

**CAN FINANCIAL RATIOS PREDICTS FINANCIAL DISTRESS?  
EVIDENCE FROM FORCED DELISTED INDONESIAN COMPANIES  
1993-2017**

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**ABSTRACT**

*This study aims to analyze the factors that influence financial distress in forced delisted companies during 1993-2017 from the Indonesian Stock Exchange (IDX). The previous studies, in general, focus on all delisted companies, while this study focuses on the forced delisted companies. The factors are liquidity, solvency, profitability, sales growth, and size. The sample in this study is 38 forced delisted companies, from the whole 121 delisted companies during 1993-2017. The data analysis technique used in this research is multiple regression analysis. Based on the results of the analysis conducted, the study found that solvability and size have a significant negative effect on financial distress; while leverage and size have a significant positive effect on financial distress in the forced delisted companies.*

**Keywords:** liquidity, profitability, solvency, growth, size, financial distress, forced delisting.

**JEL Classification:** M41

**INTRODUCTION**

The theoretical definition of financial distress implies the inability of a company to pay its financial obligations when due. The operational definition includes events such as bankruptcy, default bonds, too many bank accounts, or not paying a dividend of preferred stock (Beaver, 1966). Among the various events that indicate the state of financial distress, bankruptcy and default have become the most studied. The default event indicates a decline in the financial health of a company, which needs to be identified in due course. Financial distress is a stage before delisting from the Stock Exchange. This condition is indicated by the company's performance, which shows a negative operating profit, negative net income, the negative book value of equity, and a company that merges (Brahmana, 2007). However, not all of the delisted companies experience financial distress.

The leading causes of delisting can be grouped into three categories: legal needs, forced delisting by the stock market (forced delisting), and voluntary delisting by companies (Sanger & Peterson, 1990). Cases of legal necessity are of two main types. Either the company has been acquired or has joined with another company and no longer exists, or the company has been liquidated for other reasons (Ashta et al., 2005). Sanger & Peterson (1990) found that most of the delisting occurred due to the inability to meet financial figures (net income, minimum shareholders, minimum market capitalization), accounting practices, conflicts of interest, inability to meet debt obligations, and price or trading volume on an abnormal exchange. The third category of causes for delisting is

voluntary delisting by companies. More and more companies seem to want to be private or go private. Amoako-Adu and Smith (1993) show that tightly controlled companies go private to eliminate agency costs associated with minority shareholders.

Bankruptcy is the stage after financial distress occurs. According to Rudianto (2013), bankruptcy is interpreted as a failure in carrying out operations to achieve its goals. The company is considered bankrupt if the rate of return obtained by the company is smaller than the total costs incurred that occur in the long run. So, there are already signs that a company will go bankrupt. Bankruptcy is an accumulation of company mismanagement in the long run. Therefore, tools are needed to detect potential bankruptcy experienced by companies. The earlier the bankruptcy sign is obtained, the better it is for management because management can take various corrective measures as a preventative measure. The creditors and shareholders can also make preparations to deal with various bad possibilities that will occur.

The phenomenon of financial distress is that many companies tend to experience liquidity problems, as indicated by the increasing number of companies that cannot meet their obligations to banks. Forecasting about the presence or absence of business financial failure before a bankruptcy can be predicted using the financial distress model. According to Brahmana (2007), financial distress occurs because the company is unable to manage and maintain the stability of financial performance, causing the company to experience operating losses and net losses for the current year. Furthermore, the losses

incurred will result in a capital deficiency due to a decrease in the value of the retained earnings used to make dividend payments, so that the total equity as a whole will experience a deficiency. These conditions indicate that a company is experiencing financial distress, which at the end of the company is unable to get out of the conditions mentioned above, then the company will experience bankruptcy.

Another phenomenon of financial distress is that many companies tend to experience liquidity problems, which is indicated by the declining ability of companies to meet their short-term obligations to creditors (Hanifah, 2013). Delisting occurs when shares listed on the Indonesia Stock Exchange (IDX) decline in criteria so that they do not meet the listing requirements.

