Do Accounting, Market, and Macroeconomic Factors Affect Financial Distress?

Evidence in Indonesia

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Abstract

This paper aims to investigate the effect of accounting, market, and macroeconomic factors on financial distress. The investigations were expanded by constructing seven research models to simulate all factors. The research sample includes companies listed on the IDX from 2016 to 2020 which produce 1.710 data. This paper finds that retained earnings (RETA) and earnings (EBITTA) as part of accounting factors have a role in weakening financial distress and can be consistently tested in several research models. Equity (MVE) as part of the market factor weakens financial distress and is consistently tested. Although solvency (SOLV) was described as the company's ability to maximize debt, it is not consistently tested in several research models. Finally, it was found that deflationary conditions caused financial distress which represented macroeconomic factors. This paper makes a practical contribution to companies and governments to evade financial distress.

Keywords: financial distress; accounting; market; macroeconomic

1.   Introduction

The capital provider gives noticeable to unhealthy and healthy firms (Lizares & Bautista, 2021). Capital providers, namely lenders and investors, prefer negative and significant movement over the company's unhealthy condition. The implications decrease to the inflow of funds, liquidity, operations, and uncertainty business so that the earning quality of the company becomes a downturn (Gerstrøm & Isabella, 2015; Jan & Marimuthu, 2015; Khaliq et al., 2014). Thus, it is necessary to identify whether the company is experiencing financial distress so that there are failure prevention measures (Altman et al., 2017; Dobbie et al., 2017; Hantono, 2019; Osinubi, 2020; Paule-Vianez et al., 2020).

Financial distress is different from bankruptcy (Farooq et al., 2018). Financial distress occurs after getting to be unable to pay its obligations due to negative (operational) sales, liquidity problems, and

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high fixed costs. In contrast, bankruptcy is an interpretation of operations that have stopped due to a lack of understanding the company is falling to a distress zone in finance so it doesn't have enough time to immediately ameliorate (Franks et al., 2016; Mulyati, 2020).

Moreover, there is no date of time that represents the event of bankruptcy (Mohamed, 2020). We responded to Mohamed (2020) where we focused more on financial distress prediction (FDP) which is an early sign of bankruptcy. The significance of FDP is a signal to investors how the company is in line with expectations, namely being able to survive financial distress (Gerstrøm & Isabella, 2015; Hantono, 2019; Osinubi, 2020).

Previous studies in outlining financial distress focus on accounting measurements only (Tinoco et al., 2018; Tinoco & Wilson, 2013). By referring to the research in Indonesia, which the dominance of FDP research is affected by the use of accounting factors only such as Susanti et al. (2020), Indrajati et al. (2020), Kholisoh & Dwiarti (2020), Monir (2020), Ogachi et al. (2020), Koske et al. (2019), Fredrick, (2019), and Kazemian et al. (2017), in point of fact the object of research does not cover all companies on the IDX. However, the empirical research of financial distress is more accurately predicted when the researcher adds market and macroeconomic measurements (Tinoco et al., 2018) and the figures become to cover the debate of accounting shortcomings (Mohamed, 2020). A deviation between the book value of assets and the market value of the same assets was caused by the conservatism accounting principle (Hillegeist et al., 2004).

Some researchers argue detecting and predicting financial distress can add market and macroeconomic variables. Not only researchers and companies, but investors, governments, and creditors have profound attention to financial distress (Alifiah, 2014) because the negative impact will be felt by them if financial distress occurs (Mohamed, 2020). Previous work, Hillegeist et al. (2004), Distinguin et al. (2010), and Gao et al. (2019) investigate the effect of accounting and market factors on financial distress. However, a few researches have dependent on market and macroeconomic variables to interpret and predict the change in the financial distress (Tinoco et al., 2018) or macroenomic only (El-Ansary & Bassam, 2019). Three factors, namely accounting, market, and macroeconomics, have been investigated for financial distress by Tinoco & Wilson (2013), Binh et al. (2018), and Vo et al. (2019). Thus, the contribution of this paper is to enrich the empirical results of all factors - accounting, market, and macroeconomics, specifically in Indonesia.

The rest of the paper is revealed as the following. The second part discusses hypotheses development. The third part discusses method and research model. Results and discussion in the fourth and fifth sections. The last part is the conclusion, limitations, and suggestions for future research.

