Examining the Effect of Operating Cash Flow on Financial Distress: An Evidence from Indonesian State-Owned Enterprises (SOEs)

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Abstract

Financial distress is a situation under which a corporation or individual cannot produce enough profits or revenue, leaving it unable to satisfy or pay its financial obligations. In general, this is due to high fixed costs, a high amount of illiquid assets, or sales and operating cash flow that is vulnerable to economic downturns. Operating cash flow (OCF) calculates the amount of money generated by a company's regular business activities. The operating cash flow shows if a business can produce adequate cash flow to sustain and expand its operations; otherwise, external capital investment funding could be needed. This study motivated by the existence of gap previously published, which stated that several State-Owned Enterprises (SOEs) experienced financial difficulties due to losses, dependencies on funding for government subsidies, and the need for additional capital investment. This study seeks to examine the effect of operating cash flow on Indonesian SOEs' financial distress in conjunction with the issue. This study uses a time series data with a total sample is 31 SOEs out of 51 SOEs due to financial difficulties for 5 year started 2014 to 2018 and collected from the personal SOEs website. This study found that operating cash flow has a significant effect on SOEs' financial distress. In conclusion, the operating cash flow is categorised as a crucial factor that affects SOEs' financial distress in Indonesia. This study implies that using a marginal approach via score value is more realistic to measure financial distress. This study can also help the stakeholders, especially the government, consider assessing and evaluating the level of financial distress faced by Indonesia SOEs.

Keywords
Operating cash flow, financial distress, Stated-Owned Enterprises, Indonesia context

1. Introduction

State-Owned Enterprises (SOEs) is one important topic to study in the current era due to SOEs financial difficulties. State-Owned Enterprises consists of two forms of companies, namely Persero and Public Companies. The significant issue related SOEs is there are three groups of companies that have the potential to experience financial distress, namely: (a) companies that depend on their financial needs on government subsidies, 9 BUMN; (b) companies that receive additional state capital participation, totalling 20 BUMN; and (c) 24 BUMN companies that suffered losses until the end of the first semester of 2017. In line with the potential for financial distress, the study of financial distress is important to provide input to the stakeholder major state-owned companies against crucial variables that must be considered in preparing strategies and corporate policies.
Financial distress measurement is still constrained as a conceptual gap because previous studies used relatively simple measurements compared to the relatively very complex BUMN financial distress phenomenon. The weaknesses of measuring financial distress in previous studies, especially the differences in determining the boundaries or definitions of the group of companies experiencing financial distress, as stated by: (a) Altman, Marco and Varetto (1994) and Yang, Platt and Platt (1999), using the neural network model to distinguish companies that have failed and that have not failed; (b) Lau (1987) and Hill et al. (1996), using the indicators of companies that experience financial distress, namely the dismissal of personnel working or eliminate the payment of dividends; (c) Asquith, Gertner and Scharfstein (1991), using the indicator interest coverage ratio for defining companies that experienced financial distress; (d) Whitaker (1999), measures of financial distress by using the indicator of the flow of cash that is smaller than the debt term length that falls due when this; and (e) John, Lang and Netter (1992), define financial distress as changes in equity prices (Gamayuni, 2009).

The advantage of this marginal scoring approach is to improve and develop financial distress measurements that can fill gaps or gaps that have become weaknesses in previous research, especially in terms of: (a) the data used is a nominal scale qualitative which is relatively simple compared to the complexity faced by companies experiencing financial distress, (b) among previous studies, there was no uniformity in defining or determining boundaries as companies experiencing financial distress, (c) the last model research is less attention to variations in companies experiencing financial distress, but in general it gave a value of category 0 or 1, (d) previous research cannot be carried out if there is only one group of companies, because the dependent variable data does not vary, for example the entire sample comes from the same group, namely companies experiencing financial distress (all values = 0 or 1), (e) Financial research al previous distress using measurements based on Altman scores and others is less realistic, because the scores of Altman (1968), Springate (1978), and others use data that is less relevant to current business and industrial conditions, in addition to the weaknesses as mentioned in point (a) up to (d) referred to above.

