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# Profitability Moderate the Effect of Operating Capacity and Intellectual Capital on Financial Distress

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**Abstract**---Financial distress is the stage of declining financial conditions experienced by the company before the occurrence of bankruptcy or liquidity. This study aims to examine the effect of operating capacity and intellectual capital on financial distress with profitability as a moderating variable. The population in this study are property and real estate companies listed on the Indonesia Stock Exchange. The sample in this study amounted to 12 property and real estate companies during the 2016-2020 period. Sampling using purposive sampling method. The analytical tools used in this research are multiple linear analysis and Moderated Regression Analysis (MRA). Based on the results of the study, it shows that operating capacity has a positive effect on financial distress, intellectual capital has a negative effect on financial distress, profitability can moderate the effect of operating capacity on financial distress and profitability cannot moderate the influence of intellectual capital on financial distress.

**Keywords**---financial distress, intellectual capital, moderated regression analysis (MRA), operating capacity, profitability

## Introduction

Financial distress can be categorized into 3 conditions, namely positive conditions, gray conditions, and negative conditions (Altman, 2013). A positive condition is a condition in which the company experiences financial distress. The gray condition is the condition of a company that is threatened with financial distress. This condition is also often considered as a condition where the company does not experience financial distress. However, if it is not managed properly, the company has a high probability of experiencing financial distress in the following years. Meanwhile, the negative condition is the condition of the company that does not experience financial distress. The process of financial distress is characterized by several contributing factors before the company actually goes bankrupt, so it cannot run the company's operations. Several factors can indicate a condition in which a company is experiencing financial distress, namely mergers, acquisitions and delisting of companies that have listed their shares on the Indonesia Stock Exchange (Wibowo, 2020). These factors have occurred in several companies that listed their shares on the Indonesia Stock Exchange (IDX) (Sun & Li, 2008; Avramov et al., 2013).

The COVID-19 pandemic in early March 2020 automatically affected various aspects of the company's survival in various sectors. The impact of the pandemic has made global stock markets experience a decline, including in Indonesia. Many issuers on the IDX experience liquidity problems. The funding difficulties caused some of them to be unable to pay their debts, so the issuers were forced to file a request for suspension of debt payment obligations (PKPU). Management should be able to find out earlier the condition of the company that will experience financial distress through the company's financial statements. Thus, it is hoped that there will be quick action to anticipate the bankruptcy of a company. The financial difficulties of a company can be seen and measured through its financial statements. The financial statements published by the company are a source of information regarding the company's financial position, performance and changes in the company's financial position which are very useful to support the

right decision making (Kariani & Budiasih, 2017). Financial reports used for decision making, it is necessary to analyze financial data to be used as a basis for information in decision making. Analysis of financial statements is important to predict the survival of the company. Predicting financial distress in go public companies can be done through the ratios contained in the financial statements (Abdullah & Sofian, 2012; Ramezan, 2011).

Companies can see the condition of financial distress by using operating capacity. According to Widhiari & Merkusiwati (2015), financial distress is influenced by operating capacity. Warsono in Atika & Handayani (2013) Operating capacity or often referred to as the activity ratio is a financial ratio that measures how effectively a company manages its assets. This ratio is used to see how big the level of certain assets owned by the company. Widhiari & Merkusiwati (2015) explain that operating capacity is a ratio that describes the creation of an entity's operational performance accuracy. If the company manages and uses its assets efficiently, then the company can make sales and earn large profits so that the company is able to avoid financial distress conditions. Operating capacity is known as the total assets turnover ratio, which is assessed by dividing sales by total assets. A relatively large increase in sales compared to an increase in assets will make this ratio higher, otherwise this ratio will be lower if the increase in sales is relatively smaller than the increase in assets (Park & Yi, 2022; Dunk, 2003).