2.   Literature Review

2.1.   *Accounting Factors*

Previous work has used various predictive models of financial distress such as the Altman Z-score (Koske et al., 2019), Zmijewski (Alali et al., 2018), Springate (Prasetiyani & Sofyan, 2020), Grover (Gusni et al., 2019), Beneish M-score (Mavengere, 2015), and Ohlson O-score (Lawrence et al., 2015). From a number of financial distress prediction models, the Altman Z-score model is considered to be more capable of measuring accounting factors in influencing the company's financial distress than other models (Puro et al., 2019; Syamni et al., 2018; Tanjung, 2020). The higher the Altman Z-Score score, the higher the company is from experiencing financial distress (Thai et al., 2014). The model of the Altman Z-Score is presented as follows.

Table 1. Altman Z-score model

Model	Formula	Result
Z-Score	$Z - score = 6.56X1 + 3.26X2 + 6.72X3 + 1.05X4$	ZS>2,60=Safe Zone 1,10<ZS>2,60=Grey Zone ZS<1,10=Financial Distress Zone

Notes: X1 is working capital to total asset, X2 is retained earning to total asset, X3 is earning before interest rate and tax to total asset, X4 is book value of equity to total liabilities.

First, Moch et al. (2019) argue that the working capital to total asset (WCTA) ratio is the difference between current assets and current liabilities with total assets. Lord et al. (2020) argue that the WCTA ratio is a ratio that describes the strength of a company in paying off its obligations without relying on external funding and without having to liquidate current assets. The larger the number generated by this ratio indicates the company is increasingly able to handle its bills so that the company is further away from financial distress (Ally & Bwana, 2019). The empirical investigation has proven Moch et al. (2019), Thinh et al. (2020), Bhavani & Amponsah (2017), Januri et al. (2017) which shows that higher WCTA keeps companies from financial distress.

Second, based on research conducted by Khaliq et al. (2014), retained earnings total asset (RETA) is a ratio that measures the level of retained earnings compared to the company's total assets. Khurshid (2013) argues that the greater the net profit generated by the company, the less dependent the company is on debt. Thus, the company has sufficient sources of capital structure to face future business operations where the source of the capital structure is retained earnings which do not give rise to cash outflow options. Thus, RETA shows companies that are far from financial distress (Binh et al., 2018). Empirical investigations on this subject have been found by Charalambakis & Garrett (2019), Monir (2020), Babatunde et al. (2017), and Saini (2018).

Third, Thai et al. (2014) explains that the earnings before interest rate and tax to total assets (EBITTA) ratio is used to measure the company's ability to generate net income using its assets. Thai et al. (2014) argue that the company will be far from financial distress if it has a large net profit but with small assets. This illustrates the company is able to efficiently use assets. Thus, EBITTA is suspected to have a negative and significant relationship with financial distress where this assumption is confirmed from the results of empirical tests by Lukason & Laitinen (2018), Matturungan et al. (2017), Alifiah (2014), and Bauweraerts (2016).

Fourth, Lord et al. (2020) argue book value of equity to total liabilities (BVETL) ratio reflects the size of the company's equity because it measures the net worth of the company's liabilities. Furthermore, he explained that the use of book value is able to provide an overview of financial health by examining net assets in relation to total liabilities. Lord et al. (2020) also explains that companies with a higher percentage of net assets than total liabilities are better able to overcome financial distress, therefore the ratio of the book value of equity to total liabilities has a significant negative effect on financial distress. This is in line with the results of research conducted by Toly et al. (2020) and Altman et al. (2014). Referring to the discussion above, we propose hypotheses as follows:

H1: Working capital to total assets ratio has a significant negative relationship to financial distress.

H2: Retained earnings to total assets ratio has a significant negative relationship to financial distress.

H3: Earnings before interest rate and tax ratio has a significant negative relationship to financial distress.

H4: Book value of equity to total liabilities ratio has a significant relationship to financial distress.

2.2. *Accounting Factors*

Distance-to-Default Merton Model can affect the company's financial distress which consists of market value of equity, solvency, equity volatility, and stock price. The Merton model as a representation of market factors is used to evaluate and analyze credit risk where this has been widely used in empirical research (Anuwar & Jaffar, 2017; Fischer et al., 2019; Jessen & Lando, 2015). Thus, the market factors that will be observed in this study include market value of equity (MVE), solvency (SOLV), equity volatility (EVOL), and stock price (SPRI). First, the declining market value of equity (MVE) indicates that the company is experiencing financial distress (Khaliq et al., 2014). This is appropriate with the results of research conducted by Binh et al. (2018) and Vo et al. (2019).