The advantages of the measurement of financial distress on the basis of the score marginally mentioned above can contribute to the implementation of the assessment of financial distress on State-Owned Enterprises. The result of the prediction score of marginal can be utilised for various interests internally SOEs, especially in terms of (a) planning of the corporation with the target achievement score of marginal certain that more and more increasing from time to time; (b) assess the success of company management in achieving the programmed marginal score performance; (c) comparing the level of success in achieving the marginal score among BUMN; (d) as an instrument of monitoring the performance of the management of SOEs to be more focus on the strategies and policies of the variable key to improving the performance of companies with a score marginally the better future that will come, and (e) become the standard for assessing the company as a healthy company or possibly experiencing financial distress based on the marginal score. Thus, this study seeks to examine the effect of operating cash flow on Indonesian SOEs' financial distress.

2. Literature Review
2.1. Agency theory
This study considers the agency theory was developed by Jensen and Meckling (1976). The theory explained two parties that have interests different, namely the holders of shares or principal who want to maximise the receipt of dividends per strip of shares or earnings Per-share, while company managers who want to maximise the receipt of compensation. Managers can manage the companies to achieve the purpose of the desired holder shares. The manager will be paid compensation that is worthy of being motivated to carry out the duties and obligations. Management of the company by managers is essential because it is closely related to variables that affect financial distress, affecting the value of the company, which ultimately meets the interests of the company's shareholders.

2.2. Signaling theory
Tucker and Melewar (2005) argued that the signalling theory indicates that the company will signal through actions and communication. The company adopts the signals to express the hidden attributes to the stakeholder's interests (stakeholders). The company seeks to provide information on financial statements, give signals on various factors that affect the company's financial condition, and communicate strategic and policy steps to improve financial performance. The research uses the signalling theory to analyse financial distress, mainly due to management's actions in preparing the company's strategy and policy, which is closely related to the variables that affect the level of marginal scores or financial distress that occurred in SOEs.
2.3. Marginal theory
The marginal concept is the application of differential calculus to consumers and producers' behaviour and determining market prices for optimal quantities (Li et al., 2007; Rahman & Utomo, 2017). The implementation approach is marginally used for (a) determining the cost of the minimum per unit by the terms marginal cost equal to the average cost (MC = AC), (b) the level of profits maximum or losses minimum in terms of marginal revenue equal to marginal cost (MR = MC), and (c) the income maximum in terms of marginal revenue equal to zero (MR = 0). In this study, the concept of marginal developed by adding formula as a novelty in the measurement of financial distress, with a magnitude of zero up with one that is mentioned as a score of marginal or SMG. Companies tend to be close to the best conditions when SMG is close to, and companies reach optimal conditions when SMG = 1, and tend to experience financial distress when SMG approaches zero. The measuring financial distress is based on the approach of marginal which is used in the function derivative analysis of the function of demand and offer, analysis of marketing, the theory of the cost, the theory of production, theory of utility, decision management companies in various structures of the market, and others. The method of analysis in the concept of marginal mentioned uses the approach of mathematical and approach to the analysis of the graph as the Archibald & Debertin (1987) follows this.

2.4. Mathematical approach
The optimal condition or maximum profit is reached at the balance of marginal revenue and marginal cost.

$$\frac{MR}{MC} = 1 \quad \text{atau} \quad \frac{\Delta TR/\Delta Q}{\Delta TC/\Delta Q} = 1$$

$$SM_g = 1 - \left(\frac{MR-MC}{MR}\right)^2 \quad \text{or} \quad SM_g = 1 - \left(\frac{\Delta TR/\Delta Q}{\Delta TC/\Delta Q}\right)^2$$

Where: SMg = marginal score, MR = marginal revenue, MC = marginal cost, ΔTR = change in total revenue, ΔTC = change in total cost, ΔQ = change in sales quantity.

Based on the balance of this developed formula of measurement score of marginal (SMG) as a novelty in measuring financial distress following this.

