

## **The Influence of Liquidity, Solvency, And Foundation Size on Profitability with Perception-Based Financial Management as a Moderating Variable at the Al Istiqamah Integrated Education Foundation Balikpapan**

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### **ABSTRACT**

This study aims to analyze the influence of liquidity, solvency and foundation size on profitability by moderating perception-based financial management at the Al Istiqamah Integrated Education Foundation Balikpapan (YPAITB). This study uses a quantitative approach with a case study design, with primary data obtained through a Likert scale questionnaire to 31 respondents consisting of foundation leaders and financial managers. Data analysis was carried out using Moderated Regression Analysis (MRA) and financial trend analysis for the 2014-2023 period. The results showed that perception-based liquidity and solvency had a positive but insignificant effect on profitability, while the size of the foundation (number of students) had a positive and significant effect on profitability. This indicates that the growth in the number of students contributes significantly to the increase in the foundation's operational surplus. Meanwhile, financial management did not moderate the relationship between liquidity, solvency and foundation size to profitability, so the moderation hypothesis was not tested. Trend analysis shows that during the 2014-2023 period, the foundation's liquidity and solvency were relatively stable, while profitability had declined due to facility expansion and relocation, but increased again after asset efficiency was carried out. This research confirms that effective financial management and the growth of the number of students are key factors in maintaining the financial sustainability of educational foundations. Theoretically, the results of the research reinforce the relevance of Financial Sustainability Theory and Resource-Based View (RBV) in the context of non-profit organizations. Practically, this study recommends improving financial management competencies, implementing technology-based governance, and student growth strategies to support long-term financial sustainability.

**Keywords:**

Liquidity; Solvency; Foundation size; Profitability; Financial Management; Education Foundation

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### **INTRODUCTION**

Education is one of the most important factors in determining the level of progress of a nation. If a nation's education is getting better, then the country will become more advanced. In Indonesia, education still needs more serious attention (Araneo, 2023; Sahabuddin, 2015; Shaturaev, 2021). This can be seen from the report released by the United Nations Development Programme (UNDP), which is an agency at the United Nations in March 2024, Human Development Report 2023/2024 which shows that Indonesia's Human Development Index (HDI) is still relatively low, ranking 112th in the world below Palestine, South Africa, Lebanon and Egypt. HDI itself is a combination of achieving rankings in the fields of education, health and per capita income of a country (Al Azies et al., 2019; Bangun, 2021; Fahrika et al., 2020; Kummu et al., 2018; Santoso et al., 2023).

Meanwhile, for the Well-Educated Populations category, Indonesia is ranked 63rd out of 89 countries studied, far behind Malaysia which is ranked 45th. For the Southeast Asian scale, Indonesia is 4th below Singapore (19), Malaysia (45) and the Philippines (61). Even President Jokowi himself is very sorry because the education ranking in Indonesia is still far behind in the 57th position globally based on the Institute for Management Development (IMD) World Competitiveness in a video uploaded on the Presidential Secretariat's Youtube channel on Thursday, July 11, 2024.

Education in Indonesia still faces various challenges, so collaboration between the government and non-profit institutions, including education foundations, is needed to ensure sustainability and quality of services (European Training Foundation, 2020; Pumfrey & Verma, 2018; Simonson et al., 2019). In non-profit educational institutions, financial health is an important factor for the foundation to operate sustainably without relying on a single source of funding. The three main indicators that reflect the financial condition of the foundation are liquidity, solvency, and organizational size, which theoretically affect profitability as the institution's ability to generate an operating surplus. However, empirical conditions show that large foundations do not always have good profitability, so the quality of financial management is thought to play an important role as a factor that strengthens or weakens the influence of these three variables.

Previous research has shown mixed results regarding the influence of liquidity, solvency, and size on profitability. For example, research by Wage, Toni, & Rahmat (2022) on companies on the Indonesia Stock Exchange found that company size has a significant positive effect on profitability. Meanwhile, Ekky Pratama Putra (2017) in his research on telecommunications companies found that liquidity has a negative and insignificant effect on profitability. On the other hand, Desriana (2017) concluded that solvency does not have a significant effect on profitability at PT. Kalbe Farma Tbk. Rusnaeni et al. (2022) also found that company size, although it has a positive effect, is not significant in certain contexts. However, such studies are generally conducted in the commercial sector, not in non-profit organizations such as educational foundations.

The novelty or novelty of this research lies in several aspects. First, this study examines the moderation model of financial management in the context of non-profit educational foundations that are still very rarely researched. Second, this study integrates a perception-based quantitative approach with the trend analysis of audited financial statements for a decade (2014-2023), thus providing a comprehensive dual perspective. Third, financial variables such as liquidity, solvency, and foundation size are measured through the perception of managers, which provides a qualitative dimension in assessing the financial performance of non-profit organizations. Fourth, this study applies Moderated Regression Analysis (MRA) to test the effect of moderation of financial management, which has not been widely applied in studies of educational foundations in Indonesia.

In addition, research on educational foundations is still limited, especially using a managerial perception approach. The Al Istiqamah Integrated Education Foundation Balikpapan (YPAITB) was chosen as the object of the research because it has significant developments, academic achievements, and independently audited financial statements since 2011, making it representative to be studied. To provide a comprehensive understanding, this study combines the analysis of the perception of financial managers with the analysis of the trends of audited financial statements during 2014--2023. Based on these conditions and research gaps, this study is titled "The Influence of Liquidity, Solvency and Foundation Size on Profitability with Perception-Based Financial Management Moderation at the Al Istiqamah Integrated Education Foundation Balikpapan."