Delisting can be categorized as involuntary or forced if: first, issuer suffered losses for five years in a row. Second, there is no disclosure (information disclosure) when the issuer conducts Initial Public Offering (IPO), so there is no interest in the issuer. Third, there were no transactions with the issuer for six consecutive months. Fourth, issuers are declared bankrupt by the court. Fifth, the number of shareholders is less than 100 investors in less than three months for a row. Companies can be delisted from the Indonesia Stock Exchange (IDX) because the company is in financial distress or is experiencing financial difficulties (Pranowo et al., 2010).

Altman Z-score is a multivariate analysis model that functions to predict bankruptcy of companies with a relatively reliable and accurate level of accuracy and accuracy. This study aims to improve the company's financial performance and bankruptcy predictions based on the results of the discriminant analysis using the Altman model. This discriminant analysis is carried out to predict a company's bankruptcy by analyzing the financial statements of a company two to five years before the company is predicted to go bankrupt.

Based on previous research, the financial ratios used in examining financial distress are liquidity, solvency, profitability, and size (company size). Research on financial distress is known to give different results as conducted by Nora (2016) which states that the solvency variable has no significant effect, and the profitability variable has a significant effect on financial distress with Hanifa (2013) which states that the solvency variable has a significant impact and the profitability variable has no significant effect on the likelihood of financial distress.

Hidayat (2013), in his research, mentioned that the liquidity variable has a significant impact in predicting the occurrence of financial distress in a company. In contrast to research conducted by Nariman (2013), which states that the variable liquidity does not have a significant impact on the occurrence of financial distress.

Meanwhile, according to Vitarianjani (2015), size variable does not affect financial distress. In contrast to Smith and Graves (2005) found that variable size significantly influences the occurrence of financial distress in a company.

Therefore, this study aims to complement previous research by re-proving whether the variables of liquidity, solvency, profitability, size (company growth), and growth (company size) can significantly influence financial distress, by taking all samples of delisted company data voluntary and involuntary in the Indonesia Stock Exchange, amounting to 104 cases since the first delisting occurred on the IDX, from 1993 to 2017. Based on the background that has been described, the formulation of the problem in this study are as follows: do liquidity, solvency, and profitability affect financial distress in the forced delisted company? This research is aim to analyze and obtain empirical evidence from the effect of liquidity, solvency, and profitability on financial distress in forced delisted companies.

## LITERATURE REVIEW

### Agency Theory

Jensen and Meckling (1976), the first originators of agency theory, states that this theory can be referred to as a contract of cooperation between principal and agent where there is an agency relationship which is a binding agreement of cooperation and employing another party (agent) by one or several principals, with the aim of carrying out a number of work or services as well as delegating authority and authority for decision making from principal to agent. Agency theory describes the relationship that occurs between principals and agents. The owner and shareholders of the company as the principal while management as an agent. Agency theory is a contractual relationship that occurs between principals who use agents to carry out services according to the interests of the principal in the event of separation of ownership and control of the company. (Jensen & Meckling 1976).

### Financial Distress

Financial distress is a situation where the company is in danger and threatened due to financial difficulties. Financial distress can be experienced by all companies, especially if the economic conditions in the country where the company operates are experiencing an economic crisis. Financial distress is a decline in the company's financial condition before bankruptcy and liquidation (Platt & Platt, 2002). According to Brigham and Daves (2003), financial difficulties occur due to a series of mistakes, improper decision making, and interconnected weaknesses which can then have a direct or indirect impact on management, as well as a lack of efforts to control the company's financial condition so that in its use not in accordance with what is needed. According to Damodaran (1997), the factors causing financial distress from within a company are more micro. The factors from within the company are cash flow difficulties, the amount of debt, and losses in the company's operational activities for several years. According to Harahap (2009) there are several indicators to see the signs of financial difficulties that can be observed by external parties, for example: the

decrease in several consecutive periods the number of dividends distributed to shareholders, the decline in prices on the market continuously, dismissal of employees on a large scale, the closing or sale of a business unit with a substantial amount, and periodic decline in profits, so the company feels loss. Platt and Platt (2002) state that if a company experiences financial distress, it can be taken by management to prevent problems before bankruptcy occurs. Companies that cannot fulfill their obligations in the short term will experience liquidity problems, and if they are not resolved immediately, they will cause long-term financial difficulties (solvency) so that they can lead to bankruptcy.

