



# Comparative Study on Financial Performance of Higher Education Legal Entities (PTN-BH) Before and During the Covid-19 Pandemic

Veronika Perwita Kusumadewi<sup>1</sup>, Ivan Yudianto<sup>2</sup>

<sup>1,2</sup>Universitas Padjadjaran

Correspondence: E-mail: [perwita87@gmail.com](mailto:perwita87@gmail.com)

## ABSTRACT

This study aims to determine the financial performance of Higher Education Legal Entities (PTN-BH) before and during the Covid-19 pandemic by using financial ratio assessments. The sampling technique was carried out using a purposive sampling method so that a total sample of 10 PTN-BH was obtained. The type of data used in this research is secondary data in the form of published financial report documents. The indicators for measuring financial performance consist of CR (Current Ratio), ROA (Return on Assets), ROE (Return on Equity), POBO (Operating Income to Operating Expenses) and FAT (Fixed Asset Turnover). Data analysis was performed using paired sample t test and Wilcoxon test. The results showed that there was no significant difference between PTN-BH before and during the Covid-19 pandemic in the ratios of ROA, ROE, POBO and FAT. While there are significant differences in the CR ratio.

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## 1. INTRODUCTION

Higher Education Legal Entities (PTN-BH) are defined as states universities established by the government and holding the status of a public legal entity with autonomy in both academic and non-academic fields. The autonomy of the conduct of PTN-BH is regulated by Law Number 12 of 2012 concerning Higher Education article 64. Since 31 December 2022, government has designated 21 universities as PTN BH.

**Table 1.**  
**List of PTN BH in Indonesia**

| No. | Institutions                        | Year of Establishment |
|-----|-------------------------------------|-----------------------|
| 1   | Institut Teknologi Bandung          | 2013                  |
| 2   | Univ. Gadjah Mada                   | 2013                  |
| 3   | Institut Pertanian Bogor            | 2013                  |
| 4   | Univ. Indonesia                     | 2013                  |
| 5   | Univ. Airlangga                     | 2014                  |
| 6   | Univ. Pendidikan Indonesia          | 2013                  |
| 7   | Univ. Sumatera Utara                | 2014                  |
| 8   | Univ. Padjadjaran                   | 2014                  |
| 9   | Univ. Diponegoro                    | 2014                  |
| 10  | Univ. Hasanuddin                    | 2014                  |
| 11  | Institut Teknologi Sepuluh November | 2014                  |
| 12  | Univ. Sebelas Maret                 | 2020                  |
| 13  | Univ. Andalas                       | 2021                  |
| 14  | Univ. Brawijaya                     | 2021                  |
| 15  | Univ. Negeri Padang                 | 2021                  |
| 16  | Univ. Negeri Malang                 | 2021                  |
| 17  | Univ. Negeri Yogyakarta             | 2022                  |
| 18  | Univ. Negeri Semarang               | 2022                  |
| 19  | Univ. Negeri Surabaya               | 2022                  |
| 20  | Univ. Syiah Kuala                   | 2022                  |
| 21  | Univ. Terbuka                       | 2022                  |

Covid-19 outbreak that occurred in the year of 2020 has an impact on the continuity of business organization. Covid-19 pandemic has resulted on the decline of almost all economic sectors. Indonesia's economic conditions in 2020 show that after growing by 3 percent in the first quarter of 2020, economic growth plunged in the following quarters; -5.3 percent, -3.5 percent and -2.2 percent respectively. Accumulatively, Indonesia's economic growth contracted by 2.07 percent (Bappenas, 2021)

PTN BH is categorized as a non-profit organization. By far, non-profit organizations are relatively intertwined with business sustainability since non-profit organizations are far from the risk of bankruptcy due to financial difficulties like for-profit companies. It is therefore, established research mainly focuses on profit-oriented companies that are experiencing financial difficulties. However, financial difficulties can also be experienced by non-profit

organizations that receive funding from external parties, such as government, foundations and grant providers.