2.5. Approach Graph
Figure 1 displays the curve TC, TR, MR, MC, AVC, and AC. The optimal quantity of sales as Q1 with prices P1 occurs at point A. While the quantity of sales Q1 with price P3 is on condition financial distress are serious, so it is better to stop operational companies that do not give rise to a great loss. Because of the price of P3 on the quantity of sales Q1 is not able to cover the cost of the variable on the curve AVC and costs overall in the curve AC.

Figure 1: Marginal Revenue and Marginal Cost Balance (MR = MC)

Where: MR = marginal revenue, MC = marginal cost, AC = average cost, AFC = average fixed cost, P = price, Q = quantity of sales, D = demand.

2.6. Financial Distress
Beaver (1966), Altman (1968) were pioneered studied financial distress. Altman's models (1968), using the multiple discriminant analysis models, and variable financial distress were measured with category 1 and 2 for the company healthy and companies experiencing financial distress. The independent variables are working capital / total assets; retained earnings / total assets; earnings before interest and taxes / total assets; market value equity/book value of total liabilities, and sales / total assets. Miller & Springate (1978), using the Multiple Discriminant Analysis model, and variable financial distress measured with categories 1 and 2 for the company healthy and experiencing financial distress. Platt and Platt (2002) used a model analysis of logistic, and variable financial distress measured with the dichotomy of 0 and 1 for the company healthy and companies experiencing financial distress. The independent variable consists of finance key, namely: EBITDA / sales, current assets / current liabilities, cash flow growth rate, net fixed assets / total assets, long-term debt/equity, and notes payable/total assets (Gamayuni, 2009).

Other studies, using a linear regression model and measurement of financial distress variables based on scores from previous research, such as the Altman score (1968), the Springate score (1978), the Fulmer Model score (1984), and the CA-score (1987).

### 2.7. Hypothesis Development

#### The Effect of Capital Expenditure

Study of empirical research beforehand (Cummins & Xie, 2008), finding that capital expenditure affects financial companies' success or difficulties. This research filed hypothesis H1 follows this.

**H1:** The growth of investment or capital expenditure has a positive effect on financial distress or State-Owned Enterprises' marginal score.

#### The effect of working capital

An empirical study of previous research by Cummins & Xie (2008), F. Lin, Liang, Yeh, & Huang (2014), Altman (1968), and Miller & Springate (1978) found that working capital affects the company's financial distress. This research filed hypothesis H2 follows this.

**H2:** The growth of working capital has a positive effect on financial distress or State-Owned Enterprises' marginal score.

#### The effect of retained earnings

An empirical review of previous research by T. H. Lin (2009) and F. Lin et al. (2014), found that retained earnings affect the company's financial distress. This research filed hypothesis H3 below it.

**H3:** The growth of retained earnings has a positive effect on financial distress or State-Owned Enterprises' marginal score.

#### The Effect of Increase in equity

A study of empirical research beforehand (Cummins & Xie, 2008) finds that the increase in equity or equity affects its financial distress. This research filed hypothesis H 4 follows this.

**H 4:** The increase in equity or own capital has a positive effect on financial distress or the marginal score of State-Owned Enterprises.

#### The effect of real activities earning management

An empirical study of previous research (Bisogno & De Luca, 2015) found a correlation between real activities earning management and company financial distress. This research filed hypothesis H 5 follows this.

**H 5:** Real activities earning management has positively affected financial distress or State-Owned Enterprises' marginal score.

#### The Effect of Earnings before interest and tax

Previous research by F. Lin et al. (2014), Altman (1968), and Miller & Springate (1978) found that Earnings before interest and tax affects the company's financial distress. This research filed hypothesis H 6 below it.

**H 6:** Growth of earnings before interest and tax positively affects financial distress or the marginal score of State-Owned Enterprises.

### 2.8. Research Framework

Framework conceptual research is like in picture 2 shows the effect of variables independent of the financial distress following this.
The independent variable used in this study is based on previous research. Meanwhile, the reasons and the process for selecting the independent variables are carried out through selection by considering the relevant aspects with real conditions that cause the company to experience financial distress. Based on the selection process, the key variables that affect financial distress are then determined, namely: (a) investment growth, (b) working capital growth, (c) retained earnings growth, (d) equity growth, (e) real activities earnings management, and (f) earning before interest and taxes.