The formulation of the problem in this study focuses on how liquidity, solvency, and foundation size measured through managers' perceptions affect the profitability of the Balikpapan Integrated Al Istiqamah Education Foundation, as well as whether perception-based

financial management is able to moderate the relationship between the three variables to profitability. In addition, this study also traces trends in liquidity (current ratio), solvency (debt to asset ratio), foundation size (number of students), and profitability (return on assets) during the period 2014–2023. Based on this formulation, the purpose of the study is to analyze the direct influence of perception-based financial variables on profitability, test the role of financial management as a moderation variable, and map the foundation's financial trends over a decade. This research is expected to provide theoretical benefits in the form of contributing to the literature on factors that affect the profitability of non-profit organizations and strengthening the role of financial management as a moderation variable. Practically, this research is useful for foundation administrators as a recommendation for improving the quality of liquidity, funding structure, and financial management practices; for local policymakers as a basis for improving foundation governance; and for future researchers as a perception instrument that can be replicated or validated in different contexts.

## RESEARCH METHOD

This study uses a quantitative approach with a case study design to analyze the influence of liquidity, solvency, and foundation size on profitability, as well as test the role of financial management as a moderation variable in the Balikpapan Integrated Al Istiqamah Education Foundation. Primary data was obtained through a perception-based questionnaire using a Likert scale of 1–5 which was distributed to the administrators, management, and financial staff of the selected foundations through purposive sampling techniques. Meanwhile, secondary data was taken from the foundation's audited financial statements for the 2014–2023 period to measure liquidity (CR), solvency (DAR), foundation size (number of students), and profitability (ROA). Data analysis was carried out through validity, reliability, and *Moderated Regression Analysis* (MRA) tests using SPSS, with an interaction model to test the influence of moderation on financial management. In addition, financial trend analysis was used to observe the development patterns of liquidity, solvency, foundation size, and profitability over the past ten years to strengthen the regression results. Operational variables are measured through perception indicators for each variable according to the research instrument.

## RESULTS AND DISCUSSION

### Description of Statistics

A statistical description is required to provide an overview of the proxies that represent each variable. Before conducting statistical descriptions, to prevent errors in data interpretation and increase the credibility of the research, it is necessary to conduct a validity test and a reliability test first.

#### 1. Validity Test

The validity test is an important step taken to find out the extent to which the research instrument is able to measure what should be measured. The following are the results of the validity test conducted on all question items on the variables of perception-based liquidity (X1), perception-based solvency (X2), perception-based foundation size (X3), perception-based profitability (Y) and perception-based financial management (Z) shown in the table below:

**Table 1. Validity Test**

<b>Validity</b>			
<b>Question</b>	<b>r-count</b>	<b>r-table</b>	<b>Info</b>
<b>X1.1</b>	0,734	0,355	Valid
<b>X1.2</b>	0,83	0,355	Valid
<b>X1.3</b>	0,861	0,355	Valid
<b>X1.4</b>	0,927	0,355	Valid
<b>X1.5</b>	0,784	0,355	Valid
<b>X2.1</b>	0,825	0,355	Valid
<b>X2.2</b>	0,704	0,355	Valid
<b>X2.3</b>	0,78	0,355	Valid
<b>X2.4</b>	0,642	0,355	Valid
<b>X2.5</b>	0,761	0,355	Valid
<b>X3.1</b>	0,767	0,355	Valid
<b>X3.2</b>	0,699	0,355	Valid
<b>X3.3</b>	0,817	0,355	Valid
<b>X3.4</b>	0,832	0,355	Valid
<b>X3.5</b>	0,689	0,355	Valid
<b>Y.1</b>	0,603	0,355	Valid
<b>Y.2</b>	0,848	0,355	Valid
<b>Y.3</b>	0,814	0,355	Valid
<b>Y.4</b>	0,753	0,355	Valid
<b>Y.5</b>	0,632	0,355	Valid
<b>Z.1</b>	0,812	0,355	Valid
<b>Z.2</b>	0,711	0,355	Valid
<b>Z.3</b>	0,745	0,355	Valid
<b>Z.4</b>	0,733	0,355	Valid
<b>Z.5</b>	0,776	0,355	Valid

Source : SPSS Statistic 22 Validity Test Results

The results of the validity test showed that all instrument items for the Liquidity variable (X1) had r-calculated values ranging from 0.734 to 0.927, all of which were greater than the r-table of 0.355. Similarly, for the Solvency variable (X2), the r-calculated value ranged from 0.642 to 0.825, the Foundation Size variable (X3) ranged from 0.689 to 0.832, the Profitability variable (Y) ranged from 0.603 to 0.848, and the Financial Management variable (Z) ranged from 0.711 to 0.812.

## 2. Reliability Test

Reliability test is an instrument that is carried out to measure the consistency of the measurement results of the instrument if it is re-measured under relatively the same conditions. In this study, reliability was tested using Cronbach's Alpha to determine the level of internal consistency of all items in the instrument.

Based on the results of the data analysis, the Cronbach's Alpha values for each research variable are as follows:

**Table 2. Reliability Test**

<b>Reliability</b>	<b>Cronbach</b>	<b>Alpha &gt; 0,6</b>
<b>X1</b>	0,883	Reliable
<b>X2</b>	0,768	Reliable
<b>X3</b>	0,81	Reliable
<b>Y</b>	0,783	Reliable
<b>Z</b>	0,806	Reliable

Source : SPSS Statistic 22 Reliability Test Results

The results of the reliability test showed that the overall value of Cronbach's Alpha of the instrument was 0.883, which means that it is greater than the criterion limit of 0.60. Thus, the research instrument was declared to be very reliable and consistent to be used in data collection. Cronbach's high Alpha value indicates that all items in the instrument have good consistency and are reliable in measuring the construct being studied.