This research is conducted due to the lack of research which focus on assessing financial performance of PTN-BH particularly before and during Covid-19 pandemic. Whereas, this assessment is considered crucial as the Covid-19 pandemic has resulted on unstable economic environment as financial performance is one of significant indicators in monitoring continuity of non-profit organizations. Research is needed to be conducted to outline whether there are different conditions at PTN-BH from a financial perspective to determine appropriate financial management steps that can be taken during the pandemic.

PTN BH is a non-profit organization. Because non-profit organizations are founded with the aim of not seeking profits for investors, performance measures commonly used by commercial companies are often less suitable for use in assessing the performance of non-profit organizations. Moreover, not all non-profit organizations are the same in terms of organizational operations. There are various variations both in terms of the mission of the organization itself and the funding sources of each non-profit organization. These variations result in the absence of generally accepted norms for assessing the performance of non-profit organizations such as those in commercial companies, but rather they must be adapted to the characteristics of each non-profit organization.

PTN BH's financial performance assessment is therefore assessed using liquidity, effectiveness and efficiency ratios which refer to the Directorate General of Treasury Regulation No. 32/Pb/2014 concerning Guidelines for Performance Assessment of Public Service Bodies in the Education Services Sector as well as the Directorate General of Treasury Regulation No. 11/Pb/2021 concerning Governance and Performance Guidelines (Maturity Levels) for Public Service Bodies.

This reference was implemented since there are still no regulations governing the assessment of financial performance using financial ratios specifically at PTN BH. This is because PTN BH utilises PSAK 45 for its financial reporting, which is the financial reporting standard for non-profit organizations. This makes PTN BH equated with non-profit organizations in general. Meanwhile, research on financial performance assessment in non-profit organizations in Indonesia are mostly carried out on zakat institutions which have different operations from universities. Therefore, this research ultimately refers to the financial performance assessment regulations at BLU which have a similar form to PTN BH, namely as a tertiary institution under the government, even though they have different levels of financial management autonomy.

The financial performance assessment at PTN BH is calculated using financial ratios related to liquidity, effectiveness and efficiency. Liquidity indicators are calculated using the current ratio. The calculation of liquidity indicators with the current ratio is carried out to see the organization's ability to pay short-term obligations or obligations that are due in less than one year. The current ratio shows how an organization can maximize its current assets on the balance sheet to cover liabilities.

The effectiveness indicator is calculated using the ratio of return on fixed assets (return of assets/ROA) and return on equity (ROE). Effectiveness calculations are carried out to measure an organization's ability to achieve its goals through the use of its resources. The ROA ratio is the net asset surplus/deficit divided by total assets, presented as a percentage. This ratio measures how effectively an organization utilizes its assets to generate a financial surplus. Meanwhile, the ROE ratio is the net asset surplus/deficit divided by equity, which is presented as a percentage. Equity is assets minus liabilities. This ROE ratio measures management's ability to generate appropriate returns from existing capital.

The calculation of efficiency indicators is carried out using the ratio of Operating Income to Operating Expenses (POBO) and the fixed asset turnover (FAT) ratio. Continuous and targeted calculations are carried out on the POBO ratio. The purpose of calculating efficiency with the POBO ratio is an assessment of the organization's cost management ability to produce output outcomes. The smaller the POBO ratio indicates that cost management capabilities have not been carried out as optimally as possible and opportunities for improvement, conversely the larger this ratio indicates better cost management capabilities in producing service output achievements.

The fixed asset turnover ratio or FAT is an efficiency ratio that indicates how well or efficiently an organization utilizes the fixed assets it owns to generate income. This ratio is calculated by dividing operational income by the number of fixed assets and the calculation is carried out annually. Net fixed assets consist of land, buildings and equipment owned by the organization, except for construction in progress. In general, the higher the FAT ratio indicates the more effective the utilization of investments in fixed assets to generate income.

The description above underlies the formulation of this research which is directed at a comparative study of PTN BH's financial performance before and during the Covid-19 pandemic. The hypothesis of this research are:

H1: There is a significant difference in the current ratio at PTN BH before and during the Covid-19 pandemic.

