

The Performance of Islamic Bank in Terms of Human Resources, Outstanding Loans, and NPF: Mann-Whitney Analysis

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Abstract - Sharia banks act as financial institutions that perform financial intermediary functions, connecting parties with excess funds with parties in need of funds. The pandemic era in early 2020 is one of the most striking examples that shows the serious impact of macroeconomic changes on Islamic banking in Indonesia. This study focuses on the performance of Islamic banking. It aims to analyze changes in four variables: number of branches, number of human resources, outstanding financing, and Non-Performing Financing in Islamic banks, both before and during the pandemic. The method used is a statistical approach sourced from secondary data published by the OJK, which includes a sample of 12 Islamic commercial banks and 21 Islamic business units. The data used in this study cover the period from January 2018 to April 2023, allowing for a comprehensive comparison of Islamic banking performance before and during the COVID-19 pandemic. The analysis technique used is a descriptive comparative analysis of the results of the Mann-Whitney statistical test. The results of this study, based on the analysis using the Mann-Whitney test, indicate significant differences in these variables between the periods before and during the COVID-19 pandemic in the Islamic banking sector. Therefore, a strategic response is needed from the Islamic banking sector in addressing changes in the economic situation and customer behavior influenced by external factors such as the pandemic. The importance of adaptation by the Islamic banking sector in facing a pandemic, as well as the importance of better risk management in managing business growth and credit risk.

Keywords: Human Resources; Outstanding Financing; Non-Performing Financing

1. Introduction

Sharia banks are financial institutions that function as financial intermediaries, namely connecting parties who have excess funds with those who need funds. Furthermore, the funds collected in the form of savings are channeled in the form of financing (Ilyas, 2018). This financing includes various types, such as *mudharabah* financing (profit sharing cooperation), *musharakah* financing (capital cooperation), or *murabahah* financing (sales with profit). More broadly, sharia banking is a term that refers to all aspects related to Sharia Banks and sharia business units, which include institutional structures, business activities, as well as methods and procedures used in carrying out their operations (Andrianto & Firmansyah, 2019).

The performance of sharia banking cannot be separated from the influence of changing macro conditions. Factors such as economic conditions, social dynamics, and even disease outbreaks have a significant impact on banking operations and stability. Including disease outbreaks, this has had a significant impact on banking operations. This allows for decreased economic activity, disrupted business, and financial pressure on individuals and companies (Rizwan et al., 2020). Therefore, in measuring the performance of Islamic banking, it is not only financial ratios that are important, but there is also a need to measure performance based on the objectives of Islamic banks themselves (Al Ghifari et al., 2018).

The Covid-19 pandemic at the beginning of 2020 is one of the most prominent examples that illustrates the serious impact of changing macro conditions on sharia banking. This pandemic was triggered by the emergence of a highly contagious virus that caused respiratory tract diseases such as coughs, colds, fever, and pneumonia to spread throughout the world (Husain & Azmidar, 2022). Despite these challenging conditions, the Islamic banking sector in Indonesia continued to demonstrate resilience and positive growth. This condition is

reflected in the growth of Sharia financial assets in Indonesia, which reached IDR 2,375 trillion in 2022, an increase of 15.86% from 2021 (Kurniawan et al., 2025). These achievements indicate that, even amid economic uncertainty caused by the pandemic, Islamic financial institutions in Indonesia were able to maintain stability and expansion. This resilience underscores the importance of further analyzing the performance of Islamic banks in terms of their human resources, outstanding financing, and Non-Performing Financing (NPF), to understand how these aspects were influenced by macroeconomic disruptions during the COVID-19 period.

Meanwhile, data on the Covid-19 situation in Indonesia as of September 13, 2022, shows that there are 31,571 active cases, 79,939 specimens, 4,817 suspects, 6,397,236 confirmed, 6,207,858 recovered, and 157,807 deaths (BNPB, 2022). To control the spread of the virus, the Indonesian government implemented the Large-Scale Social Restrictions (PSBB) and Community Activity Restrictions (PPKM) programs, which allowed only essential and critical sectors to operate. These restrictions significantly affected almost all aspects of life, particularly the national economy. Essential sectors permitted to operate included financial and banking institutions, while critical sectors encompassed health, security, and other vital services. Although these measures were necessary to contain the spread of the virus, they also created economic pressures that indirectly influenced the performance and operational dynamics of the Islamic banking sector.