Second, solvency is a ratio that measures how much inflow of funds comes from debt or measures the company's ability to pay off its obligations (Khaliq et al., 2014). Kristanti & Herwany (2017) and (Olariu, 2016) suggest that the higher the company's solvency, the closer the company is to financial distress, this is because the higher the company's solvency indicates that all the capital owned by the company is used to guarantee company liabilities. This is appropriate with the results of research conducted by Kristanti & Herwany (2017), and Rafatnia et al., (2020).

Third, in respect to volatility equity, Arlov et al. (2013) explained that the higher the level of equity volatility describes the high possibility the company's assets are far below the company's liabilities, which means the company is in a state of financial distress. Several circumstances make equity volatility have an effect on financial distress. This is appropriate with the results of research by Arlov et al. (2013), Li & Faff (2019), Jia et al. (2020), Bauer & Agarwal (2014), and Tian et al. (2015).

Fourth, in respect to the stock price, Kristanti & Herwany (2017) reveal that one of the benchmarks for the success of a company's management is assessed through the company's stock price. The higher the value of the company's share price, the higher the value of the company in the perspective of shareholders. This is the result of management in managing the company and reducing agency problems. This argument is supported by empirical findings that stock prices have a significant negative effect on financial distress found by Binh et al. (2018), Nouri & Soltani (2016), and Fredrick (2019). Referring to the discussion above, we propose hypotheses as follows:

H5: Market value of equity has a significant negative relationship to financial distress

H6: Solvency has a significant positive relationship to financial distress

H7: Volatility has a significant positive relationship to financial distress

H8: Stock price has a significant negative relationship to financial distress

2.3. *Economic Factors*

First, the treasury bills used are the annual yield of one-year government bonds Binh et al. (2018). Tinoco & Wilson (2013) show that when government bonds have a high value, it will cause interest rates to rise and it will make the level of financial distress rise. This indicates that the treasury bills has a significant positive effect on financial distress, this is appropriate with the results of research conducted by Binh et al. (2018) and Tinoco et al., (2018).

Second, Kholisoh & Dwiarti (2020) define inflation as a condition where there is a general and continuous increase in prices. Moreover, Kholisoh & Dwiarti (2020) and Setyawati & Amelia (2018) reveal that inflation can affect the price of goods to be high and the ability of buyers to decline, thereby reducing the company's sales turnover. This shows that the higher the inflation rate, the higher the possibility of financial distress. This is appropriate with the results of research conducted by (Moravec, 2013) and (Li et al., 2021). Referring to the discussion above, we propose hypotheses as follows:

H9: Treasury bills has a significant positive relationship to financial distress

H10: Inflation has a significant positive relationship to financial distress

3.   **Method**

The data used in this study were obtained from the financial statements of all companies listed on the Indonesia Stock Exchange for the period 2016 to 2020. This study uses purposive sampling with the criteria of issuing financial statements that have been completely audited from 2016 to 2020 and have all the data needed in the study. Furthermore, data on stock prices were obtained from the annual closing price around 28 until 31 december available at www.idx.co.id. Also, the company's stock price at the end of each month around 27 to 31 is needed to meet the measurement of equity volatility. Annual inflation data were obtained from www.bi.go.id, and data on the treasury bills were obtained from the website www.investing.com. Altman Z-Score Model, Merton Model, and several macroeconomic indicators are used to predict financial distress. In detail, the result of the interest coverage ratio that is less than 1 is classified as suffering financial distress and is given a dummy value of 1, vice versa. Table 2 shows the variables used in this study.

Table 2. Variable measurement

Category	Variable and abreviation	Symbol	Formula
Financial Distress	Financial Distress	Y	$Interest\ coverage\ ratio = \dfrac{EBIT}{Interest\ Expense}$ (zero if the company does not experience financial distress, and 1 if otherwise).
Accounting	Working capital to total assets ratio (WCTA)	X1	$\dfrac{Working\ capital}{Total\ assets}$
	Retained earnings to total assets ratio (RETA)	X2	$\dfrac{Retained\ Earnings}{Total\ assets}$
	Earnings Before Interests Rate and Taxes to total assets ratio (EBITTA)	X3	$\dfrac{EBIT}{Total\ assets}$
	Book value of equity to total liabilities ratio (BVETL)	X4	$\dfrac{Book\ value\ of\ equity}{Total\ liabilities}$
Market	Market value of equity (MVE)	X5	log natural of Price × Outstanding shares
	Solvency (SOLV)	X6	$\dfrac{Totatal\ liabilities}{Total\ MVE + Total\ liabilites}$
	Equity volatility (EVOL)	X7	Stock return's standard deviation per month
	Stock price (SPRI)	X8	Closing price
Macro economic	Treasury bills (TBIL)	X9	Government bond interest rate one year
	Inflation (INFL)	X10	Annual inflation