H2: There is a significant difference in the ratio of return on assets (ROA) at PTN BH before and during the Covid-19 pandemic.

H3: There is a significant difference in the return on equity (ROE) ratio at PTN BH before and during the Covid-19 pandemic.

H4: There is a significant difference in the POBO ratio at PTN BH before and during the Covid-19 pandemic. H5: There is a significant difference in the fixed asset turnover ratio at PTN BH before and during the Covid-19 pandemic.

## **2. METHODS**

### **Population dan Sample**

The population in this research is PTN BH in Indonesia with a total of 21 universities. The sample was selected using a non-probability sampling technique, namely by using a purposive sampling technique. The final sample size used was 10 universities. There are 11 universities that do not meet the sample selection criteria because they have not published complete financial report components for the 2019 and 2020 reporting years. Apart from that, there are also universities whose designation as PTN BH was carried out after 2020 so they do not meet the sample criteria.

The type of data used in this research is secondary data in the form of financial report publication data from PTN BH sourced from the official website of each PTN BH for the 2019 and 2020 financial reporting years. The measurement scale used is the ratio scale for the current ratio (CR), return on assets (ROA), return on equity (ROE), POBO and fixed asset turnover (FAT).

### **Data Analysis**

The method of data analysis and hypothesis testing begins with presenting descriptive statistical results, then a normality test is carried out and continues with a difference test for hypothesis testing. The Paired Sample T-Test is used for normally distributed data, but special

treatment is carried out if the data is not normally distributed. If the data is not normally distributed, the test used is a non-parametric test using the Wilcoxon signed test method.

### 3. RESULTS AND DISCUSSION

#### Results of Descriptive Statistical Analysis

The descriptive statistical results of this research are presented in Table 2. The average value of the CR ratio has increased from 5.7962 before the Covid-19 pandemic to 6.1687 during the Covid-19 pandemic. This increase in the CR ratio illustrates that liquidity at PTN-BH has increased during the Covid-19 pandemic. This means that PTN BH's ability to pay its short-term obligations using its current assets has increased during the Covid-19 pandemic.

The average value of the ROA ratio has increased from 0.0349 before the Covid-19 pandemic to 0.0726 during the pandemic. In line with the increase in the ROA ratio, the ROE ratio also increased in average value from 0.0848 before the Covid-19 pandemic to 0.1049 during the Covid-19 pandemic. This increase in the ROA and ROE ratio illustrates that PTN-BH's effectiveness has increased during the Covid-19 pandemic. This means that there has been an increase in PTN BH's ability to utilize assets and generate rewards from existing capital during the Covid-19 pandemic.

The average value of the POBO ratio has increased from 0.9635 before the Covid-19 pandemic to 1.0227 during the Covid-19 pandemic. A different thing happened to FAT which decreased from 0.7613 before the Covid-19 pandemic to 0.7076 during the Covid-19 pandemic. The increase in the POBO ratio illustrates that at PTN-BH there has been an increase in cost management capabilities that are getting better in producing service output during the Covid-19 pandemic. Meanwhile, the decline in the FAT ratio illustrates that there has been a decline in PTN BH's ability to utilize investments in fixed assets to generate income.

Table 2  
Descriptive Statistics

|              | N  | Min.    | Max.    | Mean   | Std. Deviasi |
|--------------|----|---------|---------|--------|--------------|
| CR_Sebelum   | 10 | 1,1057  | 15,7460 | 5,7962 | 4,1237       |
| CR_Selama    | 10 | 1,6253  | 15,9323 | 6,1687 | 4,0144       |
| ROA_Sebelum  | 10 | -0,0519 | 0,0982  | 0,0349 | 0,0544       |
| ROA_Selama   | 10 | -0,0272 | 1,1862  | 0,0726 | 0,0733       |
| ROE_Sebelum  | 10 | -0,0703 | 0,5788  | 0,0848 | 0,1831       |
| ROE_Selama   | 10 | -0,0289 | 0,3105  | 0,1049 | 0,1052       |
| POBO_Sebelum | 10 | 0,6902  | 1,3458  | 0,9635 | 0,2158       |
| POBO_Selama  | 10 | 0,7249  | 1,3748  | 1,0227 | 0,1820       |
| FAT_Sebelum  | 10 | 0,3309  | 1,6357  | 0,7613 | 0,3812       |
| FAT_Selama   | 10 | 0,3189  | 1,4706  | 0,7076 | 0,3509       |