3. Methodology
3.1 Population and Sample
Population research this is the 44 SOEs were experiencing difficulties finances. The sample is determined by using the method solving as Loving & Kamermans (1991). The number of samples that will be observed as much as 31 state-owned companies. The number of samples or units of analysis for this study was 31 BUMN, about 70.4% of the total population of 44 BUMNs experiencing financial difficulties. Observations were made using panel data as a combination of cross-section data of 31 BUMN and time series data in the last few years so that the number of observations in this study was 72 company-years. In the processing of statistical data for each BUMN, several variables use data on changes between times, so that it is processed statistically as many as 48 observations.

3.2 Measurement Instruments
Financial distress
Financial distress is the dependent variable indicating the level of financial difficulties faced by state-owned enterprises or BUMNs ranging from small to medium difficulties to bankruptcy. Variable measurement financial distress SOE used approaches score is marginal, as described previously following this.

\[
SMg = 1 - \sqrt{\frac{(MR - MC)}{MR}}^2 \text{ atau } SMg = 1 - \sqrt{\frac{(\Delta TR - \Delta TC)}{\Delta TR}^2}
\]

Where: SMg = marginal score, MR = marginal revenue, MC = marginal cost, \(\Delta TR\) = change in total revenue, \(\Delta TC\) = change in total cost, \(\Delta Q\) = change in sales quantity.

Capital expenditure
Investment growth (CAPEX), which is an independent variable that shows the amount of investment expenditure for a certain period or known as capital expenditure period t. This variable is measured using a formula as in the research of J. Chen, Wosinska, MacHuca, & Jaeger (2010), namely:

\[
CAPEX_t = \frac{\text{Fixed Assets}(t) - \text{Fixed Asset}(t-1)}{\text{Fixed Asset}(t-1)}
\]
Growth Working Capital, namely changes in working capital between time, while working capital is the difference between the asset with debt smoothly that describe the capital of work net that held firm period t. Measurement of variables is done by calculation, as in Bailey (1989) or Brigham and Daves (2007) follow.

\[
WC_t = \frac{Working\ Capital\ (t) - Working\ Capital\ (t-1)}{Working\ Capital\ (t-1)}
\]

Retained Earnings
Growth of Retained Earnings, ie changes in retained earnings of the time, while retained earnings are part of profits that are not distributed to the holders of shares, and can be used by companies to reinforce the need for financial Good for financing operations as well as for development or investment period t. Measurement of variables is done with a formula as in Bailey (1989) or Brigham and Daves (2007) follow.

\[
RE_t = \frac{Retained\ Earnings\ (t) - Retained\ Earnings\ (t-1)}{Retained\ Earnings\ (t-1)}
\]

Equity
Growth equity, ie the rate of growth of capital owners well as increases profitability as well as from additional deposit capital owners of period t. Measurement of variables is done with a formula as in Bailey (1989) or Brigham and Daves (2007) follow.

\[
EQ = \frac{Equity(t) - Equity\ (t-1)}{Equity\ (t-1)}
\]

Real activities earning management
Real activities earning management, which is an independent variable that shows earnings management actions based on company activities period t. Real Earnings Management is defined as the actions of management that deviate from the practice of business that is normal to do with the purpose of principal to achieve the target profit, as (Cohen, 2015) and (Roychowdhury, 2006) in real activities of earnings management can be done with three ways, namely the manipulation of sales, the production of which is excessive ( overproduction ), and a decrease in discretionary expenditures. Measurement of variables estate activities was used in the study of this, is as in Roychowdhury (2006) in equation (1) to equation (5 below.