The seven research model to test and prove the hypotheses were logistic regression that using Stata 18. Model 1 consists of all independent variables accounting, market, and macroeconomic factors. Model 2 consists of independent variables accounting factors, market factors in model 3, and macroeconomic factors in model 4. Model 5 consists of independent variables accounting and market factors. Model 6 consists of independent variables accounting and macroeconomic factors. The last is

model 7 which consists of the independent variables of market and macroeconomic factors. These research models can be expressed in the following equation:

$$Y = \beta_0 + \beta_1 WCTA_1 + \beta_2 RETA_2 + \beta_3 EBITTA_3 + \beta_4 BVETL_4 + \beta_5 MVE_5 + \beta_6 SOLV_6 + \beta_7 EVOL_7 + \beta_8 SPRI_8 + \beta_9 TBIL_9 + \beta_{10} INFL_{10} + \varepsilon \ldots\ldots (1)$$

$$Y = \beta_0 + \beta_1 WCTA_1 + \beta_2 RETA_2 + \beta_3 EBITTA_3 + \beta_4 BVETL_4 + \varepsilon \ldots\ldots (2)$$

$$Y = \beta_0 + \beta_5 MVE_5 + \beta_6 SOLV_6 + \beta_7 EVOL_7 + \beta_8 SPRI_8 + \varepsilon \ldots\ldots (3)$$

$$Y = \beta_0 + \beta_9 TBIL_9 + \beta_{10} INFL_{10} + \varepsilon \ldots\ldots (4)$$

$$Y = \beta_0 + \beta_1 WCTA_1 + \beta_2 RETA_2 + \beta_3 EBITTA_3 + \beta_4 BVETL_4 + \beta_5 MVE_5 + \beta_6 SOLV_6 + \beta_7 EVOL_7 + \beta_8 SPRI_8 + \varepsilon \ldots\ldots (5)$$

$$Y = \beta_0 + \beta_1 WCTA_1 + \beta_2 RETA_2 + \beta_3 EBITTA_3 + \beta_4 BVETL_4 + \beta_9 TBIL_9 + \beta_{10} INFL_{10} + \varepsilon \ldots\ldots (6)$$

$$Y = \beta_0 + \beta_5 MVE_5 + \beta_6 SOLV_6 + \beta_7 EVOL_7 + \beta_8 SPRI_8 + \beta_9 TBIL_9 + \beta_{10} INFL_{10} + \varepsilon \ldots\ldots (7)$$

4.   Results

4.1.   *Descriptive Analysis*

The interest coverage ratio is the most common tool in classifying firms into distressed groups (Mohamed, 2020). The data used are company data listed on the Indonesia Stock Exchange with a total of 1,710 observation data. Finally, table 3 shows the observation data divided into two groups, namely 1,175 observation data or 68.7% did not experience financial distress and 535 data or 31.3% experienced financial distress.

Furthermore, table 4 shows the results of descriptive statistical tests for each independent variable. The ratio of working capital to total assets (WCTA) has an average value with 40% which indicates companies in Indonesia are still able to pay off their obligations due to the adequacy of their assets. Therefore, it is necessary to investigate empirically whether the average value of WCTA (40%) do not evoke financial distress.

The variable-ratio of retained earnings to total assets (RETA) has an average value of -36% which indicates companies in Indonesia prefer to distribute their profits to shareholders in the form of dividends, allegedly to maintain credence investors. This is confirmed by looking at the average value of the ratio of working capital to total assets (WCTA) with 40% which indicates that investors are loyal to the company. Thus, it is interesting to confirm empirically whether the company's strategy in distributing profits has positive implications for the absence of financial distress.

The average value of earnings before interest and taxes on total assets (EBITTA) is 5% which indicates companies in Indonesia can generate profits 5 times the value of assets so that it can be concluded companies have the power to sell and create profits. The noticeable point, the findings of this descriptive analysis strengthen another accounting factors, namely the high sales value or RETA which prioritizes break-even and gain to investors. Thus, it is interesting to explore the role of EBITTA allegedly evading financial distress.