Based on the experts' definition above, it can be concluded that the condition of financial distress is a condition where the company is unable to fulfill its obligations, both short term and long term, resulting in financial difficulties at the company and financial distress condition mostly occurs in companies that in a state of crisis. Financial distress in a company can be measured by analyzing the financial statements using financial ratios owned by the company.

#### Liquidity Ratio

Liquidity ratios are ratios that describe the ability of a company to meet all its short-term obligations at maturity. Companies that can pay the short-term debt are called liquid companies, whereas if not called liquid. This ratio can provide an early sign of cash flow problems and impending business failure. All companies want to be able to pay their bills, so it is important to have enough liquidity for daily operational activities. However, liquid assets, such as cash held in banks and securities, do not get high returns, so shareholders do not want companies to invest too much in liquidity. Companies must balance the need for security given liquidity with low returns that produce liquid assets for investors (Gitman & Zutter, 2012).

#### Solvency Ratio

Solvency ratio is a ratio that shows a company's ability to fulfill all its obligations, both short and long term if the company is liquidated. The company's debt position shows the amount of other people's money used to make a profit. In general, long-term debt makes the company make a contractual payment flow in the long run. The more debt the company has, the higher the risk of not being able to meet its contractual debt payments. Companies that have sufficient assets to repay all of their debts are called solvable companies, while those that are not called insolvable (Gitman & Zutter, 2012).

#### Profitability Ratio

Profitability ratios are ratios used to measure a company's ability to get profits. Profit evaluation can be seen from a certain level of sales, a certain level of assets, or the investment of the owner. Without profits, companies cannot attract capital from outside. Owners, creditors, and management pay attention to increased profits because it

is closely related to the survival of the company (Gitman & Zutter, 2012).

#### Company Growth

Sitanggang (2014) argues that to find out how much the growth of the company's achievements in a certain period can be seen from the growth ratio. Kasmir (2012) states that the depiction of a company's ability amid economic growth and its business sector can be done with a growth ratio. According to Fahmi (2011), measurement of how capable a company is in defending its position in the industry and the economic environment, in general, can be proven by the growth ratio. Furthermore, according to Kasmir (2012), growth is a ratio that illustrates a company's ability to maintain its economic position amid economic growth and its business sector. According to Weston and Copeland (1992), the ratio of sales growth measures how well a company maintains its economic position, both in its industry and in overall economic activity. Companies that have positive sales growth indicate that the company can maintain its economic position and survival.

#### Size

Company size is a scale that shows the size of the company that can be measured in various ways, including total assets, log size, the market value of shares, and others. However, the size of a company is only divided into three categories, namely large companies, medium-sized companies, small companies (Fitdini, 2009). Law of the Republic of Indonesia Number 20 the Year 2008 classifies company size as the size of the company, which can be categorized based on total assets and annual sales results. In this study using total assets as an indicator of company size.

#### Delisting

The inability of a company to meet the listing requirements, which then results in a decrease in criteria can be said to be a characteristic of a company that is excluded from listing on an Exchange. The phenomenon of delisting is a frequent occurrence on the Exchange. In accordance with Rule Number I-I concerning the Delisting and Delisting of Shares on the Stock Exchange, the criteria for delisting are: for 3 consecutive years suffered losses or there was a loss balance of 50% or more of the paid-up capital in the company's balance sheet in the last year; for 3 years in a row did not pay cash dividends (for shares) and made three defaults (for bonds); the amount of own capital is less than Rp. 3 billion; the number of shareholders is less than 100 investors (persons or entities) for 3 consecutive months based on the issuer's monthly report or Registrar (1 investor at least has 1 trading unit / 500 shares); for 6 consecutive months no transaction occurred; the financial statements are prepared not in accordance with generally accepted accounting principles and the provisions stipulated by BAPEPAM; violating the provisions of the bourse in particular and the provisions of the Capital

Market in general, take actions that violate the public interest based on the investment decision of the authorities; issuers are liquidated either because of a merger, merger, bankruptcy, liquidation (mutual fund) or other reasons, issuers are declared bankrupt by the court; issuers face lawsuits or events that materially affect the condition and survival of the company.