The results of research conducted by Utami (2019); Wibowo & Susetyo (2020) show that operating capacity has a negative effect on financial distress. This means that the more effective the use of assets to generate sales will be able to prevent the company from being in financial distress. These results are inversely proportional to the research conducted by Kariani & Budiasih (2017) which states that operating capacity has no effect on financial distress. Thus, a company that has a large operating capacity, there is no guarantee that the company is in a safe condition from the threat of experiencing financial difficulties. Due to the inconsistency of the influence of the results of previous studies, the researchers are interested in using operating capacity to see the effect of operating capacity on the financial distress of property and real estate companies listed on the Indonesia Stock Exchange in 2016-2020 (Atici, 2011; Andiappan et al., 2019).

Another indicator that can be used to predict the occurrence of financial distress is Intellectual Capital (IC). According to the International Federation of Accountants (IFAC) IC is considered a knowledge-based capital owned by a company. IFAC also estimates that currently the value of the company is no longer determined by fixed assets, but the value of the company is determined more by the management of intellectual capital owned. Several studies also reveal that financial distress can occur due to several factors, namely the company's intellectual capital (Nadeem et al., 2016). Intellectual capital is an intangible asset that can be used to increase company value and increase company performance. The existence of intellectual capital, the company will be able to compete with other companies. Therefore, the company's ability to manage intellectual capital effectively and efficiently has an impact on ensuring the stability of the company's financial health so that the company can carry out its business activities in the long term (Dumay & Tull, 2007; Shahwan & Habib, 2020). The results of Purba (2018); Mustika et al. (2018) research say that intellectual capital has a significant negative effect on financial distress. These results are inversely proportional to the research conducted by Andriani & Sulistyowati (2021) that intellectual capital has no effect on financial distress. Due to the inconsistency of the influence of the results of previous studies, researchers are interested in using intellectual capital to see the effect of intellectual capital on the financial distress of property and real estate companies listed on the Indonesia Stock Exchange in 2016-2020 (Alsyouf, 2007; Bernhardt et al., 2000).

### *Literature Review and Hypothesis Development*

The operating capacity or activity ratio is a ratio which is also known as an efficiency ratio that is used to assess whether or not a company is effective in using assets to generate sales so that it will create the accuracy of a company's operational performance (Atika & Handayani, 2013). The operating capacity ratio is measured by total assets turnover by comparing total sales with the total assets owned by a company. When the operating capacity ratio is high, the sales volume generated by the company is expected to bring greater profits to the company compared to the use of company assets (Arrum & Wahyono, 2021). Companies can increase sales and revenues by using company assets in the company's operational activities effectively so as to create optimal income. Thus, an increase in income can prevent the company from experiencing financial difficulties. According to the theory of Resources Based Theory (RBT) proposed by Barney (1991) which states that in the perspective of RBT, firm resources include all assets, capabilities, organizational processes, company attributes, information, knowledge, and others that are controlled by companies that are controlled by the company. enable companies to understand and implement strategies to improve company efficiency and effectiveness. This is supported by research conducted by Utami (2019); Wibowo & Susetyo (2020), showing that operating capacity has a negative effect on financial distress.

*H1: Operating Capacity has a negative effect on Financial Distress*

Management of intellectual capital properly can improve the company's financial performance. Intellectual capital provides knowledge-based resources and describes intangible assets that when used optimally enable the company to carry out its strategies effectively and efficiently. Thus, companies that have strong resources, capabilities and competencies can contribute to the company's competitive advantage and can prevent companies from financial difficulties. According to the Resources Based Theory (RBT) theory, companies that are able to manage and maintain their own resources will be able to maintain their superiority when compared to other companies that obtain their resources from outside the organization. So that by managing and maintaining superior resources, the company will have sustainable superior performance. This is supported by research conducted by [Purba \(2018\)](#); [Mustika et al. \(2018\)](#) which states that intellectual capital has a significant negative effect on financial distress.