### 3. Statistical Description

After conducting a validity test and a reliability test stating that all research instruments are valid and reliable, then a statistical description can be carried out. Below is a description of the statistics shown in table 3:

**Table 3. Descriptive Statistics of Research Variables**

<b>Variable</b>	<b>N</b>	<b>Minimum</b>	<b>Maximum</b>	<b>Mean</b>	<b>Std. Deviation</b>
<b>X1</b>	31	20	25	22,84	2,115
<b>X2</b>	31	18	25	22,26	2,338
<b>X3</b>	31	17	25	22,52	2,031
<b>Y</b>	31	18	25	22,06	2,097
<b>Z</b>	31	19	25	22,58	1.911

Source : SPSS Statistics 22 Output Results

Based on the description of the statistical analysis above, it can be explained as follows:

#### 1. Perception-based liquidity

Minimum value is 20, maximum 25, mean is 22.84 and std. deviation is 2.115. The average value of close to 23 indicates that the respondents' perception tends to be high regarding the foundation's liquidity. The range of 20-25 shows a not very wide variation, and the standard deviation of +2.115 means that the answer is relatively homogeneous. Respondents assessed that the foundation has good ability to fulfill short-term obligations. With stable liquidity, the foundation can not only maintain its daily operations, but also have the potential to allocate excess cash for productive activities.

#### 2. Perception-based solvency

Minimum score 18, maximum 25, mean 22.26, Std. Deviation 2.338. The average score is quite high, indicating that most respondents assess the solvency of the foundation to be at a good level. However, the largest standard deviation (2.338) among all variables showed a relatively larger difference of opinion than the other variables. This means that in this study, solvency is the most dynamic factor. This could happen because there were different views between respondents when the foundation built the building with loan financing to Islamic banks in 2016 and 2021.

### 3. Perception-based Foundation Size (Number of Students)

Minimum score 17, maximum 25, mean 22.52, Std. Deviation 2.031. The average score of 22.52 shows that the size of the foundation is considered quite high in terms of the number of students. With a relatively small standard deviation (2.031), it indicates that the majority of respondents agree that the size of the foundation (number of students) is relatively stable.

### 4. Perception-based profitability

Minimum score of 18, maximum 25. mean 22.06, Std. Deviation 2.097. Profitability is considered to be at the middle to upper level with an average value of 22.06. The spread of answers is also moderate, meaning that respondents tend to have similar views regarding the foundation's ability to generate a surplus from its assets. However, in this study the average profitability was the lowest among all variables. This means that although the liquidity, solvency and size of the foundation are considered quite high, the impact has not been maximized in increasing profitability.

### 5. Perception-based Financial Management

Minimum score 19, maximum 25, mean 22.58, Std. Deviation 1.911. This variable has the highest average at 22.58 with the lowest standard deviation at 1.911. This shows that respondents are very consistent in assessing the foundation's financial management as good and stable.

### Model Moderated Regression Analysis (MRA)

This study uses the Moderated Regression Analysis (MRA) method, which is a statistical technique in regression analysis to test the effect of moderation of a variable on the relationship between independent variables (X) and dependent variables (Y).

The steps in Moderated Regression Analysis (MRA) are as follows:

### Hypothesis Testing

Hypothesis testing was carried out through a series of statistical tests to ensure the validity of the model and test the significance of the influence of the research variables. The following are the results of the tests carried out systematically.

### 1. Coefficient of Determination ( $R^2$ )

The  $R^2$  value (coefficient of determination) of the regression model is 0.822, which means that about 82.2% of the variation in profitability can be explained by the variables in the model, namely liquidity, solvency, foundation size, and the three interaction variables that represent the influence of moderation of financial management as shown in the following table:

Table 4. Coefficient of Determination

Model	R	R Square	Adjusted R Square
1	0,906a	0,822	0,767

Source: SPSS Statistics 22 Output Results

The remainder, at 17.8%, is explained by other variables not included in the model, such as management quality, operational efficiency, external environment, educational factors, or government policies towards educational foundations.

The Adjusted  $R^2$  value is 0.767, which has been adjusted for the number of variables and sample size. This value is slightly lower than  $R^2$ , but still above 70%, indicating that the model has strong explanatory power and is not overfitted by the number of predictors inserted.

In this context, with  $n=31$ , Adjusted  $R^2=0.767$  indicates that the model is quite statistically robust. This value is in the high category, considering that research in the field of education foundation finance is complex and influenced by many contextual factors.

## 2. Simultaneous Test (F Test)

The F-test is used to test whether all independent variables together have a significant influence on profitability. Based on the output of "ANOVA", the results are obtained as shown in the following table:

Table 5. Simultaneous Tests

Model	Sum of Squares	df	Mean Square	F	Sig.
1	Regression	110,243	7	15,749	15,124
	Residual	23,950	23	1,041	
	Total	134,194	30		

Source: SPSS Statistics 22 Output Results

The value of the F calculation = 15.124 with significance (Sig.) = 0.000, which is well below  $\alpha = 0.05$ . Decision: because the Sig. value  $< 0.05$ ,  $H_0$  was rejected, and it was concluded that simultaneously, the variables of liquidity, solvency, foundation size, and interaction with financial management had a significant effect on profitability. This means that the combination of the three financial aspects (liquidity, solvency, size) and how their financial management is carried out collectively can explain changes in the profitability of the foundation.

In the context of foundations, this shows that financial aspects need to be managed in an integrated, not partial, manner in order to have a positive impact on profitability performance.