Equation (1): Cash flow operasi (CFO),
\[
CFO_{t/At-1} = \alpha_0 + \alpha_1 (1/At-1) + \beta_1 (St/At-1) + \beta_2 (\Delta S_{t/At-1}) + \epsilon_t
\]

Equation (2): Cost of good sold (COGS),
\[
COGS_{t/At-1} = \alpha_0 + \alpha_1 (1/At-1) + \beta (St/At-1) + \epsilon_t
\]

Equation (3): Perubahan inventory (ΔINV),
\[
\Delta INV_{t/At-1} = \alpha_0 + \alpha_1 (1/At-1) + \beta_1 (\Delta S_{t/At-1}) + \beta_2 (\Delta S_{t-1/At-1}) + \epsilon_t
\]

Equation (4): Production (PROD),
\[
PROD_{t/At-1} = \alpha_0 + \alpha_1 (1/At-1) + \beta_1 (St/At-1) + \beta_2 (\Delta S_{t/At-1}) + B_3 (\Delta S_{t-1/At-1}) + \epsilon_t
\]

Equation (5): Discretionary expense (DISEXP),
\[
DEXP_{t/At-1} = \alpha_0 + \alpha_1 (1/At-1) + \beta (St_{-1}/At-1) + \epsilon_t
\]

Procedures measurement variable is preceded by using equation (1) to the equation (5), then calculated the residual or abnormal from the five equations that (ACFO, ACOGS, AΔINV, APROD, and ADEXP) as well as on research Cohen et al. (2008) in Roychowdhury (2006) follows this.

\[
RAEM_t = AREAL_t = ACFO_t + ACOGS_t + A\Delta INV_t + APROD_t + ADEXP_t
\]

Where: AREA or Raem = abnormal or residuals from estate activities ; ACFO = abnormal or residual cash flow from operating ; ACOGS = abnormal or residual cost of goods sold ; AΔINV = abnormal or residual change in inventory value ; APROD = abnormal or residual production costs ; ADEXP = abnormal or residual discretionary expense ; At = total assets end of year t; St: sales period t.

Earning Before Intrest and Tax
Growth in Earnings Before Interest and Tax, namely changes in EBIT between time, while EBIT showed the achievement of profitability of operating companies before reckoned loads and revenues other outside operations and burden the tax period t. Measurement of variables is done with a formula as in Bailey (1989) (Bailey, 1989) or Brigham and Daves (2007) follow this.

\[
\text{EBIT}_t = \frac{\text{EBIT}(t) - \text{EBIT}(t-1)}{\text{EBIT}(t-1)}
\]

Test the hypothesis of variables that affect financial distress, using the following equation model.

\[
Y_{\text{FINDIS}}_t = \beta_0 + \beta_1 \Delta \text{CAPEX}_t + \beta_2 \Delta \text{WC}_t + \beta_3 \Delta \text{RE}_t + \beta_4 \Delta \text{EQ}_t + \beta_5 \text{RAEM}_t + \beta_6 \Delta \text{EBIT}_t + \epsilon_t
\]

Where: \(Y_{\text{FINDIS}}_t\) = financial distress based on marginal score (SMG) period t, \(\Delta \text{CAPEX}_t\) = growth in capital expenditure in period t, \(\Delta \text{WC}_t\) = growth of working capital in period t, \(\Delta \text{RE}_t\) = growth retained earning in period t, \(\Delta \text{EQ}_t\) = growth in equity in period t, \(\text{RAEM}_t\) = real activities earning management in period t, \(\Delta \text{EBIT}_t\) = growth in earnings before interest and tax in period t, \(\beta_0\) constant, \(\beta_1 \ldots \beta_6\) coefficient regression, \(\epsilon_t\) error period t.

4. Results and Discussion
The independent variable used in this study is based on previous research. Meanwhile, the reasons and the process for selecting the independent variables are carried out through selection by considering the relevant aspects with real conditions that cause the company to experience financial distress. Based on the selection process, the key variables that affect financial distress are then determined, namely: (a) investment growth, (b) working capital growth, (c) retained earnings growth, (d) equity growth, (e) real activities earnings management, and (f) earning before interest.