The government carried out the acceleration of handling the Covid-19 virus in anticipating the rapid spread of the virus through Government Regulation no. 21 of 2020 concerning PSBB dated 31 March 2020. Apart from that, the government is also implementing Community Activity Restrictions (PPKM) based on the Instruction of the Minister of Home Affairs number 15 of 2021 concerning the Implementation of Emergency Community Activity Restrictions (PPKM) for Corona Virus Disease 2019 in the Bali and Java regions, which comes into effect from 3 to 20 July 2021. This is an effort to break the chain of the corona virus which continues to increase. As a policy, it certainly has both positive and negative impacts. The positive impact is of course hoped that the Covid-19 virus chain can be resolved quickly, while the negative impact is feared that there will be an economic slowdown, allowing employment terminations, company activities tending to be reduced, and even allowing for financing problems in the national banking sector (Damayanti, 2020).

The Covid-19 pandemic and the implementation of PPKM caused micro small and medium enterprises in the early stages of the Covid-19 pandemic to also experience turmoil in their business processes, and quite a few even went bankrupt due to their inability to cover the costs of production. Micro small and medium entrepreneurs must be creative to survive the Covid-19 Pandemic (Lina Ayu Safitri, 2021). Termination of employment during the Covid-19 pandemic was dominant in the tourism and production services sector which involved a large number of workers. This is due to an emergency or force majeure situation so that the Termination of Employment does not occur as it should. Layoffs were carried out en masse due to a lack of demand for production goods due to decreased activity during the Covid-19 pandemic, so some carried out permanent layoffs and some temporarily (Muslim, 2020).

In the banking world, macro *conditions* are one of the bases for decision making in expanding the financing sector. Banks tend to hold back expansion in the financing sector considering the high risk of financing problems or even if they continue to expand financing, it will be carried out strictly with very careful and prudent considerations. If bank financing during Covid-19 is not analyzed and studied in depth, it is suspected that this could lead to an increase in problematic financing. Financing at sharia banks can take the form of profit sharing in the form of *Mudharabah* or *Musyarakah*, leasing in the form of *Ijarah* or rental purchase in the form of *Ijarah Muntahiya Bittamlik*, buying and selling (*Murabahah*, *Salam* and *istishna*), *Qardh*, as well as the leasing process for multi service transactions.

For comparison, conventional banks use an interest system in their operations while Islamic banks use a profit sharing system. The interest system provides certainty in terms of the amount of income that will be received when customers deposit their funds in the bank and also provides certainty regarding the amount of money that must be paid for the loan they receive at the interest rate agreed between the bank and the customer. Meanwhile, in the profit sharing system, the amount of income received by an investor (*hohibul mal*) and the amount of money that must be paid by the *mudharib* to the bank cannot be determined nominally at the start, but can only be determined after a certain agreed period. This depends on the *mudharib*'s profit situation in the agreed period (Wahyuni and Pujiharto, 2018).

In addition, Islamic banks give rise to cooperative interactions. These interactions lead to cooperation, one of which includes cooperation in economic activities. This cooperation, from a *muamallah* perspective, consists of four contracts, namely *mudharabah*, *musyarakah*, *muzara'ah*, and *mukhabarah* (Maududi Islam et al., 2021). This is in line with the fatwa of the National Sharia Council of the Indonesian Ulema Council (MUI) No. 04/DSN-MUI/IV/2000 dated April 1, 2000 (Yuspin & Kn, 2007).

In relation to the above, human resources (HR) are a crucial element in the development of Islamic banks, as employees significantly influence the growth of Islamic banking in Indonesia. Therefore, improving employee performance is an important aspect that Islamic banks must pay attention to (Arif et al., 2024). Similarly, the Non-Performing Financing (NPF) ratio of Islamic banks represents the proportion of problematic financing to total financing disbursed. A higher NPF ratio indicates poorer quality of financing or credit disbursed (Dwi

Angraeni Berlina, 2019). If the financing is based on a profit-sharing agreement, where the mudharib (business partner) incurs business losses, these losses are also borne by the Islamic bank (shahibul mal) (Saekhu, 2019). These elements have significant non-financial and financial impacts. This can be seen from the perspectives of employees, management, and other financial aspects, which can be observed through financial performance (Putri & Ningtyas, 2023). If human resources, NPF, and the number of offices can be controlled, the performance of Islamic financial institutions will show significant improvement and dynamic growth (Kadir et al., 2022).