## 3. Partial Test (t-test)

The t-test was performed to see the significance of the influence of each variable on profitability. Based on the output of "Coefficients", the result is as shown in the following table:

Table 5. Regression Coefficients and t-Tests

Variable	B	Std. Error	Beta	t	Sig.
(Constant)	0,167	0,321		0,522	0,607
X1	0,201	0,164	0,222	1,225	0,233
X2	0,140	0,129	0,134	1,087	0,289
X3	0,431	0,153	0,427	2,811	0,010
With	0,294	0,225	0,266	1,306	0,204
X1Z	0,044	0,075	0,062	0,595	0,558
X2Z	-0,071	0,076	-0,100	-0,939	0,357
X3Z	-0,087	0,071	-0,136	-1,222	0,234

Source : SPSS Statistics 22 Output Results

Based on Table 6, the results of the t-test for each variable can be interpreted as follows:

### 1. Liquidity

From the table above, the value of the regression coefficient = 0.201, the value of t calculated = 1.225 and Sig. = 0.233  $> 0.05$ . Thus, it shows that  $H_1$  which reads

"Liquidity has a positive effect on the profitability of the Al Istiqamah Integrated Education Foundation Balikpapan" was not accepted because the result was positive but not significant.

## 2. Solvency

From the table above, the regression coefficient value = 0.140, the calculated t-value = 1.087 and Sig. = 0.289 > 0.05. Thus, it shows that H2 which reads "Solvency has a significant negative effect on the profitability of the Balikpapan Integrated Al Istiqamah Education Foundation" is not accepted because the results have a positive and insignificant effect.

## 3. Foundation Size (Number of Students)

From the table above, the regression coefficient value = 0.431, the t-value = 2.811 and Sig. = 0.010 < 0.05. Thus, it shows that H3 which reads "The size of the Foundation has a significant positive effect on the profitability of the Al Istiqamah Integrated Education Foundation Balikpapan" is acceptable because the results are appropriate, namely positive and significant. From these results, it shows that the size of the foundation (number of students) in this study is an important determining factor in increasing profitability.

## 4. Liquidity × Financial Management Interactions

From the table above, the value of the regression coefficient = 0.044, the value of t-calculation = 0.595 and Sig. = 0.558 > 0.05. Thus, it shows that H4 which reads "Financial management moderates the influence of liquidity on the profitability of the Al Istiqamah Integrated Education Foundation Balikpapan" is not accepted because although the results have a positive effect, they are not significant.

## 5. Interaction of Solvency × Financial Management

From the table above, the value of the regression coefficient = -0.071, the value of t-calculation = 0.939 and Sig. = 0.357 > 0.05. Thus, it shows that H5 which reads "Financial management moderates the influence of solvency on the profitability of the Al Istiqamah Integrated Education Foundation of Balikpapan" is not accepted because the results even though it has a negative effect, financial management does not significantly moderate the impact of solvency on profitability. This means that no matter how good the financial management is, the high debt structure still has a negative impact. This is due to limited flexibility in managing long-term debt from Islamic banks as well as regulatory limitations on the use of funds.

## 6. Size Interaction × Financial Management

From the table above, the value of the regression coefficient = -0.087, the value of t-calculation = -1.222 and Sig. = 0.234 > 0.05. Thus, it shows that H6 which reads "Financial management moderates the influence of the size of the foundation (number of students) on the profitability of the Al Istiqamah Integrated Education Foundation of Balikpapan" was not accepted because the results had a negative and insignificant effect. This suggests that financial management does not significantly moderate the impact of foundation size on profitability. In contrast to the results of the size of the foundation which has a positive and significant effect on profitability, it turns out that financial management cannot moderate the size of the foundation (number of students) to the profitability of the Al Istiqamah Integrated Education Foundation Balikpapan.

### Hypothesis Testing Results

Based on the results of the statistical test above, it can be concluded that the hypothesis testing is as follows:

**Table 6. Hypothesis Testing Results**

No.	Hypothesis	Coeff.	Sig<0.05		Result	
1	Liquidity- Profitability	0,201	0,233	+	Insignificant	Rejected
2	Solvency- Profitability	0,140	0,289	+	Insignificant	Rejected
3	Foundation Size- Profitability	0,431	0,010	+	Significant	Accepted
4	Liquidity-Financial Management- Profitability	0,044	0,558	+	Insignificant	Rejected
5	Solvency-Financial Management- Profitability	-0,071	0,357	-	Insignificant	Rejected
6	Foundation Size- Financial Management- Profitability	-0,087	0,234	-	Insignificant	Rejected

Source : Data processed from the summary of SPSS Statistic 22 output results

### Discussion of Research Results

The main findings in this study show that the size of the foundation, in this case the number of students, has a central role in explaining the profitability of the Balikpapan Integrated Al Istiqamah Education Foundation. The more students, the greater the acceptance of the foundation, which can improve financial performance. This is in line with the theory economies of scale (Dang, (Frank) Li, and Yang 2018), Where the growth in the number of students allows the foundation to share the fixed costs among more students, thereby increasing efficiency and ultimately improving profitability.

In the context of nonprofit educational institutions, if the number of students increases, fixed costs such as teacher salaries, electricity or building maintenance can be borne by many learners, this leads to lower cost per student while foundation admissions increase, thus positively impacting the profitability and financial sustainability of the foundation. These results are also in line with research conducted by (Wage, Toni, and Rahmat 2022) and found the results of "Company Size has a significant positive effect on the profitability of companies on the Indonesia Stock Exchange."

Liquidity was shown to have a positive effect but did not significantly affect profitability statistically in this study.(Firmansyah et al., 2017; Pyo, 2022; Wibowo et al., 2023) This is interesting because it contradicts many studies in the profit sector that have found a positive and significant influence on profitability. Although in theory high liquidity is supposed to strengthen profitability, in the context of non-profit institutions or educational foundations, liquid funds are held for operational costs (such as teacher salaries, infrastructure, student activities, human resource development, etc.), so that they do not directly increase profitability.