The variable-ratio of the book value of equity to total liabilities (BVETL) has an average value of 7.27 which indicates the ability of companies in Indonesia to pay off their obligations using their capital is very large. Overall, WCTA, RETA, EBITTA, and BVETL have a good performance of accounting ratio. Therefore, it is necessary to estimate whether all of these ratios have a role to reduce bankruptcy potential.

Furthermore, market factors as part of external factors have a role in giving implications for the company's financial distress. Market factors are represented by four variables, namely market value of equity (MVE), solvency (SOLV), equity volatility (EVOL) and stock price (SPRI). First, the market value of equity has an average value of 29.177884 which indicates the natural log of the stock price multiplied by the outstanding share. The higher the MVE value, the more financial distress will be evaded. Second, the solvency variable has an average value of 46.46% which represents the company's operations supported by debt. So, it is necessary to empirically test whether it is true that high corporate debt causes financial distress. Third, the equity volatility (EVOL) variable shows an average value of 353.10 which is a representation of the standard deviation of stock returns. Zhang et al. (2009) argue that the higher EVOL value, the greater asset volatility leads to financial distress. Fourth, the company's stock price shows an average of Rp 2,057 where the higher the company's share price reflects investor trust to companies so that financial distress is increasingly evaded.

The third factor in this study is the macroeconomic, namely the one-year government bond interest rate or treasury bills (TBIL) and inflation (INFL). The treasury bills variable has an average value of 5.60%. Otherwise, the inflation variable has an average value of 2.83%. The expected inflation value is the inflation rate that does not fluctuate and is low so is not render financial distress. Referring to PMK No. 93/PMK.011/2014 and PMK No. 124/PMK.010/2017, the inflation rate set by the regulator from 2016 to 2020 is 4.0%, 4.0%, 3.5%, 3.5%, and 3% consecutively. It is interesting to examine whether the difference between the target and the realization value of inflation affects financial distress. Thus, all average numbers show the characteristics of each variable.

Table 3. Grouping of companies based on financial distress

Variabel	Classification	Frequency	Percentage
Interest coverage ratio	0 : Companies do not experience financial distress	1.175	68,7
	1: Companies experience financial distress	535	31,3
	Total	1.710	100

Table 4. The results of descriptive analysis of accounting, market, and macroenomic factors

Variabels	N	Max	Min	Mean	Std Dev
WCTA (x 100%)	1.710	5,509924	-37,656048	0,040117	1,393114
RETA (x 100%)	1.710	20,052585	-118,561391	-0,366017	4,924397
EBITTA (x 100%)	1.710	1,266642	-1,177132	0,050669	0,127165
BVETL (n)	1.710	3.536,34	-0,989009	7,273303	118,791894
MVE (log natural)	1.710	33,94127	22,90368	28,28170	1,96149
SOLV (x 100%)	1.710	0,99209	0,00033	0,46462	0,26302
EVOL (std deviasi of stock return)	1.710	48.157,80	0,00	353,10	1.437,78

Variabels	N	Max	Min	Mean	Std Dev
SPRI (Rp)	1.710	83.800	50	2.057	5.365,89
TBIL	1.710	0,07463	0,04239	0,056012	0,010718
INFL	1.710	0,0361	0,0168	0,02832	0,006434

Notes: WCTA is working capital to total assets ratio; RETA is retained earnings to total assets ratio; EBITTA is earnings before interests rate and taxes to total assets ratio; BVETL is book value of equity to total liabilities ratio; MVE is market value of equity; SOLV is solvency; EVOL is equity volatility; SPRI is stock price; TBIL is treasury bills; INFL is inflation.

4.2. *Results of Hypotheses*

In this section, we focus to describe model 1, namely the influence of all variables from accounting, market and macroeconomic factors on financial distress to answer the research hypotheses. In contrast, the other models namely models 2, 3, 4, 5, 6, and 7 were shown in the discussion section.