Delisting can be divided into two types, namely delisting done at the request of the Listed Company (voluntary delisting) and delisting carried out by the Exchange (forced delisting). Registered companies that will submit applications for delisting must meet the following requirements. First, submission of a request for delisting of shares by a listed company can only be made if it has been listed on the Exchange for at least five years. Second, the delisting plan has been decided in the GMS attended by independent shareholders representing 75% or more shares owned by all independent shareholders and the plan was approved by more than 50% of the valid voting rights held by independent shareholders present at the AGM. Third, the listed company has completed all its obligations towards the Exchange as required by the

Exchange rules.

The Exchange deletes the listing of shares of a listed company if the listed company experiences at least a condition of experiencing conditions or events that have a significant negative effect on the business continuity of the company listed either financially or legally, and the listed company cannot show an adequate recovery; and the company's shares are listed as having been suspended, both in the regular market and the cash market for at least the past 24 months.

#### Hypothesis Formulation

In accordance with research conducted by Alifiah, et al. (2012), which states that liquidity ratios measured by using the current ratio (CR) and quick ratio (QR) do not have a significant effect on financial distress predictions in a company. This research is also supported by research conducted by Hanifah (2013), which states that the insignificance of this liquidity ratio is possible for companies to have low current liabilities and are more concentrated on long-term liabilities, so as not to affect the condition of the company. This study is also consistent with the results of research conducted by Putri and Merkusiwati (2014) which states that liquidity is calculated using the current ratio, which compares the total current assets owned by the company with total current liabilities. In current assets, there are accounts and accounts receivable accounts that later if used to pay current liabilities of the company, it takes much time and varies between each company to convert accounts receivable and inventories in cash to be used. However, different results have been found by Masdupi et al. (2018); the liquidity ratio has a significant negative effect on financial distress. This effect means that the higher the availability of funds to pay off its current liabilities, the less chance the company will experience financial

distress. Based on the arguments above, and considering the certain condition of forced delisted companies, this study proposed the following hypothesis with a neutral sign:

#### **H1: Liquidity affect financial distress**

Kamaludin and Pribadi(2011) found that the solvency ratio had a negative effect on the prediction of a company's financial distress, one of the causes was: the relationship between stability cash flow and debt ratio. If the stability of sales and profits is higher then the burden of fixed debt that occurs in a company will have a smaller risk; compared to companies whose sales and profits decline sharply if the profits are small, then the company will find it difficult to pay fixed interest from the bonds. The lower the solvency ratio, the higher the level of corporate funding provided by shareholders, and the higher the lender's safety limit in the event of depreciation in asset values or losses. The results of this study are also in line with research conducted by Laitinen and Suvas (2016), which states that solvency has a significant effect on financial distress. However, different research results were stated by Vitarianjani (2015) which stated that solvency had no significant effect on financial distress conditions because the companies in the study sample were still able to manage their debt with well-owned capital. Although basically leverage can improve financial distress, with a high level of leverage it is expected to increase the company's operational activities such as to purchase assets, pay for operational expenses of the company, pay debts that are due with the total debt held so that the company can continue to maintain sustainability business. Based on the arguments above, and considering the certain condition of forced delisted companies, this study proposed the following hypothesis with a neutral sign:

#### **H2: Solvency affect financial distress**

Nurmayanti (2017) found that ROA or return on assets significantly influences financial distress. The effect of ROA with positive statistical results means that the higher the value of ROA, then the possibility of financial distress will also increase. The results of this study are supported by the research of Widarjo and Setiawan (2009), Handjani (2012), Mas'ud and Srengga (2012), and Hapsari (2013) which states that the ROA influences financial distress. The results of this study differ from Nella (2011), which states that the profitability ratio has a negative effect on financial distress. That is, the higher the profits derived by the company, the smaller a company will experience financial distress. A high ROA is a strong sign of solid financial and operational performance. Based on the arguments above, and considering the certain condition of forced delisted companies, this study proposed the following hypothesis with a neutral sign:

#### **H3: Profitability affect financial distress**

Dependent Variable

The dependent or dependent variable is a variable that is influenced by other variables. In this study, the dependent variable used is Altman Z-Score emerging markets. Ramadhani and Lukviarman(2009) state that over time and adjustments to various types company, Altman then revised its model so that it could be applied to all companies, such as manufacturing, non-manufacturing, and bond issuing companies in developing countries (emerging markets). In this modified Z-score, Altman eliminates the variable X5 (sales to total assets), because this ratio is very varied in industries with different asset sizes. Following is the equation of the emerging market Z-Score modified by Altman (1995).

$$Z=3.25 + 6,56X1 + 3,26X2 + 6,72X3 + 1,05X4$$

Legend:

Z = financial distress index

X1 = (current assets-current liabilities) / total assets

X2 = retained earnings / total assets

X3 = earnings before interest and taxes or EBIT / total assets

X4 = book value of equity/book value of total liabilities

The classification of a good and bankrupt company is based on the Z-score of the Altman model. Modifications to emerging markets are:

1. If the value of  $Z < 1.1$ , including companies that experience financial distress.
2. If the value of  $1.1 < Z < 2.6$  is included in the gray area (it cannot be determined whether the company is healthy or experiencing financial distress).
3. If the value of  $Z > 2.6$ , including companies that do not experience financial distress.

**Liquidity.** According to John (2010), the company's inability to meet its current liabilities is an extreme liquidity problem, this problem can lead to the sale of forced investments and other assets, and even lead to insolvency and bankruptcy difficulties. The following formula measures liquidity:  $\text{Current Ratio} = \text{Current Assets} / \text{Current Liabilities}$ .

**Solvency.** The solvency ratio gives an idea of how much debt a company has compared to its capital or assets. The solvency ratio used in this study is a debt to equity ratio. According to Brigham and Houston, (2013), debt to equity ratio is calculated with the following formula:  $\text{DER} = \text{Total Debt} / \text{Equity}$ .

**Profitability.** According to Wahyu (2009), profitability shows the efficiency and effectiveness of the use of company assets because this ratio measures the ability of companies to generate profits based on the use of assets. With the effectiveness of the use of assets, there will be a reduction in costs by the company. Therefore, the company will obtain savings and will have sufficient funds to run its business. With the adequacy of these funds, the possibility of financial distress in a company will become smaller. Return on asset ratio is calculated

using the following formula:  $\text{ROA} = \text{Net profit before tax} / \text{Total assets}$ .

**Growth.** This ratio illustrates the company's ability to increase sales within a specified period. The sales growth ratio is formulated as follows:  $\text{Sales Growth} = (\text{Sales} - \text{Sales } t-1) / T-1 \text{ Sales}$ .

**Size.** The size of the company illustrates the size of the assets owned by the company. The use of total assets as a proxy for company size, because assets are a description of the assets owned by a company in a certain period. Calculation of company size is proxied by the logarithmic value of total assets:  $\text{Size} = \text{Ln}(\text{Total Assets})$

**Population and Research Samples**

The population used in this study are all types of companies listed on the Indonesia Stock Exchange (IDX) from the first year the IDX was inaugurated, while the samples in this study were all companies listed on the Indonesia Stock Exchange (IDX) selected with several criteria. To obtain the sample, the authors used the purposive sampling method. Samples were selected based on the following criteria:

1. The selected sample is all delisted companies, both voluntary and involuntary or forced from the Indonesia Stock Exchange (IDX) from the first year of delisting, namely 1993-2017.
2. The company suffered losses for three years in a row.
3. The number of shareholders is less than 100.
4. Do not distribute cash dividends for three years in a row.
5. Balance loss of more than 50% of paid-up capital.
6. There are no financial transactions for six consecutive months.
7. Equity is less than 3 billion or a loss balance of 50%.
8. Liquidation of equity less than 3 billion or a loss balance of .50%.
9. The bank is liquidated.
10. The business license has been revoked.
11. The company is subject to delisting criteria from the Indonesia Stock Exchange (IDX) for two consecutive years.
12. The company does not conduct financial transactions for ten consecutive months and get a disclaimer opinion.
13. Do not submit financial reports to the Indonesia Stock Exchange (IDX).
14. Trade transactions are very illiquid, do not submit financial reports for two periods; financial performance has suffered losses in 5 consecutive years.
15. Revoked business license.
16. The survival of dubious business.
17. Referring to Rule Number I-I regarding the delisting of Delisting and Relisting of shares on the Exchange, write off of shares of the Listed Company if:

- a. Item III.3.1.1 experiences a condition, or event, which has a significant negative effect on the business continuity of the Listed Company, either financially or legally, or on the continuity of the status of the Listed Company as a Listed Company, and the Listed Company cannot show any indication of recovery adequate.
  - b. The company's shares listed due to suspension in the Regular Market and Cash Market, have only been traded in the Negotiation Market for at least the last 24 (twenty-four) months.
18. Own application of the related company.
  19. Go private.
  20. Permanently stop operations and liquidation without going through the process of going private first. Alternatively, in other words, the company does not comply with regulations that apply to the IDX.
  21. Mergers and acquisitions.

**METHODS**

Descriptive statistics are used to describe and describe the variables in the study. Descriptive statistics used in this study are the mean (mean), the maximum value (max), minimum value (min), and standard deviation. Multiple linear regression testing can be done after the model in this study meets the requirements, namely passing the classic assumption test. The conditions that must be met are that the data must be normally distributed, not containing multicollinearity and heteroscedasticity. For this reason, before carrying out multiple linear regression testing, it is necessary first to test the classic assumptions which consist of normality test, multicollinearity test, heteroscedasticity test,

Model

$$FDIS = a + b1 LIQ + b2 SOL + b3 PROF + b4 GRO + b5 SIZE + e_i$$

Keterangan:

FDIS = *financial distress*

a = constant

b1 - b6 = coefficient

LIQ = liquidity

SOL = solvability

PROF = profitability

GRO = *growth*

SIZE = *log size*

$e_i$  = *error*

**RESULTS**

Company Profile Delisting in 1993-2017

In this study, the data used are secondary. The object of research in all types of companies listed on the Indonesia Stock Exchange (IDX) from 1993 to 2017, which will be delisted at least one year later. The sample is determined using purposive sampling.

**Table.1**  
**Sample Adoption**

Item	Sample
Population delisted companies 1993-2017	121
Incomplete data	16
<i>Voluntary Listing</i>	38
<i>Not Distressed</i>	29
<i>Forced and Distressed</i>	38

The sample and the total population of the company until the company with incomplete data which amounted to 16, voluntary companies numbered 38, not distress numbered 29 and forced, and distress numbered 38.

Descriptive Statistics

Descriptive statistics are statistics that describe phenomena or characteristics of data. Descriptive statistics related to the collection and ranking of data, which illustrates the characteristics of the sample used in the study of factors that influence financial distress. This analysis explains the characteristics of the target population, mainly including the mean, extreme values, namely the minimum, and maximum values and standard deviations.

**TABLE 2**  
**STATISTIC DESCRIPTIVE**

	N	Minimum	Maximum	Mean	Std. Dev
LIQ	38	.02	998.82	27.00	161.91
SOL	38	-39.09	9620.57	256.80	156.13
PROF	38	-.71	.12	-.1498	.20383
GRO	38	-1.00	2.24	-.0379	.68596
SIZE	38	3.55	7.30	5.6250	.79177
FD	38	-86.49	2.55	-8.3328	16.97830
Valid N (listwise)	38				

From Table 2 above, it can be known and explained the results of the statistical calculations of the independent and dependent variables as follows. Minimum Liquidity is 0.02, and the maximum is 998.82, with an average of 27.00 and a standard deviation of 161.91. Minimum Solvency is -39.09, and the maximum is 9620.57 with an average of 256.80 and the standard deviation of 156.13. Minimum Profitability is -0.71, and the maximum is 0.12, with an average of -1498 and a standard deviation of .20383. Minimum Growth -1.00 and a maximum of 2.24 with an of -0.0379 and a standard deviation of 0.68596. Minimum Financial Distress is -86.49 and a maximum of 2.55 with a mean of -8.3328 and

standard deviation of 16.97830. Minimum Lg Size is 3.55 and a maximum of 7.30 with an average of 5.6250 and standard deviation 0.79177.