Thus, liquidity does not always have a significant positive effect on profitability, not only in the foundation but also in the company. These results are in line with research conducted by Ekky Pratama Putra (2017) which found "Liquidity has a negative and insignificant effect on profitability in telecommunications subsector companies listed on the Indonesia Stock Exchange".

Solvency was also proven to have a positive effect and did not significantly affect profitability statistically in this study. This is because the foundation's debt for the construction of the building is long-term whose economic benefits will only be felt in the future. In contrast to companies in the profit sector that use debt to finance productive activities so that the benefits can be directly used to generate profits, while in the context of nonprofit foundations, the long-term debt burden tends to exceed the benefits, especially if it is not balanced by proportionate income. This is consistent with financial theory which states that excessive debt increases financial risk and capital costs.

These findings are consistent with research conducted by Desriana (2017) which concluded that "Solvency does not have a significant effect on profitability in PT. Kalbe Farma Tbk". In the context of educational foundations, long-term debt is used for the construction of physical facilities, but if it is not followed by an increase in operational income, it will actually create a sustainable financial burden.

This study emphasizes the role of financial management that has not been proven to moderate the influence of liquidity, solvency and foundation size positively and significantly on profitability. The results of this study show that financial management does not strengthen the effectiveness of liquidity, solvency and foundation size on profitability. This is because, as a non-profit private educational institution, financial management is important, but there are still regulations from the foundation that must be carried out, such as the policy of saving funds for operational costs and endowment funds, sharia compliance and non-profit orientation. Thus, even though the financial management capacity is high and has been running well, the impact does not necessarily increase profitability.

Positive but insignificant interaction coefficients indicate that good financial management has not been able to increase the positive impact of liquidity on profitability, nor has financial management been shown to significantly moderate the relationship between solvency and profitability. This shows that despite the quality of financial management, a high debt structure will still have a negative impact on profitability. Long-term debt in foundations has strict contractual attachments to lenders (Islamic banks), so management flexibility is very limited.

Financial management shows a moderation effect that is also negative and insignificant on the size of the foundation. This can happen because the financial management of the foundation is still administrative and operational, not yet to the stage of strategy to increase the size of the foundation in this case the number of students. Likewise, a more complex financial management system is needed, because without good financial management, a large number of students can actually become an additional operational burden. This is in line with research conducted by (Rusnaeni et al. 2022) which states that the size of the company although has a positive effect but is not significant.

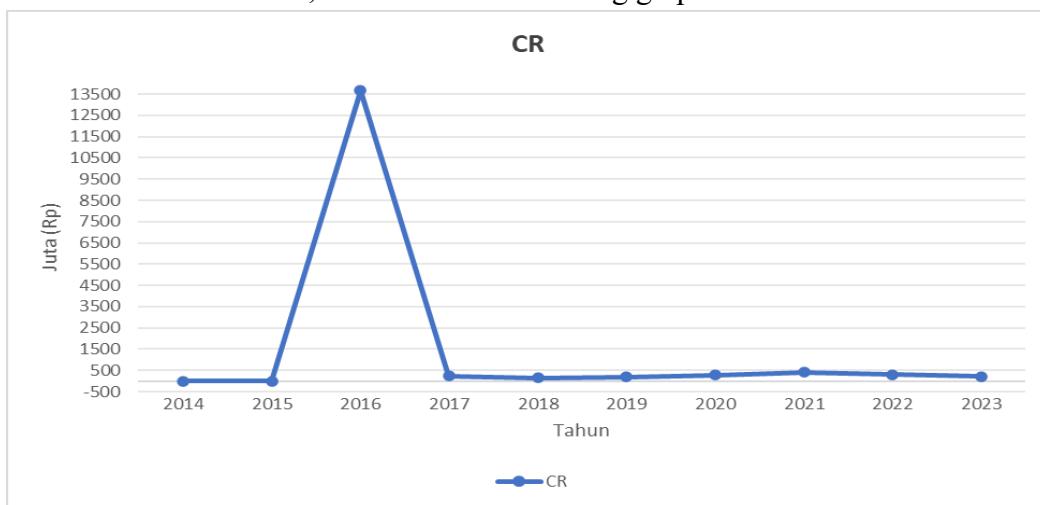
## Trend Analysis

Trend analysis is needed to deepen the analysis of the four main financial and operational performance indicators of the Al Istiqamah Integrated Balikpapan Education Foundation for 10 years from 2014 to 2023, namely liquidity (Current Ratio / CR), solvency (Debt to Asset Ratio / DAR), foundation size (Number of Students) and profitability (Return On Asset / ROA).

The analysis is conducted temporally to identify long-term trends, fluctuation patterns as well as critical points of change that are potentially influenced by strategic policies such as relocation and financing of development projects.

### 1. Current Ratio (CR)

Based on data from 2014 to 2023, the CR pattern of the Balikpapan Integrated Al Istiqamah Education Foundation shows highly volatile dynamics, reflecting the intensive stages of institutional transformation, as seen in the following graph:



**Figure 1. Current Ratio (CR)**

Source : Trend Analysis Output Results

Explanation of the current liquidity trend (CR) of the Al Istiqamah Integrated Balikpapan Education Foundation (YPAITB) for 10 years from 2014-2023:

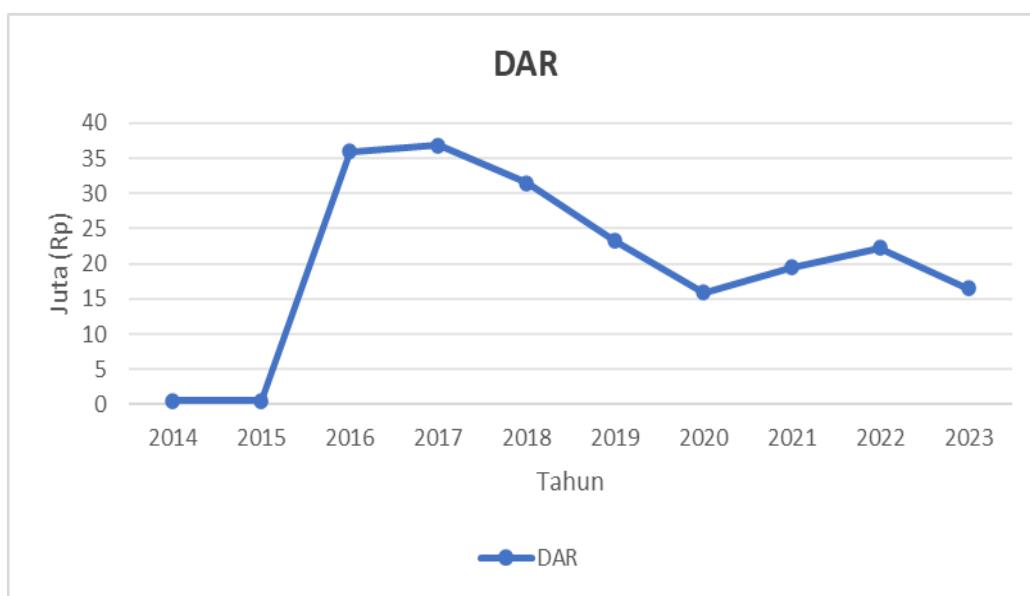
- Year 2014: This year YPAITB has no current obligations at all (zero/0) so the CR is not defined.
- In 2015: YPAITB already has current liabilities, but it is still very small so that it shows a figure of 58,088.64, which is far above the ideal ratio. This figure indicates a highly liquid financial structure, where a CR this high can be interpreted as *over-liquidity*, which has the potential to indicate excess cash that is not being used productively.
- In 2016: The CR decreased significantly to 13,666.94, although still very high. This decrease is in line with the relocation and YPAITB's loan to Bank Syariah for the construction of a building on new land.
- In 2017-2018: There was a sharp decline in CR, to 232.75 (2017) and 140.86 (2018), respectively. This decrease is very relevant to Building Construction and loan financing to

Sharia Banks. The development financing process is categorized as cash expenditure from current assets, thus directly lowering the numerator in the CR calculation.

- In 2019-2021: CR has increased, from 197.22 (2019) to 285.34 (2020) and 412.33 (2021). This increase indicates a recovery in liquidity. Driven by post-relocation operational stabilization and declining operational costs of activities due to the covid-19 pandemic where students study at home.
- In 2022-2023: The CR fell again to 302.61 (2022) and 224.11 (2023), although it remained above the 2018 level. This decrease is attributed to the additional construction of buildings that absorb liquidity for the payment of the initial stage of construction and its supporting costs.

## 2. Solvability Trend (Debt to Asset Ratio/DAR)

Debt to Asset Ratio (DAR) describes the proportion of total assets financed by debt. This ratio is the main indicator of capital structure and bankruptcy risk. The higher the ratio, the greater the foundation's dependence on external financing, which gives rise to periodic ijarah obligations. The following is an analysis of YPAITB's solvency trends (DAR) from 2014 to 2023:



**Figure 2. Debt to Asset Ratio (DAR) Trend**

Source : Linear Trend Output Results

The explanation of the linear trend of solvency (Debt to Asset Ratio / DAR) of the Al Istiqamah Integrated Balikpapan Education Foundation (YPAITB) for 10 years from 2014 to 2023 is as follows:

- 2014-2015: DAR was at 0.5418 (2014) and 0.499 (2015), which indicates that YPAITB did not have any debt in that year.
- In 2016: DAR experienced a significant increase to 35.93 indicating that the foundation's assets have been financed by debt of 35.93%. This is in line with the foundation's loan to Bank Syariah to finance the construction of a building in a new location for development. Therefore, the foundation's capital structure is relatively aggressive, showing dependence on external financing.

- In 2017: DAR increased again to 36.80% in line with additional loans to Sharia Banks to finance the construction of buildings. Although the increase is small, the trend is upward, indicating the influx of new debt obligations for construction financing.
- In 2018-2020: There was a consecutive decline to 31.51 (2018), 23.24 (2019) and 15.93 (2020). This indicates that the foundation in this period is able to consistently pay off its debts so that there is a reduction in debt. The growth of assets that exceeded the foundation's debt also drove this ratio down.
- 2021-2022: There was a trend reversal where the DAR rose again from 19.44 (2021) to 22.27 (2022). This increase is strongly correlated with the additional construction of buildings financed through loans to Sharia banks. Thus, it shows the re-entry of additional new debt obligations.
- In 2023: DAR showed a decrease in value to 16.47 in line with the payment of the financing debt of the first building (in 2016).

### 3. Development of the Number of Students as a Proxy for the Size of the Foundation

In this study, what is used as a proxy to measure the scale or size of the foundation is the number of students which is directly correlated with income (tuition and building fees), use of facilities and operational expenses.