The first model represents financial distress which is influenced by all accounting factors, namely WCTA, RETA, EBITTA, and BVETL, market factors namely MVE, SOLV, EVOL, and SPRI, and macroeconomic factors namely TBIL and INFL. First, the ratio of working capital to total assets (WCTA) does not affect financial distress, with a value of -0.0179. The results of this study are appropriate with research conducted by Ramadhan & Marindah (2021). Second, the retained earnings ratio variable on total assets (RETA) has a negative and significant effect on financial distress, scoring -0.00784 with the error rate of 10%. This means that companies stay away from the financial distress zone. If this result is related to descriptive statistics, it can be concluded that because the company distributes more profits to investors in the form of dividends than retained earnings, it creates trust from investors. Companies that distribute more profits in the form of dividends than retained earnings generate enterprise good news from investors in the form of company income expectations that will continue to be good in the future (Al-Shattarat et al., 2018). The results of this study are appropriate with research conducted by Charalambakis & Garrett (2019), Monir (2020), Saini (2018), and Babatunde et al. (2017). Third, the variable earnings before interest and taxes on total assets (EBITTA) have a negative and significant effect on financial distress, scoring -1.463 with the error rate of 1%. This means that the company is moving away from the financial distress zone due to good EBITTA performance. This is confirmed from table 4 that the companies able to create a profit 5 times greater than their assets. Thai et al., (2014) explain that a company is far from the financial distress zone if it has a large net profit with existing assets. This is because the company has efficiency in maximizing assets to generate income. The results of this study are appropriate with research conducted by Lukason & Laitinen (2018), Matturungan et al. (2017), Alifiah (2014), and Bauweraerts (2016). Fourth, the variable book value of equity to total liabilities (BVETL) does not affect financial distress, with a value of 0.00009.

The fifth is the market value of equity (MVE) variable which represents the group of market factors showing a negative and significant effect on financial distress, scoring -0.0433 with the error rate of 1%. The company stays away from the financial distress zone because of the performance of MVE. If we refer to the descriptive statistics of MVE value, it means MVE value which is the natural log of the market price multiplied by the outstanding share, keeps the company from the financial distress zone. Moreover, the average share value of the company increases and the volume of business from trading also increases. This supports the analysis of RETA's findings that the company focuses on investor returns. This study is appropriate with the work by Khaliq et al. (2014) where the market value of a company's equity that has not decreased indicates that the company is not experiencing financial distress. Sixth, the solvency variable (SOLV) has a negative and significant effect on financial distress, scoring -0.0394 with the error rate of 5%. The descriptive test result shows that the debt level of 46.46% which

is considered to be quite high does not undermine the company's attention in allocating financial resources and has no implications for financial distress. This means that companies in Indonesia adopt the paradigm of trade off theory, namely, there is value that can be optimized from debt to finance activities, operations and maintain company liquidity (Harjito, 2016; Tong & Green, 2005). However, it should be noted that debt can also provide an obligation for companies in the form of scheduled principal and interest obligations and consequences of penalties and lawsuits in financial and non-financial forms due to moral hazard. Therefore, this paper underlines that the level of debt that can be justified to stay away from the financial distress zone is a maximum of 46% where this level is confirmed from the results of the statistical descriptive test in table 4. This result is appropriate with research conducted by Yazdanfar & Öhman (2020), Santosa et al., (2020), Alifiah & Tahir (2018). Seventh, the equity volatility (EVOL) variable does not affect financial distress, with a value of 20,306. Eighth, the stock price variable does not affect financial distress, with a value of 70,608.

The ninth variable is treasury bills (TBIL) which represents a group of macroeconomic factors which shows no effect on financial distress, with a value of -0.906. The last or tenth variable, namely the inflation variable (INFL) shows a negative and significant effect on financial distress, scoring -0.0753 with the error rate of 5%. Sequentially, the inflation set by the regulator since 2016-2020 is 4.0%, 4.0%, 3.5%, 3.5%, and 3%. By referring to the descriptive statistics in table 4, the average inflation rate is 2.83% or 1.17% lower than the inflation rate set. This means that the condition experienced by the Indonesian economy is deflation, which is a decrease in purchasing power. Thus, from a macroeconomic perspective, Indonesia does not have good economic fundamentals, wherein substance, the level of deflation causes financial distress in companies. The government needs to carry out several economic policies to get out of the deflation zone.