As for previous research was conducted by Irma Citarayani (2022) in analyzing differences in total assets, number of office networks, number of human resources and performance of the Sharia Banking sector in Indonesia between before and during the Covid-19 Pandemic. The research results show that there are differences in Total Assets, number of office networks, and Return On Assets (ROA) before and during the Covid-19 Pandemic in Islamic banking in Indonesia (Citarayani, 2022) . Meanwhile, another research was conducted by Muhammad Eka Rahman (2015) to test the crisis resilience of sharia banking in Indonesia using the *IBC* (Banking Crisis Index) measure. This aims to prove that the Islamic economic financial system is able to contribute to a country's monetary system (Rahman, 2015). Research findings show that the Islamic banking sector in Indonesia experienced minimal or insignificant impact due to the global crisis.

The two previous studies had different focuses but were able to provide valuable insights into the role and resilience of Islamic banking in facing external challenges. Irma Citrayani's research results illustrate how the Covid-19 pandemic has affected the performance of Islamic banking in Indonesia by focusing on total assets, office networks, and profitability ratios. Meanwhile, Muhammad Eka Rahman's study highlights the resilience of the Islamic banking sector in facing the global crisis using the Banking Crisis Index (IBC) approach. However, these studies have not comprehensively examined the operational aspects of Islamic banking particularly the number of offices, human resources, outstanding financing, and Non-Performing Financing (NPF). Therefore, this study aims to fill this research gap by conducting a comparative analysis of these variables before and during the COVID-19 pandemic, to provide a broader and more detailed understanding of the performance dynamics of Islamic banking in Indonesia.

2. Research Methods

2.1 Data Types and Sources

The type of data used is quantitative data, namely in the form of numbers and obtained from a second source or what is usually called Secondary Data. The figures in question are figures for the amount of financing in various sharia bank financing products and Sharia Business Units as well as Non-Performing Finance figures or the amount of problematic financing in various sharia bank products and Sharia Business Units. These figures are presented in a *time series* for the period before Covid-19 (January 2018 to February 2020) and the period during Covid-19 (March 2020 to April 2023). All data were sourced from the Otoritas Jasa Keuangan (OJK) through the official publication titled "*Statistik Perbankan Syariah (SPS)*", which is part of the OJK Monthly Financial Services Statistics Report. These reports are publicly accessible via the official OJK website at <https://www.ojk.go.id>, under the *Data dan Statistik* section.

2.2 Population and Sample

The population and sample in this research are all Sharia Commercial Banks, totaling 12 banks and Sharia Business Units, totaling 21 banks. The Sharia Commercial Banks are: Bank Muamalat Indonesia, BCA Syariah, Bank Mega Syariah, Bank Syariah Bukopin, Bank Panin Dubai Syariah, Bank Victoria Syariah, Bank Jabar Banten Syariah, National Pension Savings Bank Syariah, Bank Aladin Syariah, and Bank Aceh Syariah. Meanwhile, the Sharia Business Units are: Bank Danamon, Bank Maybank Indonesia, Bank Permata, Bank OCBC NISP, Bank CIMB Niaga, Bank Sinar Mas, BPD DKI, Bank Tabungan Negara, BPD Yogyakarta Special Region, BPD Central Java, BPD East Java, BPD Jambi , BPD West Sumatra, BPD North Sumatra, Riau and Riau Islands, BPD Sumatra Seatan and Banka Belitung, BPD South Kalimantan, BPD West Kalimantan, BPD East Kalimantan and BPD South Sulawesi and West Sulawesi.

2.3 Research Variable

The variables in this research include knowing the number of offices, number of human resources, *outstanding* financing and NPF (Non Performing Finance) in sharia banking. Number of offices refers to the number of branches or offices owned and operated by Sharia Commercial Banks and Sharia Business Units. Meanwhile, the number of HR is the number of Human Resources who work at Sharia Commercial Banks and Sharia Business units. The amount of human resources is expressed in units of people. Human resources, both in quality and quantity, greatly influence the performance of sharia banking (Budiono & Aris, 2022) . The quality of human resources has a significant effect on employee performance in sharia banking (Sari & Amri, 2018) . Outstanding financing is the total financing position at the end of the month throughout the observation period

(in billions of rupiah). NPF is the amount of non-performing financing or the amount of problematic financing which is used as an aspect of assessing the performance of a sharia bank or sharia business unit (in billions of rupiah). Non-Performing Financing or problematic financing begins to occur when the obligation to pay the loan given is more than 90 days old and is not fulfilled (Supriyatni and Nurjamil, 2021).

For analytical consistency, all variables were collected in monthly time-series format for the period January 2018 to April 2023. Since the distribution of data did not meet normality assumptions, no logarithmic or ratio transformations were applied; instead, raw values were maintained for use in non-parametric analysis (Mann–Whitney test).