*H2: Intellectual Capital has a negative effect on Financial Distress*

Based on the contingency theory related to the inconsistency of research results with one another, due to the existence of variables or other factors that can affect the relationship between variables. This approach to theory is expected to be able to develop other variables to get different results from previous research. Profitability is used as a moderator, because it can affect operating capacity on financial distress. This is because any income earned by the company can be used to increase assets in order to increase company sales. This is supported by research conducted by [Wibowo \(2020\)](#) which shows that profitability and operating capacity significantly affect financial distress conditions.

*H3: Profitability weakens the effect of Operating Capacity on Financial Distress*

According to research conducted by [Behzad & Haleh \(2014\)](#); [Mulyatiningsih & Atiningsih \(2021\)](#), explains that the role and importance of intellectual capital in determining sustainable profitability in a company has decreased drastically, meaning that the success of a company in conducting competition depends on the knowledge possessed by the company. management and the company always carry out the maintenance and creation of intellectual capital. Based on contingency theory, the addition of moderating variables is used to combine between variables in the hope of being able to provide opportunities for other variables to be used as moderating variables. Profitability is used as a moderator because every profit/profit that the company gets from operational activities will be reused according to the company's needs. The profits obtained can be used to strengthen the company's human capital, structural capital and capital employed. The high intellectual capital will be directly proportional to the high profitability that will be generated. This is supported by research conducted by [Mulyatiningsih \(2021\)](#) in his research that profitability, as measured by ROA, is able to moderate the effect of Intellectual Capital on financial distress.

*H4: Profitability weakens the effect of Intellectual Capital on Financial Distress*

## **Methods**

This research was conducted on property and real estate companies listed on the Indonesia Stock Exchange in 2016-2020. The reason for selecting the population by using property and real estate companies is because the property and real estate sector can describe the nation's economic growth. If the sale of property and real estate is high, it illustrates that people's purchasing power is at a good stage. Another reason is that property and real estate companies listed on the Indonesia Stock Exchange are currently increasing every year. With the increasing number of companies, it is certain that the amount of competition will increase. In addition to the increasingly fierce competition, the COVID-19 pandemic in early March 2020 automatically affected various aspects of the company's survival. This has resulted in many companies and issuers on the Indonesia Stock Exchange (IDX) being very vulnerable to being faced with financial difficulties. The analytical technique used in this research is to carry out quantitative analysis which is expressed by numbers that are calculated using statistical methods assisted by the statistical data processing program SPSS (Statistical Product and Service Solution) ([Nuryani et al., 2018](#); [Partha et al., 2019](#)).

## Result and Discussion

### *Moderating Regression Analysis (MRA)*

Table 1  
MRA Result

Coefficients <sup>a</sup>		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
Model		B	Std. Error	Beta		
1	(Constant)	-1,297	1,568		-,827	0,412
	TATO	40,075	5,873	0,941	6,824	0,000
	VAICTM	-0,696	0,308	-0,478	-2,260	0,028
	ROA	32,288	30,302	0,431	1,066	0,291
	TATO*ROA	-339,761	122,832	-1,516	-2,766	0,008
	VAICTM*ROA	10,005	5,475	1,032	1,828	0,073

Secondary Data, 2022

The resulting moderating regression equation is as follows.

$$Y = -1,297 + 40,075X_1 - 0,696X_2 + 32,288Z - 339,761X_1Z + 10,005X_2Z + e$$

Based on Table 5.7, if the independent variables of operating capacity (X1) and intellectual capital (X2) do not have a constant contribution to the dependent variable, namely financial distress. Then financial distress will decrease by -1.297%. The regression transformation coefficient of the operating capacity (X1) variable is 40.075, which means that if the operating capacity (X1) increases by one point while the intellectual capital (X2) remains, then financial distress will increase by 40.075%. The regression transformation coefficient of the intellectual capital variable (X2) is -0.696, which means that if intellectual capital (X2) decreases by one point while the operating capacity variable (X1) remains, then financial distress decreases by -0.696%. The regression transformation coefficient of the profitability variable (Z) is 32.288, which means that if the profitability (Z) increases by one point while the operating capacity (X1) and intellectual capital (X2) variables remain, then financial distress increases by 32.288%. The regression transformation coefficient of the operating capacity and profitability variables (X1\*Z) is the interaction between operating capacity and profitability resulting in a regression value of -339.761. The regression transformation coefficient of the intellectual capital and profitability variables (X2\*Z) is the interaction between intellectual capital and profitability resulting in a regression value of 10.005.

