The Listed Companies in The Palestine Exchange." *The University of Gaza, Deanery of Higher Studies Fakulty of Commerce, Department of Business AdministRation* (2015).
4. Altman, E. I. "Financial Ratios, discriminant analysis and the prediction of corporate bankruptcy." *The Journal of Finance* 23.4(1968): 589-609.
5. Amarilla, U., Nurcholisah, K. & Sofianty, D. "Pengaruh Arus Kas Operasi dan Ukuran Perusahaan Terhadap Financial distress." *Prosiding Akuntansi*, 3.2(2017). file:///C:/Users/Administrator/Downloads/8423-17641-1-PB (2).pdf
6. Arlov, O., Rankov, S. & Kotlica, S. "Cash Flow in Predicting Financial distress and Bankruptcy." *Advances in Environmental Science and Energy Planning* (2015): 88–93
7. Atieh, S. H. "Liquidity Analysis Using Cash Flow Ratios as Compared to Traditional Ratios in the Pharmaceutical Sector in Jordan." *International Journal of Financial Research*, 5.3(2014): 146–158.
8. Atmaja, K. F. "Analisis Rasio Keuangan Untuk Memprediksi Kemungkinan Financial distress." *Accounting Analysis Journal*, 1.2(2012).
9. Ayu, A., Handayani, S. & Topowijono, T. "Pengaruh Likuiditas, Leverage, Profitabilitas, dan Ukuran Perusahaan Terhadap Financial Distress Studi pada Perusahaan Manufaktur Sektor Industri Dasar dan Kimia yang

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Terdaftar di Bursa Efek Indonesia tahun 2012-2015." *Jurnal Administrasi Bisnis*, 43.1(2017): 138–147.
10. Baimwera, B. and Antony, M.M. "Analysis Of Corporate Financial distress Determinants: A Survey Of Non-Financial Firms Listed In The NSE." *International Journal of Current Business and Social Sciences* 1.2 (2014):58–80.
11. Bhunia, A., Khan, I. & MuKhuti, S. "A Study of Managing Liquidity." *Journal of Management Research*, 3.2(2011).
12. Bintara, R., Tanjung P. R. S. "Analysis of Fundamental Factors on Stock Return." *International Journal of Academic Research in Accounting, Finance and Management Sciences* 9.2 (2019): 49-64
13. Brigham, E. F., Dan, H. and Joel, F. "Dasar-Dasar Manajemen Keuangan Terjemahan. Edisi 10." *Jakarta: Salemba Empat* (2011).
14. Carolina, V., Marpaung, E. I. & Pratama, D. "Analisis Rasio Keuangan untuk Memprediksi Kondisi Financial distress (Studi Empiris pada Perusahaan Manufaktur yang Terdaftar di Bursa Efek Indonesia Periode 2014-2015)." *Jurnal Akuntansi Maranatha*, 9.2(2018): 137–145.
15. Fawzi, N. S., Kamaluddin, A. & Sanusi, Z. M. "Monitoring Distressed Companies through Cash Flow Analysis." *Procedia Economics and Finance* (2015): 136–144.
16. Fitriyah, I.H. "Pengaruh Rasio Keuangan Terhadap Financial distress Pada Perusahaan Properti Dan Real Estate**.**" *Jurnal Ilmu Manajemen* 1.3 (2013).
17. Gamayuni, R. R. "Analisis Ketepatan Model Altman sebagai Alat untuk Memprediksi Kebangkrutan." *The Journal of Accounting and Finance*, 16.2(2011).
18. Ghozali, I. "Aplikasi Analisis Multivariate dengan Program IBM SPSS 23." *Semarang: Universitas Diponegoro* (2016).
19. Hair, J.F., Black , W.C., Babin B.J., Anderson R.E. and Tatham, R.L. "Multivariate data Analysis (6 th edition) New Jersey." *Prentice Hall, Upper saddle River* (2006).
20. Harlan, D. P. and Marjorie, B. P. "Predicting Corporate Financial distress; Reflections on Choice - Base Sample Bias." *Journal of Economics and Finance* 26. 2 (2002).
21. Hastuti, I. and dan Purwanto, E. "Analisis Rasio Keuangan Sebagai Alat Prediksi Financial distress Bagi Perusahaan Manufaktur di Bursa Efek Indonesia Tahun 2009-2012." *E-Journal STIE Wijaya Mulya Surakarta* 18.1(2015): 99–106.