4.1 Hypotheses Testing
Level of significant effect of simultaneous variable investment growth, working capital growth, retained earnings growth, equity growth, real earnings management activities, and earnings before interest independent of the financial distress can measure by using F-stat. The variables independently are simultaneously influenced significantly toward SOEs financial distress. Much smaller than 0.10 or limits of tolerance in 10% alpha. The result of the calculation below this indicates that the Sig. = 0.000, so it is stated that the independent variable has a significant effect on financial distress.

<table>
<thead>
<tr>
<th></th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>1.188</td>
<td>6</td>
<td>0.198</td>
<td>6.474</td>
<td>.000b</td>
</tr>
<tr>
<td>Residual</td>
<td>1.254</td>
<td>41</td>
<td>0.031</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>2.441</td>
<td>47</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. Dependent Variable: \(Y_{\text{FINDIS}}\)
b. Predictors: (Constant), \(\Delta \text{CAPEX}, \Delta \text{WC}, \Delta \text{RE}, \Delta \text{EQ}, \text{RAEM}, \Delta \text{EBIT}\)

Furthermore, to analyse is the partial effect of each variable needs to be done the test statistic t as in table coefficients below it.

In partial indicate that each variable independently effects significant to the financial distress with a significance level that varies between 0.000 to 0.091. The level of significance of variable investment growth 0.001 means that the variables have a significant effect on the financial distress at alpha 0.1%, so the strategy and policy management associated with the variable need to be considered, because of a very significant impact on the financial distress. Working capital growth shows Sig. 0.091 which means that the variables have a significant effect on the financial distress at alpha 9.1 %, so the strategy and policy management associated with the variable need to be considered, because of a very significant impact on the financial distress. Retained earnings growth affects financial distress.
Equity growth shows Sig. 0.012 which means that the variables have a significant effect on the financial distress at alpha 1.2%, so the strategy and policy management associated with the variable is needed to be considered, because of a very significant impact on the financial distress. Real activities in earning management show Sig. 0.010 which means that the variables have a significant effect on the financial distress at alpha 1%, so the strategy and policy management associated with the variable need to be considered, because of a very significant impact on the financial distress. Earnings before interest are independent of financial distress. Earnings before interest show Sig. 0.067 which means that the variables have a significant effect on the financial distress at alpha 6.7%, so the strategy and policy management associated with the variable need to be considered, because of a very significant impact on the financial distress.

Table 2. The result of hypotheses testing

<table>
<thead>
<tr>
<th></th>
<th>Unstandardised Coefficients</th>
<th>Standardised Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>(Constant)</td>
<td>-0.243</td>
<td>0.037</td>
<td>-6.502</td>
<td>0.000</td>
</tr>
<tr>
<td>X1ΔCAPEX</td>
<td>0.721</td>
<td>0.211</td>
<td>0.420</td>
<td>3.409</td>
</tr>
<tr>
<td>X2ΔWC</td>
<td>-0.212</td>
<td>0.122</td>
<td>-0.209</td>
<td>-1.732</td>
</tr>
<tr>
<td>X3ARE</td>
<td>-0.971</td>
<td>0.246</td>
<td>-0.465</td>
<td>-3.953</td>
</tr>
<tr>
<td>X4ΔEQ</td>
<td>-0.594</td>
<td>0.225</td>
<td>-0.318</td>
<td>-2.636</td>
</tr>
<tr>
<td>X5RAEM</td>
<td>0.00005</td>
<td>0.000</td>
<td>0.321</td>
<td>2.711</td>
</tr>
<tr>
<td>X6ΔEBIT</td>
<td>0.052</td>
<td>0.028</td>
<td>0.219</td>
<td>1.879</td>
</tr>
</tbody>
</table>

a. Dependent Variable: YFINDIS

The independent variable has varying effects, both in terms of the amount of the coefficient and the direction of the negative or positive impact on financial distress.