The graph below shows a relatively stable development pattern but reflects post-relocation dynamics:

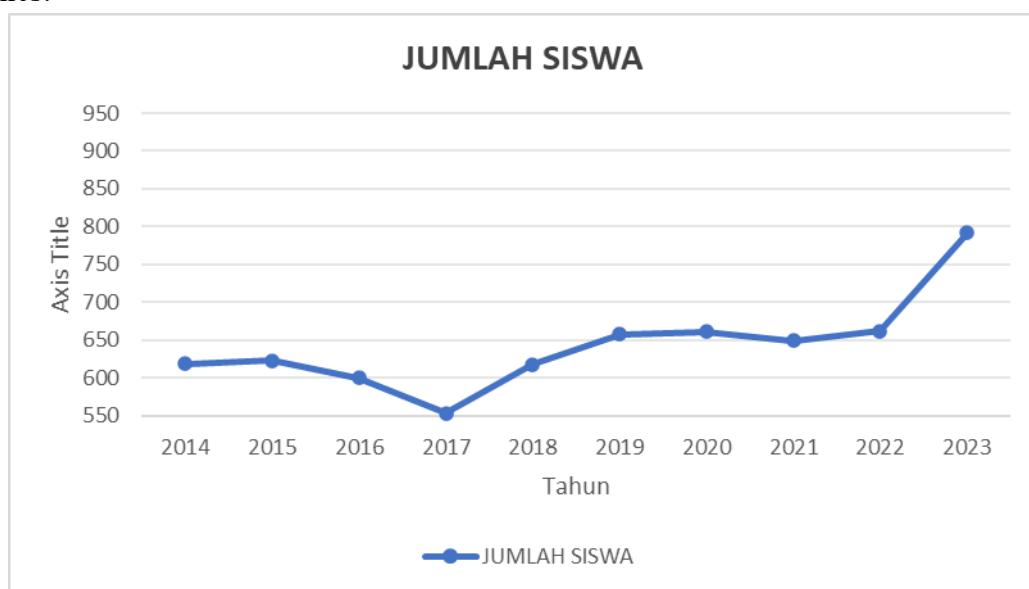


Figure 3. Foundation Size Trends (Number of Students)

Source : Trend analysis output results

The explanation of the trend in the number of students of the Balikpapan Integrated Al Istiqamah Education Foundation (YPAITB) during the period from 2014 to 2023 is as follows:

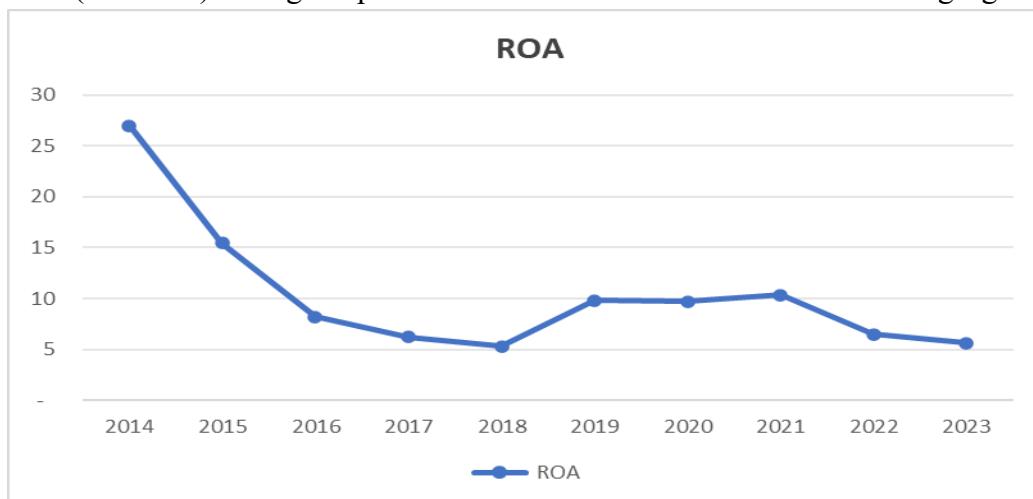
- Year 2014-2015: Stable at 619 and 623 students where a relatively small increase of 0.65%.
- In 2016: The decrease to 600 students was in line with the internal problems of the foundation which resulted in the transfer of location from Balikpapan City to South Balikpapan causing a decrease in students.

- In 2017: The deeper decline to 553 students is still the impact of internal problems and location changes from 2016.
- 2018-2020: Gradual recovery to 618 (2018), 658 (2019) and 661 (2020) shows that the stabilization of facilities at the new location (post-construction) has succeeded in regaining the trust of the community and students' parents.
- Year 2021-2023: Fluctuations of around 649 - 792 indicate that the foundation has reached a *steady state* in storage capacity and market attractiveness.

#### 4. Profitability Trend (Return On Asset/ROA)

Return On Asset (ROA) is used to measure the efficiency of a foundation in generating net profit from the total assets owned. Although the Foundation is non-profit, ROA remains an important indicator because profits (surplus) are used for improvement, development and financial resilience buffers.

The analysis of the ROA of the Balikpapan Integrated Al Istiqamah Education Foundation (YPAITB) during the period of 2014-2015 is shown in the following figure:



**Figure 4. Return On Asset (ROA) Trend**

Source : Trend analysis output results

The explanation of the profitability trend (Return On Asset/ROA) of the Balikpapan Integrated Al Istiqamah Education Foundation (YPAITB) during the period from 2014 to 2023 is as follows:

- In 2014: ROA shows a figure of 26.99 which is a very high figure and reflects the efficiency of asset use.
- 2015: There was a significant decrease to 15.43 related to unforeseen costs and preparations for relocation to new land.
- 2016-2018: Consistent downward trend to 8.23 (2016), 6.22 (2017) and 5.35 (2018) indicates asset efficiency. The impact of relocation and construction has caused new assets to not be optimally generating revenue, while depreciation and expenses continue to increase.
- 2019-2021: Recovery with an increase in ROA to 9.84 (2019), 9.74 (2020) and 10.37 (2021) indicates that new assets are starting to operate effectively, capacity is increasing and efficiency is increasing. This signifies a period of post-relocation stabilization.