Hypothesis Testing

Test the regression model or test the coefficient of determination between the variables Liquidity, Solvency, Profitability, Growth, Size as an independent variable on Financial Distress as the dependent variable.

Coefficient of Determination (R2)

TABLE 3  
Coefficient of Determination (R2)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.457 <sup>a</sup>	.219	.084	15.33515

The table 3 above explains that Adjusted R2 (coefficient of determination) =0.199 means that the variation of the independent variable (Liquidity, Solvency, Profitability, Growth, Size) can explain the variation of the dependent variable Financial Distress of 21.9%. While the rest (100%

- 21.9% = 78.1%) is a variation of other independent variables that affect Financial Distress that is not contained in this study.

Overall Model Test (Anova-Test)

TABLE 4

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2126.938	5	425.388	1.594	.190
	Residual	8538.786	32	266.837		
	Total	10665.724	37			

Based on table 4 above it is known that a significant value of 0.002 or smaller than the probability value (p-value) of 0.05 (0.0190 > 0.05) means that the independent variables namely Liquidity, Solvency, Profitability, Growth, Size do not affect significant simultaneously (simultaneously) to Financial Distress.

T-Test

This test is done by looking at the significance value of each relationship. The level of significance ( $\alpha$ ) is set at 5%, which means that the tolerance range that can be tolerated is 5%. In other words, the level of evidence from testing this preparation is 95%. If the p-value <0.05, it can be said that the independent variable has a significant effect on the dependent variable.

TABLE 5

T-Test Results

	B	t	Sig
Constant	-36.335	-1.724	.094*
LIQ	-.002	-2.104	.062*
LEV	-1.648	-2.009	.043**

ROA	2.129	2.056	.048**
GRO	2.327	1.542	.041**
SIZE	-5.679	-1.535	.035**
N		38	
R-Squared	21.9%		
Adj.R-square	8.4%		
Durbin Watson Stat	1.788		
F-stat	1.594		
Prob (F-statistic)	0.190		

\*\* significant at 5%, \*

significant at 10%

DISCUSSION

Hypothesis 1

Hypothesis1 proposes that Liquidity affect Financial Distress. Table 5 shows that Liquidity has a coefficient of minus 0,002, meaning there is a negative relation between Liquidity and Financial Distress. However, this study determines to accept hypotheses with significance level at 5% and below. So, it can be concluded that H1 is rejected; there is no effect of Liquidity on Financial Distress. Liquidity cannot predict Financial Distress.

This study result is in accordance with research conducted by Alifiah et al. (2012), which shows that liquidity ratios measured by using the current ratio and quick ratio do not

have a significant effect on financial distress predictions in a company. This research is also supported by research conducted by Hanifah (2013), which states that the insignificance of this liquidity ratio is possible for companies to have low current liabilities and are more concentrated on long-term liabilities, so as not to affect the condition of the company. This study result is also consistent with the study results of Putri and Merkusiwati (2014). Their study measure liquidity by using the current ratio, which compares the total current assets owned by the company with total current liabilities. In the current assets, there are accounts and also accounts receivable that later will be used to pay current liabilities of the company. It takes much time and varies between each company to convert accounts receivable and inventories in cash to be used. However, different results have been found by Masdupi et al. (2018), which states that the liquidity has a significant negative effect on the likelihood of financial distress in a company. This effect means that the higher the availability of funds to pay off its current liabilities, the less chance the company will experience financial distress.

Hypothesis 2

Hypothesis 2 proposes that Solvency affect Financial Distress. Based on Table 5 above, it appears that the Solvency affects Financial Distress at a significance level of 0.043 (below 0.05). Therefore it can be concluded that

H2 is accepted, which means that Solvency has an impact on financial distress.