### *Determination Coefficient (R<sup>2</sup>)*

Table 2  
Determination Coefficient (R<sup>2</sup>)

Model Summary <sup>b</sup>		R Square	Adjusted R Square	Std. Error of the Estimate
Model	R			
1	0,735 <sup>a</sup>	0,540	0,497	2,265

Primary Data, 2022

The obtained value of Adjusted R-Square is known to be 0.497, it explains that the determination of all variables namely operating capacity, intellectual capital and profitability moderating variable is able to explain or describe financial distress of 0.497 or 49.7% and the remaining 50.3% is explained by the variable others that were not investigated in this study.

*F-Test*Table 3  
F-Test

ANOVA <sup>a</sup>						
<i>Model</i>		<i>Sum of Squares</i>	<i>df</i>	<i>Mean Square</i>	<i>F</i>	<i>Sig.</i>
1	<i>Regression</i>	325,309	5	65,062	12,680	0,000 <sup>b</sup>
	<i>Residual</i>	277,067	54	5,131		
	<i>Total</i>	602,376	59			

Secondary Data, 2022

Based on the test results, the F value is 12,680 with a significance of 0.000. The significance value which is less than 0.05 indicates that the accuracy of the sample regression function in estimating the actual value has been met.

**Discussion***Effect of Operating Capacity on Financial Distress*

The regression coefficient for the TATO variable is positive and the t-test results show a value of 6.824 with a significance of 0.000. This significant value less than 0.05 can be stated that TATO has a positive and significant effect on financial distress. This result contradicts the proposed hypothesis.

*Effect of intellectual capital on financial distress*

The regression coefficient for the VAIC<sup>TM</sup> variable is negative and the t-test results show a value of -2.260 with a significance of 0.028. This significant value less than 0.05 can be stated that VAICTM has a negative and significant effect on financial distress. These results are in accordance with the proposed hypothesis.

*Profitability Moderate the Effect of Operating Capacity on Financial Distress*

The regression coefficient for the interaction variable TATO\*ROA is negative and the t-test results show a value of -2.766 with a significance of 0.008. This significant value less than 0.05 can be stated that profitability can moderate the effect of operating capacity on financial distress. These results are in accordance with the proposed hypothesis. The regression coefficient, which is negative, means that ROA weakens the effect of TATO on financial distress.

*Profitability Moderate the effect of intellectual capital on Financial Distress*

The regression coefficient for the interaction variable VAICTM\*ROA is positive and the t-test results show a value of 1.828 with a significance of 0.073. A significance value greater than 0.05 can be stated that profitability cannot moderate the influence of intellectual capital on financial distress. This result is not in accordance with the proposed hypothesis.

**Conclusion**

Operating capacity has a positive effect on the financial distress of property and real estate sector companies on the Indonesia Stock Exchange for the 2016-2020 period. A positive effect means that the increased operating capacity, financial distress will also increase. Intellectual capital has a negative effect on the financial distress of property and real estate companies on the Indonesia Stock Exchange for the 2016-2020 period. That is, the increasing intellectual capital, the lower the financial distress. Profitability can moderate the effect of operating capacity on the financial distress of property and real estate sector companies on the Indonesia Stock Exchange for the 2016-2020 period. This shows that profitability weakens the influence of operating capacity on financial distress. Profitability is not able to moderate the effect of intellectual capital on the financial distress of property and real estate sector companies on the Indonesia Stock Exchange for the 2016-2020 period. This shows that profitability does not weaken or strengthen the influence of operating capacity on financial distress. For further research, the detection of companies experiencing

financial distress by using operating capacity (total asset turnover) is expected to use other measuring instruments for better measurement.

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