YFINDIS = -0.243 + 0.721 X1ΔCAPEX – 0.212 X2ΔWC – 0.971 X3ARE – 0.594 X4ΔEQ + 0.00005 X5RAEM + 0.052 X6ΔEBIT

The investment growth variable has a positive effect on financial distress with a coefficient of 0.721. It is demonstrated that pe enhancing the one unit of the variable will increase the level of financial distress for 0.721, which means that SOEs experienced improvement and spared from hardship finance. Conversely, suppose the case decreases the activity of investment. In that case, the level of financial distress will experience a decrease in the score is even lower, which could potentially cause the company to experience financial distress. Implications of the study are against the policy of management of SOEs. It is a need to encourage increased investment activities due to the increasing amount of investment, then encourage an increase in sales and service to improve the company's cash flow. However, it still required a subsidy each increment of sales will reduce losses due to price average is greater than the variable cost.

Working capital growth impacts negatively on the financial distress with a coefficient -0.212. It demonstrated that a decrease of one unit of a variable would shortly increase the financial distress level of 0.212, which means that SOEs experienced improvement and spared from hardship finance. Conversely, suppose the case increases the amount of working capital. In that case, the level of financial distress will experience a decrease in the score, which could potentially cause the company to experience financial distress. This study's implication for BUMN management policy is to control working capital at an optimal level because the position of increasing working capital at the end of the year shows a symptom of idle because having a working capital exceeding operational needs.

Retained earnings growth impacts negatively on the financial distress with a coefficient of -0.971. It demonstrated that the decrease in the unit variable would increase the level of financial distress of 0.971, which means that SOEs experienced improvement and spared from hardship finance. Conversely, suppose the case increases the amount of retained earnings growth. In that case, the level of financial distress will experience a decrease in the score, which could potentially lead to financial difficulties. Implications of the study are against the policy of management of SOEs is controlling retained earnings growth. The position of an increase in retained earnings growth at the end of the year will affect the additional funding from the holder of the stock since it is assumed the company can prepare the funding is independent while going on an increase in retained earnings for companies experiencing difficulties.
cash flow. Need to convince the interns stock or lender associated with the cash flow condition the company, so it does not cause an increase in difficulty financial future that will come.

Equity growth, impact negatively on the financial distress with a coefficient of -0.594. It demonstrated that the decrease in the unit variable would increase financial distress by 0.594, which means that SOEs experienced improvement and spared from hardship finance. Conversely, suppose the case increases the amount of retained earnings growth. In that case, the level of financial distress will experience a decrease in the score, which could potentially cause the company to experience financial distress early. The implication of this research for BUMN management policy is that it is necessary to encourage an increase in earnings before interest and taxes because it can cause the company to experience financial difficulties. Implications of the study are against the policy of management of SOEs is necessary to encourage an increase in real earnings activities management. Because it can encourage an increase in sales and service to improve the company's cash flow but should be made an effort increase in the activity of collecting accounts receivable to increase sales and the buildup of inventories does not cause difficulties financial BUMN.

Real earnings management activities, impact positively on the financial distress with a coefficient of 0.052. It demonstrated that an increase in one unit of a variable would increase the level of financial distress for 0.052, which means SOE undergo repairs and spared from hardship finance. Conversely, if there is a decrease in investment activity, the level of financial distress will decrease the score, which is getting lower, which can cause the company to experience financial difficulties. Implications of the study are against the policy of management of SOEs is necessary to encourage an increase in real earnings activities management. Because it can encourage an increase in sales and service to improve the company's cash flow but should be made an effort increase in the activity of collecting accounts receivable to increase sales and the buildup of inventories does not cause difficulties financial BUMN.

Earnings before interest and taxes are independent of financial distress, have a positive effect on financial distress with a coefficient of 0.00005. It demonstrated that an increase in one unit of a variable would increase the level of financial distress at 0.00005, which means SOE undergo repairs and spared from hardship finance. Conversely, if there is a decrease in investment activity, the level of financial distress will decrease the score, which is getting lower, which can cause the company to experience financial difficulties. Implications of the study are against the policy of management of SOEs is necessary to encourage an increase in real earnings activities management. Because it can encourage an increase in sales and service to improve the company's cash flow but should be made an effort increase in the activity of collecting accounts receivable to increase sales and the buildup of inventories does not cause difficulties financial BUMN.