Table 5. Regression test result

Variabel	Expected	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
WCTA	(-)	-0.0179	-0.0163	n.a.	n.a.	-0.0195	-0.0144	n.a.
		(0.0141)	(0.0142)	n.a.	n.a.	(0.0141)	(0.0141)	n.a.
RETA	(-)	-0.00784*	-0.00979**	n.a.	n.a.	-0.00805*	-0.00965**	n.a.
		(0.00432)	(0.00434)	n.a.	n.a.	(0.00433)	(0.00434)	n.a.
EBITTA	(-)	-1.463***	-1.576***	n.a.	n.a.	-1.507***	-1.532***	n.a.
		(0.0811)	(0.0771)	n.a.	n.a.	(0.0805)	(0.0779)	n.a.
BVETL	(-)	0.00009	0.000155*	n.a.	n.a.	9.09e-05	0.000161*	n.a.
		(0.00008)	(8.30e-05)	n.a.	n.a.	(8.67e-05)	(8.29e-05)	n.a.
MVE	(-)	-0.0433***	n.a.	-0.0686***	n.a.	-0.0420***	n.a.	-0.0696***
		(0.00835)	n.a.	(0.00986)	n.a.	(0.00834)	n.a.	(0.00984)
SOLV	(+)	-0.0394**	n.a.	-0.00699	n.a.	-0.0367**	n.a.	-0.0152
		(0.0160)	n.a.	(0.0174)	n.a.	(0.0160)	n.a.	(0.0174)
EVOL	(+)	20.306	n.a.	-27.506	n.a.	11.206	n.a.	-1.06e-06
		-61.206	n.a.	-65.506	n.a.	-61.206	n.a.	(6.49e-06)
SPRI	(-)	70.608	n.a.	-35.306	n.a.	-12.707	n.a.	-2.78e-06
		-27.006	n.a.	-31.406	n.a.	-27.006	n.a.	(3.13e-06)
TBIL	(+)	-0.906	n.a.	n.a.	-1.119	n.a.	-0.690	-1.219
		(0.847)	n.a.	n.a.	(0.890)	n.a.	(0.847)	(0.893)

Variabel	Expected	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
INFL	(+)	-0.0753**	n.a.	n.a.	-0.163***	n.a.	-0.0766**	-0.150***
		(0.0347)	n.a.	n.a.	(0.0364)	n.a.	(0.0349)	(0.0364)
Obs		1,710	1,710	1,710	1,710	1,710	1,710	1,710

Notes: model 1 is accounting, market, and macroeconomic factors; model 2 is accounting factors; model 3 is market factors; model 4 is macroeconomic factors; model 5 is accounting and market factors; model 6 is accounting and macroeconomic factors; and model 7 is market and macroeconomic factors; *, **, *** indicate significance at the 10%, 5%, and 1% levels.

5.   Discussion

In this discussion section, we describe models 2 through 7 to test the consistent empirical results of model 1 covering all variables and research hypotheses. The second model is a test of financial distress which is influenced by accounting factors only. Referring to table 5, the results are consistent with model 1 where the RETA variable has a negative and significant effect on financial distress, scoring -0.00979 with the error rate of 5%. This means that the company's preference for profit sharing is the distribution of dividends compared to retained earnings to signal that the company has high earnings prospects in the future (Al-Shattarat, 2020). Furthermore, consistent results were also found that the EBITTA variable had a negative and significant effect, scoring -1.576 with the error rate of 1%. This means that strengthening RETA where the company has a high level of income so that it gives a signal on profit sharing and the prospect earning of future as well (Al-Shattarat et al., 2018).

The third model is a test of financial distress which is influenced by market factors only. Referring to table 5, the results are consistent with model 1 where the market value of equity (MVE) has a negative and significant effect, scoring -0.0686 with the error rate of 1%. These results indicate that there is a relationship between high stock prices and trading volume with low financial distress, which supports RETA concerning investor trust.

The fourth model is a test of financial distress which is only influenced by macroeconomic factors. Referring to table 5, the results are consistent with model 1 where inflation (INFL) has a negative and significant effect, scoring -0.163 with the error rate of 1%. This result strengthens the previous analysis, that the macroeconomic substance, companies in Indonesia are experiencing a deflationary stage, namely a decline in purchasing power because the inflation rate in the field is lower than the inflation rate that has been set (2.83% versus 4.0%, 4.0%, 3.5%, 3.5% and 3% in 2016-2020) - not inflation.

The fifth model is a test of financial distress which is influenced by a combination of accounting and market factors. All variables of accounting factors are consistent with the results of model 1 and model 2, RETA has a negative and significant effect on financial distress, scoring -0.00805 with the error rate of 10%. The EBITTA variable also consistently has a negative and significant effect on financial distress, scoring -1.507 with the error rate of 1%. From the market factors, it was also found that the results were consistent with model 1 and model 3 where the MVE variable had a negative and significant effect on financial distress, scoring -0.0420 with the error rate of 1%.