#### Normality Test Results

The normality test results show that the variables that met the normality test before the Covid-19 pandemic were CR, ROA, POBO and FAT with a significance figure greater than 0.05. The ROE variable does not meet the normality test because it has a significance number of 0.00 which is smaller than 0.05. The variables that meet the normality test during the Covid-19 pandemic are CR, ROA, ROE, POBO and FAT, all of which have a significance figure of more than 0.05.

Table 3  
Normality test

| Sebelum pandemi (2019) |       |       |       |       |       |
|------------------------|-------|-------|-------|-------|-------|
|                        | CR    | ROA   | ROE   | POBO  | FAT   |
| N                      | 10    | 10    | 10    | 10    | 10    |
| Sig                    | 0,091 | 0,236 | 0,000 | 0,326 | 0,136 |
| Selama pandemi (2020)  |       |       |       |       |       |
|                        | CR    | ROA   | ROE   | POBO  | FAT   |
| N                      | 10    | 10    | 10    | 10    | 10    |
| Sig                    | 0,067 | 0,382 | 0,543 | 0,979 | 0,199 |

Based on the results of the normality test on variables before and during the Covid-19 pandemic, it can be concluded that the variables that meet the normality test or are normally distributed are CR, ROA, POBO and FAT. So that on these variables a different test can be carried out using a paired sample t-test. Meanwhile, for ROE variables that do not meet the normality test or are not normally distributed, processing is carried out using the Wilcoxon Signed Rank Test.

#### Paired Sample T-test Results

The results of the paired sample t-test on the CR, ROA, POBO and FAT variables are shown in Table 4.

Table 4  
Paired Sample T-test

|        | Variabel                                    | Sig 2 tailed | Keterangan  |
|--------|---|--------------|-------------|
| Pair 1 | CR_Sebelum (2019) -<br>CR_Selama (2020)     | 0,006        | H1 diterima |
| Pair 2 | ROA_Sebelum (2019) -<br>ROA_Selama (2020)   | 0,062        | H2 ditolak  |
| Pair 3 | POBO_Sebelum (2019) -<br>POBO_Selama (2020) | 0,169        | H4 ditolak  |
| Pair 4 | FAT_Sebelum (2019) -<br>FAT_Selama (2020)   | 0,171        | H5 ditolak  |

Table 4 shows that the difference ratio test with a paired sample t-test on the CR ratio before and during the pandemic has a figure of 0.006 which is smaller than the significance figure of 0.05, therefore hypothesis H1 is accepted. The difference test on the ROA ratio before and during the pandemic has a figure of 0.062 which is greater than the significance figure of 0.05, therefore hypothesis H2 cannot be supported. The difference test on the POBO ratio before and during the pandemic has a figure of 0.169 which is greater than the significance figure of 0.05, therefore hypothesis H4 cannot be supported. The difference test on the FAT ratio before and during the pandemic has a figure of 0.171 which is greater than the significance figure of 0.05, therefore hypothesis H5 cannot be supported.

#### Wilcoxon Signed Rank Test Results

The results of the Wilcoxon signed rank test on the ROE variable are shown in Table 5.

Table 5  
Wilcoxon Signed Rank Test

| Variabel                                  | Sig 2 tailed | Keterangan              |
|---|--------------|-------------------------|
| ROE_Sebelum (2019) -<br>ROE_Selama (2020) | 0,139        | H3 tidak dapat didukung |

Table 5 shows that the difference test with the Wilcoxon Signed Rank Test on the ROE ratio variable before and during the pandemic has a number of 0.139 which is greater than the significance number of 0.05, therefore hypothesis H3 cannot be supported.