22. Hidayah, N. "Pengaruh Investment Opportunity Set (IOS) dan Kepemilikan Manajerial Terhadap Nilai Perusahaan pada Perusahaan Property dan Real Estat di Bursa Efek Indonesia." *Jurnal Akuntansi* XIX.3, (2015): 420-432
23. Hidayat, M. A. & Meiranto, W. "Prediksi Financial distress Perusahaan Manufaktur Di Indonesia." *Diponegoro Journal of Accounting*, 3.3(2014): 538–548.
24. Ijaz, M. S., Hunjra, A. I., Hameed, Z., Maqbool, A. & Rauf-i-Azam. "Assessing the financial failure using Z-score and current Ratio: A case of sugar sector listed companies of Karachi stock exchange." *World Applied Sciences Journal*, 23.6(2013): 863–870.
25. Innocent, M. & Matthew. "Financial Ratio Analysis as a Determinant of Profitability in Nigerian Pharmaceutical Industry." *International Journal of Business and Management*, 8.8(2013): 107–117.
26. Janjua, A. R., Asghar, A., Munir, U., Raza, A., Akhtar, N. & Shahzad, K. "Influence of Liquidity on Profitability of Cement Sector: Indication from Firms Listed in Pakistan Stock Exchange." *Business Management Dynamics*, 6.5(2016): 1–12. Retrieved from www.bmdynamics.com
27. Jr, B. A. Z. & Peñol, C. A. Z. "Social Interactive Behavioral Problems of Social Studies Students of Cabiao National High School." *Global Journal of Social Sciences Studies*, 4.2(2018): 102–114.
28. Julius, F. "Pengaruh Finacial Leverage, Firm Growth, Laba Dan Arus Kas Terhadap Financial distress." *Jom Fekon* 4.1 (2017).
29. Kakauhe, A. C. I. & Pontoh, W. "Analisis Model Altman (Z-Score) Dalam Mengukur Kinerja Keuangan Untuk Memprediksi Kebangkrutan Pada Perusahaan Manufaktur Sektor Industri Barang Konsumsi Di Bursa Efek Indonesia (Bei) Periode 2010-2014." *Journal Accountability*, 6.1(2017):18.
30. Kamaluddin, A., Ishak, N. & Mohammed, N. F. "Financial distress prediction through cash flow Ratios analysis." *International Journal of Financial Research*, 10.3(2019): 63–76.
31. Kartika, R. & Hasanudin. "Analisis Pengaruh Likuiditas, Leverage, Aktivitas,dan Profitabilitas terhadap Financial Distress." *Jurnal Ilmu Manajemen*, 14.2(2019): 26–42.
32. Kazemian, S., Shauri, N. A. A., Sanusi, Z. M., Kamaluddin, A. & Shuhidan, S. M. "Monitoring mechanisms and financial distress

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of public listed companies in Malaysia." *Journal of International Studies*, 10.1(2017): 92–109.
33. Khaliq, A., Motawe Altarturi, B. H., Mohd Thas Thaker, H., Harun, M. Y. & Nahar, N. "Identifying Financial distress Firms : A Case Study of Malaysia ' s Government Linked Companies (GLC)." *International Journal of Economic, Finance and Management*, 3.3(2014): 141–150.
34. Khong, L. Y., Low, C. S., Tee, L. P. & wan Lim, L. "Corporate Failure Prediction in Malaysia." *Journal of Research in Business, Economics and Management*, 4.2(2015): 343–375.
35. Kim-soon, N., Mohammed, A. A. E. & Agob, F. K. M. "A Study of Financial distress Companies Listed in the Malaysian Stock Exchange using Financial Liquidity Ratios and Altman ' s Model." *European Journal of Scientific Research*, 114.4(2013): 513–525.
36. Kordestani, G., Biglari, V. & Bakhtiari, M. "Ability of combinations of cash flow components to predict financial distress." *Business: Theory and Practice*, 12.3(2011): 277–285.
37. Lawrence, J. R., Pongsatat, S. & Lawrence, H. "The use of ohlson's o-score for bankruptcy prediction in Thailand." *Journal of Applied Business Research*, 31.6(2015): 2069–2078.
38. Lee, S., Koh, Y. & Huh, C. "Financial distress for US Lodging Industry: Effects of Leverage, Capital Intensity, and Internationalization." *International CHRIE Conference-Refereed Track, Paper* 3(2010): 1–8.
39. Lenap, I. P. "Analisis Model Altman Dalam Memprediksi Kebangkrutan Pada Perusahaan Pertambangan Di Bursa Efek Indonesia." *Jurnal Aksioma*, 14.1(2015).