## The Influence of Liquidity, Solvency, and Foundation Size on Profitability with Perception-Based Financial Management as A Moderating Variable at The Al Istiqamah Integrated Education Foundation Balikpapan

- 2022-2023: Decreased again to 6.49 (2022) and 5.62 (2023) in line with the initial stage of additional construction of new buildings, which increased the value of assets but did not generate revenue, as well as increased operating expenses.

## CONCLUSION

The results of the study showed that perception-based liquidity and solvency had a positive but not significant effect on the profitability of the Al Istiqamah Integrated Education Foundation Balikpapan, while the size of the foundation (number of students) was proven to have a positive and significant effect so that it became the main factor that increased profitability. Financial management has not been shown to moderate the relationship between liquidity, solvency, or the size of the foundation to profitability. This study has limitations in the small number of respondents and a single research object, but it still makes an important contribution in understanding the factors that affect the profitability of non-profit educational institutions. Based on the findings of the study, it is recommended that foundation managers prioritize strategies to increase the number of students through improving the quality of educational services and curriculum innovation, considering that the size of the foundation has been proven to significantly affect profitability. In addition, it is necessary to optimize cash management by allocating excess liquidity to productive investments that are in line with the foundation's vision, as well as paying attention to the optimal proportion of debt by considering alternative financing schemes to reduce long-term financial burdens. The implementation of a technology-based financial management system is also needed to improve the efficiency and transparency of governance. For future researchers, it is recommended to expand the scope of research by increasing the number of respondents and study objects, as well as considering other variables such as the quality of governance, innovation of educational services, or external factors that can affect the financial performance of educational foundations.

## REFERENCES

Al Azies, H., Trishnanti, D., & Mustikawati, E. (2019). Comparison of Kernel Support Vector Machin (SVM) in Classification of Human Development Index (HDI). *Journal of Proceedings Series*, 6, 53–57.

Araneo, P. (2023). Exploring education for sustainable development (ESD) course content in higher education; a multiple case study including what students say they like. *Environmental Education Research*, 1–28.

Bangun, W. (2021). The Gender Inequality Index: Indonesian Efforts to Enhance Human Development within ASEAN. *Journal of Southwest Jiaotong University*, 56(1). <https://doi.org/10.35741/issn.0258-2724.56.1.7>

Dang, C., (Frank) Li, Z., & Yang, C. (2018). Measuring firm size in empirical corporate finance. *Journal of Banking and Finance*, 86, 159–176. <https://doi.org/10.1016/j.jbankfin.2017.09.006>

European Training Foundation. (2020). Key Indicators on Education, Skills and Employment 2020. In *European Training Foundation*.

Fahrika, A. I., Salam, H., & Buhasyim, M. A. (2020). Effect of Human Development Index (HDI), Unemployment, and Investment Realization toward Poverty in South Sulawesi-Indonesia. *The International Journal of Social Sciences World*, 2(2).

Firmansyah, D., Ahmar, N., & Mulyadi, J. M. V. (2017). The Effect of Leverage, Size, Liquidity, Operating Cash Flow on Fixed Asset Revaluation. *The Indonesian Accounting Review*, 7(1), 31–43.

Kummu, M., Taka, M., & Guillaume, J. H. A. (2018). Gridded global datasets for Gross Domestic Product and Human Development Index over 1990-2015. *Scientific Data*, 5. <https://doi.org/10.1038/sdata.2018.4>

Pumfrey, P. D., & Verma, G. K. (2018). *Foundation Subjects and Religious Education in the Primary School*. Routledge.

Pyo, G. (2022). Insider Trading, Stock Volatility, and Market Liquidity in the Korean Capital Market. *Studies in Business and Economics*, 17(3). <https://doi.org/10.2478/sbe-2022-0054>

Rusnaeni, N., Gursinda, H., Sasongko, H., & Hakim, D. R. (2022). Financial Performance, Institutional Ownership, Size, and Firm Value : a Structural Equation Modeling Approach. *International Journal of Economics, Business and Accounting Research (IJEBAR)*, 6(1), 799. <https://doi.org/10.29040/ijebar.v6i1.3856>

Sahabuddin, E. S. (2015). Model Pembelajaran Pendidikan Lingkungan Hidup Berbasis Educational-Portofolio Suatu Tinjauan. *Optimalisasi Hasil-Hasil Penelitian Dalam Menunjang Pembangunan Berkelanjutan*, 95–114.

Santoso, R. A., Rukhviyanti, N., & Hayati, N. (2023). Pemetaan Lanskap Riset Human Development Index dan Technology Menggunakan Data Scopus dengan Analisis Bibliometrik. *Media Jurnal Informatika*, 15(2). <https://doi.org/10.35194/mji.v15i2.3480>

Shaturaev, J. (2021). indonesia: superior policies and management for better education (Community development through Education). *Архив Научных Исследований*, 1(1).

Simonson, M., Zvacek, S. M., & Smaldino, S. (2019). *Teaching and learning at a distance: Foundations of distance education 7th edition*.

Wage, S., Toni, H., & Rahmat, R. (2022). Pengaruh Likuiditas, Solvabilitas, Aktivitas, Dan Ukuran Perusahaan Terhadap Profitabilitas Perusahaan Di Bursa Efek Indonesia. *Jurnal Akuntansi Barelang*, 6(1), 41–49. <https://doi.org/10.33884/jab.v6i1.4558>

Wibowo, S. N., Siregar, N. F., & Febriansyah, R. (2023). Determinant tax aggressiveness in Indonesia: The influence of profitability, leverage, and liquidity. *Research Trend in Technology and Management*, 1(2), 100–110. <https://doi.org/10.56442/rttm.v1i22.10>



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