This study result is in accordance with Kamaludin and Pribadi (2011) that solvency ratios have a negative effect on the prediction of a company's financial distress, one of the causes is the relationship between cash flow stability and debt ratios. If the stability of sales and profits is excellent, then the burden of fixed debt that occurs in a company will have a smaller risk compared to companies whose sales and profits decline sharply if the profits are small, then the company will find it difficult to pay fixed interest from the bonds. The lower the solvency ratio, the higher the level of corporate funding provided by shareholders, and the greater the lender's safety limit in the event of depreciation in asset values or losses. The results of this study are also in line with research conducted by Laitinen and Suvas (2016) and Masdupi et al. (2018) which states that solvency and liquidity have a significant effect on financial distress. However, different research results were showed by Vitarianjani (2015) which stated that solvency had no significant effect on financial distress conditions because the companies in the study sample were still able to manage their debt with well-owned capital. Although basically leverage can improve financial distress, with a high level of leverage it is expected to increase the company's operational activities such as to purchase assets, pay for operational expenses of the company, pay debts that are due with the total debt held so that the company can continue to maintain sustainability business.

### Hypothesis 3

Hypothesis 3 proposes that Profitability affect financial distress. Based on Table 5 above, it appears that the ROA has a positive effect on Financial Distress at a significance level of 0.048 (below 0.05). Therefore it can be concluded that H3 is accepted.

This study result is in accordance with research conducted by Nurmayanti (2017). Nurmayanti found that ROA or return on assets significantly influences financial distress. The effect of ROA with positive statistical results means that the higher the value of ROA, then the possibility of financial distress will also increase. The results of this study are supported by the research of Widarjo and Setiawan (2009), Handjani (2012), Mas'ud and Srengga (2012), and Hapsari (2013) which states that the ROA influences financial distress. The results of this study differ from Nella (2011), which states that the profitability ratio has a negative effect on financial distress.

Table 5 also shows that Growth and Size affect Financial Distress. For forced delisted companies, during 1993 – 2017, the impact of growth is positive, the higher the growth, the higher the financial distress. The impact of size on financial distress is negative, meaning the more significant the size of the companies, the lower the financial distress.

## CONCLUSIONS

This research was conducted to analyze and get the evidence of the effect (prediction ability) of liquidity, solvency, and profitability on financial distress in forced delisted companies from the Indonesia Stock Exchange from 1993 to 2017. Based on the data processing results, it can be concluded that liquidity does not affect (cannot predict) the financial distress, solvency, profitability, growth and size impact (can predict) financial distress. The particular condition of forced delisted Indonesian companies shows unique results in the relation of financial ratios with financial distress. First, solvency has a negative sign, meaning the higher the leverage, the lower the financial distress. The sample companies use their debt for funding projects which generate sound revenue, so the financial distress is low. Second, profitability has a positive sign, meaning the higher the profitability, the higher the financial distress. The sample companies have a high net income but high financial distress. It seems that revenue is generated by credit sales. Third, growth has a positive sign, meaning the higher the growth, the higher the financial distress. The sample companies have higher sales in the year before the financial distress happened, but it seems that the sales are in credit sales. Restricted cash inflow to the companies. Fourth, size has a negative sign, meaning the more significant the company size, the lower the financial distress. The sample companies showed to follow the theory of economies of scale. The larger the companies, the lower the cost per unit, the higher the profit, and the lower the financial distress.

### Research Limitations

1. Although in this study, using a sample of the entire population of delisted companies, not all companies have complete financial statement data.
2. This study limits its observations to only companies that are forced delisted, so it has not made a study of comparisons between forced delisted and voluntary delisted.

### Implications

1. For Academics. The results of this study can be a strong argument for use in subsequent research, which links the types of delisting with financial ratios for which data is generated from accounting information.
2. For Investors. The results of this study are expected to provide information that investors can use the profitability and solvency financial ratios as a basis for consideration for investment decision making companies that experience financial distress.

### Suggestions

Based on the conclusions and limitations, this study suggests as follows:

1. In this study, liquidity, solvency, and profitability to financial distress ratios are used. For future researchers, consider using a proxy ratio other than ROA and DER. For example, ROE, ROI, and other leverage calculations.



2. A comparison study of forced and voluntary delisting will be constructive support to the accounting literature.

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