The sixth model is a test of financial distress which is influenced by a combination of accounting and macroeconomic factors. The variables RETA and EBITTA remain consistent with models 1, 2, and 5. RETA has a negative and significant effect on financial distress, scoring -0.00965 with the error rate of 5%. Moreover, EBITTA has a negative and significant effect on financial distress, scoring -1.532 with the error rate of 1%. Likewise, with RETA and EBITTA, the inflation variable (INFL) is also consistent with models 1 and 4, which has a negative and significant effect on financial distress, scoring -0.0766 with the error rate of 5%.

Finally, the seventh model is a test of financial distress which is influenced by a combination of market and macroeconomic factors. This model also shows that all MVE from market factors and inflation (INFL) from economic factors have a negative and significant effect on financial distress. The significant value of MVE is -0.0696 with an error rate of 1%. Moreover, the significant value of inflation is -0.150 with an error rate of 1%.

Referring to all models and consistency of results, it can be concluded that the RETA and EBITTA variables are part of the accounting factors that consistently have implications for evading financial distress. This means that companies need to maintain the company's behaviour to prefer to share profits with investors - such as dividends. The company can also focus on the future to maintain a stable rising revenue level. The MVE variable which is part of the consistent market factor in each test has implications for evading financial distress. The company has earned the trust of investors, which is represented by the stock price so that in the future the company needs to maintain events that contain good news to maintain this. Another variable from the market, namely SOLV, is significantly negative in model 1 and consistent results in model 5 but inconsistent that does not affect financial distress in models 3 and 7. Finally, the INFL variable shows the consistency in models 1, 4, 6, and 7. Inflation is the external environment of the company that is not able to be controlled. If referring to Alifiah (2014), the government is also affected if the company experiences financial distress, so the government needs to develop economic policies that are more likely to improve economic fundamentals such as improving purchasing power.

6.   Conclusions

This study uses 7 research models to examine accounting, market, and macroeconomic factors on financial distress. Accounting factors that have contributed to evading financial distress are RETA and EBITTA, while WCTA and BVETL do not affect all models. The only market factor that affects financial distress is MVE in all research models which represents stock prices which have implications for a decrease in financial distress. Moreover, SOLV affects evading financial distress, where the company has a debt level that can be maximized and can anticipate the consequences of debt, namely principal and interest. However, SOLV is not consistent across several research models. INFL is a variable that represents part of macroeconomic factors that have a relationship with financial distress. However, because the descriptive test shows the inflation rate is below the set rate, it means that Indonesia is in a deflationary zone, so that significant negative effects need to be considered by the government.

This study provides several noteworthy implications for companies and regulators. Companies need to consider maintaining and consistent to distribute of principal returns to investors (RETA), maintaining sales (EBITTA), producing good news to maintain stability in rising share prices (MVE), and maintaining controlled debt levels (SOLV). Lastly, the government needs to anticipate the consequences of deflation which reduces purchasing power.

Purchasing power is part of macroeconomic factors that we do not observe. This happened because we face lack of available data and literature reviews. Furthermore, the next writer can consider the variables that have been studied by Hu & Zheng (2015) and Paule-Vianez et al., (2020) to capture until 32 variables. We did not adopt all variables due to the limited availability of literature review in constructing the hypothesis.

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Apakah Faktor Akuntansi, Pasar, dan Makro Ekonomi Mempengaruhi *Financial Distress*?

Bukti di Indonesia

Abstrak

Paper ini bertujuan untuk menginvestigasi pengaruh faktor akuntansi, pasar, dan makro ekonomi terhadap financial distress. Investigasi diperluas dengan menyusun tujuh model riset untuk mensimulasi seluruh faktor. Sampel penelitian mencakup perusahaan yang terdaftar di BEI sejak tahun 2016 hingga 2020 dimana menghasilkan 1.710 data. Paper ini menemukan bahwa retairned earning (RETA) dan earning (EBITTA) sebagai bagian dari faktor akuntansi memiliki peran memperlemah financial distress dan mampu konsisten diuji dalam beberapa model riset. Equity (MVE) sebagai bagian dari faktor market memperlemah financial distress dan konsisten diuji. Sebaliknya, meskipun solvency (SOLV) menunjukkan kemampuan perusahaan dalam memaksimalkan utang, namun tidak konsisten diuji dalam beberapa model riset. Terakhir, ditemukan keadaan deflasi yang menyebabkan terjadinya financial distress yang merepresentasi faktor makro ekonomi. Kontribusi praktis disumbangkan paper ini kepada perusahaan dan pemerintah untuk menghindari financial distress.

Kata kunci: financial distress, akuntansi, market, ekonomi