4.2 Classic assumption test

Autocorrelation Test
Autocorrelation is a correlation of the residuals order of time. Autocorrelation test is intended to determine whether a correlation between members of a series of data observations was described by the time (time-series) and space (cross-section). The autocorrelation test is one of the requirements under the assumption of a classic that must be met before carrying out regression linear regression. Autocorrelation test is very necessary because of the test's presence because it can be known whether there are relationships or correlations were high between a period t to period t previously. Consequences if there is a problem autocorrelation, ie the value of the t-statistic and the value of F-statistic is not to be trusted because of the things it would be misleading (Gujarati, D.2004: 441-505). To detect autocorrelation, the study uses the test autocorrelation with methods Durbin Watson with the result, i.e. the value of Dubin Watson statistics (DW statistics) = 2 073. Compared to the table Durbin Watson at alpha 5% to the value of dL = 1.2605 and dU = 1.8290, it can be stated that the research is any no symptoms of autocorrelation because the results of SPSS in Table Model Summary shows that the value of Durbin-Watson statistic (2. 073 ) is greater than the DW table at the dU value ( 1.8290 ).

Multicollinearity Test
Multicollinearity is the relationship linear between variables. Multicollinearity is the correlation of linear high or close to perfect between variables free. The consequence or result of the occurrence of multicollinearity, i.e. estimator,
Research is already fulfilling the requirements are non-multicollinearity with the value of tolerance (TOL) more substantial than 0:10 and variance inflation factor (VIF) is smaller than 10. The tolerance value was exceeding 0.10 with a variation in a range between the minimum = 0.823 on X1 ΔCAPEX and maximum = 0.919 on X6 ΔEBIT. In comparison, the value of variance inflation factor (VIF) is less than 10 with variations in the range between the minimum value = 1.089 at X 6 ΔEBIT and maximum = 1.215 on X1 ΔCAPEX.

**Heteroscedasticity test**

Heteroscedasticity is a state where the inequality of variance of residuals in the model regression. To detect heteroscedasticity, this study uses the heteroscedasticity test with the Glejser. The independently used in the research are not symptoms of heteroscedasticity because the level of significance of the effect of variable independent of the residual is more substantial than 0.05 with the variation in the range of value minimum X2 ΔWC = 0.147 and the maximum = 0.858 on a variable X3ARE.

**Normality Test**

The Kolmogorov-Smirnov residual normality test requires that the research data be declared normally distributed if the Asymp Sig. (2-tailed) is greater than 0.05, on the contrary, if the Asymp Sig. (2-tailed) is smaller than 0.05. It is stated that the data research are not distributed normally (Gujarati, 2004). To detect the normality, the research uses the test normality with methods Kolmogorov-Smirnow. The result that the value of asymptotic significant (two-tailed) = 0.200 is more substantial than 0.05, so it is stated that the data used in the analysis of regression of research this is distributed normally.

**5. Conclusions**

This study seeks to examine the effect of operating cash flow on Indonesian SOEs' financial distress in conjunction with the issue. This study uses a time series data with a total sample is 31 SOEs out of 51 SOEs due to financial difficulties for five year started 2014 to 2018 and collected from the personal SOEs website. This study found that operating cash flow has a significant effect on SOEs' financial distress. In conclusion, the operating cash flow is categorised as a crucial factor that affects SOEs' financial distress in Indonesia. This study implies that using a marginal approach via score value is more realistic to measure financial distress. This study can also help the stakeholders, especially the government, consider assessing and evaluating the level of financial distress faced by Indonesia SOEs. Research has limitations from the aspect of data sources, mainly because only relies on the data of secondary session information presented online by SOE web. It suggested that subsequent studies use secondary data and use primary data to obtain information related to company management policies that affect SOE's financial distress.

**References**


Gamayuni. (nd).


Herdana. (2013). No Title No Title. *Journal of Chemical Information and Modeling, 53* (9), 1689–1699. https://doi.org/10.1017/COB9781107415324.004


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