40. Marwansyah, S. "Analisis Current Ratio Terhadap Debt To Asset Ratio Pada Perusahaan Property Dan Real Estate." *Jurnal Moneter*, IV.1(2017): 5.
41. Mas'ud, I. & Srengga, R. M. "Analisis Rasio Keuangan Untuk Memprediksi Kondisi Financial Distress Perusahaan Manufaktur Yang Terdaftar Di Bursa Efek Indonesia." *Jurnal Akuntansi Universitas Jember*, 10.2(2015): 139.
42. Masdupi, E,, *et al.,* "The Influence of Liquidity, Leverage and Profitability on Financial distress of Listed Manufacturing Companies in Indonesia." *Indonesia: Atlantis Press* (2018).
43. Nanayakkara, K. G. M. & Azeez, A. A. "Predicting corporate financial distress in Sri Lanka with reference to Z-score model." *Kelaniya Journal of Management*, 3.1(2015): 1.
44. Ong, S. W., Choong Yap, V. & Khong, R. W. L. Corporate failure prediction: a study of public listed companies in Malaysia." *Journal of Managerial Finance*, 37.6(2011): 553–564.
45. Orchid, G. "Pengaruh Profitabilitas, Financial Leverage dan Ukuran Peusahaan Terhadap Financial Distress pada Perusahaan Manufaktur yang Terdaftar di Bursa Efek Indonesia Tahun 2009-2011." http://Fejournal.upn.ac.id/students/article (2014).
46. Prasetyo, H.A. "Berjibaku Bayar Utang." *Tabloid Kontan tgl* (2021).
47. Proença, P., Laureano, R. M. S. & Laureano, L. M. S. "Determinants of Capital Structure and the 2008 Financial Crisis: Evidence from Portuguese SMEs." *Procedia - Social and Behavioral Sciences*, 150(2014): 182–191.
48. Rani, D. R. "Pengaruh Likuiditas, Leverage, Profitabilitas, Agency Cost Dan Sales Growth Terhadap Kemungkinan Terjadinya Financial distress (Studi Empiris Pada Perusahaan Manufaktur Yang Terdaftar Di Bursa Efek Indonesia Tahun 2012-2015)." *JOM Fekon* 4.1 (2017).
49. Rodoni, A. & Ali, H. "Manajemen Keuangan Modern." Jakarta: Mitra Wacana Media (2014).
50. Ross, S. A., Westerfield, R. W., Jaffe, J., Lim, J., Tan, R. & Wong, H. "Corporate Finance (Asia Global; 10, Ed.)." *McGraw-Hill Education* (2015).
51. Subramanyam, K. R. & Wild, J. J. "Analisis Laporan Keuangan (11th ed.)." *Jakarta: Salemba Empat* (2017).
52. Tanjung, P.R.S. and Wahyudi, S.M. "Analysis the Effect Disclosure of Sustainability Report, Economic Value Added and Other Fundamental Factors of Companies on Company Value." *International Journal of Academic Research in Accounting, Finance and Management Sciences* 9.2(2019): 237-249
53. Thai, S.B. & Abdollahi, M. "Corporate failure prediction: Malaysia's emerging market." *International Journal of Finance*, 23.2(2011): 6825–6851.
54. Ufo, A. "Determinants of Financial distress in Manufacturing Firms of Ethiopia." *Research Journal of Finance and Accounting*, 6.17(2015): 98–107.
55. Vinh, V. X. "Using Accounting Ratios in

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Predicting Financial distress : An Empirical Investigation in the Vietnam Stock Market." *Journal of Economics and Development* 17.1(2015): 41–49.
56. Weygandt, K. & Kieso. "Financial Accounting (IFRS 3rd)." *New Jersey: John Willey & Sons* (2015).
57. Willy, S. "Analysis of Financial Ratios to Measure the Company's Performance in the Sectors of Consumer Goods at Pt. Nippon Indosari Corpindo, Tbk and Pt. Mayora Indah, Tbk." *International Journal of Business and Economic Affairs*, 2.1(2017): 45–51.
58. Zmijewski, M.E. "Methodological Related To The Estimation Of Financial distress Model." *Journal of Accounting Research* 22(1984): 59-82
59. Zutter, C. J. & Smart, S. B. "Principle of Managerial Finance (15th ed.)." *Pearson, Addison Wesley Publishing Company* (2019).

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