## Discussion

The results of the CR ratio difference test before and during the pandemic show a significance value of  $0.006 < 0.05$ , which means the H1 hypothesis is accepted. There is a significant difference in CR between conditions before and during the Covid-19 pandemic. The increase in the CR ratio in descriptive statistical analysis illustrates that at PTN-BH there has been an increase in current assets. The increase in current assets is likely due to a decrease in operational expenditure during the pandemic so that the CR ratio has increased. This happened because of restrictions on activities during the pandemic, including educational activities, namely face-to-face learning. These activity restrictions ultimately reduce operational costs for activities at PTN-BH and increase current assets (liquidity). These results are in line with research by Hilman & Laurette (2021) which shows that there is a significant difference between CR before the pandemic and CR during the pandemic.

The results of the different ROA ratio test before and during the pandemic show a significance value of  $0.062 > 0.05$ , which means hypothesis H2 cannot be supported. There is no significant difference in ROA between conditions before and during the Covid-19 pandemic. These results support the research results of Arwantini & Syaiful (2022) which also found that there was no significant difference between ROA before the pandemic and ROA during the pandemic. From the descriptive statistical analysis, it can be seen that the average value of the ROA ratio has increased from 0.0349 before the Covid-19 pandemic to 0.0726 during the pandemic. This means that there has been an increase in PTN BH's ability to utilize assets, although the difference is not significant between before and during the pandemic.

The results of the different ROE ratio test before and during the pandemic show a significance value of  $0.139 > 0.05$ , which means hypothesis H3 cannot be supported. There is no significant difference in ROE between conditions before and during the Covid-19 pandemic. These results are in accordance with Hidayat's (2022) research which shows that there is no significant difference between ROE before the pandemic and ROE during the pandemic. Even though there is no significant difference between before and during the pandemic, the results of descriptive statistics show that the ROE ratio has increased in average value from 0.0848 before the Covid-19 pandemic to 0.1049 during the Covid-19 pandemic. This means that PTN BH's ability to generate returns from existing capital has increased during the pandemic.

The results of the POBO ratio difference test before and during the pandemic show a significance value of  $0.169 > 0.05$ , which means hypothesis H4 cannot be supported. There were no significant differences in POBO between conditions before and during the Covid-19 pandemic. These results do not support the research findings of Putra (2020) which used POBO as an indicator of financial performance, where there was a decrease in POBO in government service agencies during the pandemic. Even though there was no significant difference in the POBO ratio before and during the pandemic, the average value of the POBO ratio increased from 0.9635 before the Covid-19 pandemic to 1.0227 during the Covid-19 pandemic. The increase in the POBO ratio illustrates that at PTN-BH there has been an increase in cost management capabilities that are getting better in producing service output during the Covid-19 pandemic.

The results of the test for the difference in FAT ratio before and during the pandemic show a significance value of  $0.171 > 0.05$ , which means that hypothesis H5 cannot be

supported. There was no significant difference in FAT between conditions before and during the Covid-19 pandemic. These results are in accordance with the research results of Ahffha & Pradana (2022) where the TATO asset turnover ratio or Total Asset Turn Over did not show a significant difference before and during the pandemic. The results of the descriptive analysis of FAT decreased from 0.7613 before the Covid-19 pandemic to 0.7076 during the Covid-19 pandemic, which means that the FAT ratio illustrates that there has been a decline in PTN BH's ability regarding the utilization of investment in fixed assets to generate income, although it is not significant.

#### 4. CONCLUSION

From the aforementioned discussion, it can be concluded that there is no significant difference between PTN BH's financial performance before and during the Covid 19 pandemic which can be seen in the efficiency ratios, namely POBO and FAT, as well as in the effectiveness ratios, namely ROA and ROE. However, there is a significant difference between PTN BH's financial performance before and during the Covid 19 pandemic when viewed from the liquidity ratio.

Based on the results of this discussion, future research is suggested to add other financial ratio variable proxies to obtain different research results. Apart from that, it is also recommended to extend the observation period for financial reports to obtain more powerful results. The suggestion for PTN BH is to be able to continue to maintain liquidity from its current assets so that higher education operations continue to be maintained during the pandemic.

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