2.4 Data Analysis Technique

This research applies a comparative descriptive analysis as its main analytical framework. The descriptive aspect aims to provide an in-depth explanation of the numerical data obtained, detailing the characteristics and trends of each variable. Meanwhile, the comparative aspect is intended to identify and test differences between two groups of data before and during the Covid-19 pandemic using an appropriate statistical approach

The statistical technique employed in this study is the Mann Whitney U test, a non-parametric test suitable for comparing two independent groups when the data do not meet normality assumptions. The choice of this test was based on the results of a preliminary normality test using Kolmogorov–Smirnov test, which indicated that the data for several variables were not normally distributed. Therefore, the Mann–Whitney test provides a more reliable basis for comparison between the pre-pandemic and during-pandemic periods.

The analysis followed four steps: (1) Data collection and cleaning from the *Statistik Perbankan Syariah (SPS)* OJK reports (Jan 2018 – Apr 2023); (2) Descriptive statistics to summarize each variable; (3) Normality testing using Kolmogorov Smirnov tests, which confirmed non-normal data; and (4) Comparative analysis using the Mann Whitney U test to examine differences between the pre-pandemic (Jan 2018 – Feb 2020) and pandemic (Mar 2020 – Apr 2023) periods.

The hypotheses tested in this study are formulated as follows:

H_0 : There is no significant difference between variables (number of offices, number of human resources, *outstanding financing*, NPF) before and during Covid-19.

H_1 : There is a significant difference between a variable (number of offices, number of human resources, *outstanding financing*, NPF) before and during Covid-19

3. Result and Discussion

This section discusses descriptive data analysis, normality tests, and Mann-Whitney test statistics from research data. First, a classical assumption test was carried out, namely data normality using the *Kolmogorov Smirnov method*. If the data does not meet the normality assumption, then proceed with nonparametric comparative analysis on the variables number of offices, number of human resources, outstanding financing, and NPF.

3.1 Descriptive Analysis

Descriptive analysis is a statistical method that is very useful in explaining and summarizing data. This aims to provide a general overview of the observed data and help in understanding the basic characteristics of the research data held. In the context of this research, the variables studied include the number of offices, number of human resources (HR), *outstanding financing*, and *Non-Performing Financing (NPF)* in the Islamic banking sector. Descriptive analysis is used to provide an initial view of changes in these variables, which reflects the performance of the sharia banking sector in two different periods, namely before and during the Covid-19 pandemic in Indonesia.

Before further analysis is carried out, the first step is to summarize and describe the data. In this way, we can see the trends and changes that occur in each variable in the context of Islamic banking. This helps in identifying the impact that the Covid-19 pandemic has had on the sector. By understanding the basic characteristics of these data, we can take the next steps in more in-depth analysis such as hypothesis testing or statistical modeling.

3.1.1 Number of Offices

Below are presented the results of a descriptive analysis of the number of offices in Sharia Commercial Banks and Sharia Business Units before and during the Covid-19 pandemic in Indonesia.

Table 1. Descriptive Analysis Number of offices

Group		N	Mean	Std. Deviation
Number of Offices	Pre Covid 19	26	2,233.31	48.868
	During Covid 19	38	2,390.74	69.938

Table 1 provides a quite striking comparison between the average number of offices in the Islamic banking sector before and during the Covid-19 pandemic. Before the emergence of the pandemic, the average number of offices was 2,233.31, with a standard deviation of 48.868. This suggests that prior to the pandemic, the sector was experiencing stable and consistent levels of office numbers. The relatively low average, along with the low standard deviation, indicates little variation between individual figures in the pre Covid-19 office count data.

During the Covid-19 pandemic, there were quite significant changes in the number of offices variable. The average number of offices increased substantially to about 2,390.74, with a higher standard deviation of about 69.938. This significant average increase shows that during the pandemic, the sharia banking sector including Sharia Commercial Banks and Sharia Business Units experienced a clear expansion in the number of operating offices. A higher standard deviation indicates that there is more variation between the figures over this period indicating greater fluctuations in the number of offices.

This trend suggests that, despite economic pressures, Islamic banks demonstrated resilience and adaptability by expanding their service networks. The increase in branch numbers could reflect strategic efforts to maintain customer access and trust during uncertain times, consistent with the risk-sharing principles and social objectives of Islamic finance. It also indicates that the sector responded proactively to shifting financial needs, possibly through regional service expansion and integration of digital banking solutions to ensure operational continuity amid restrictions.

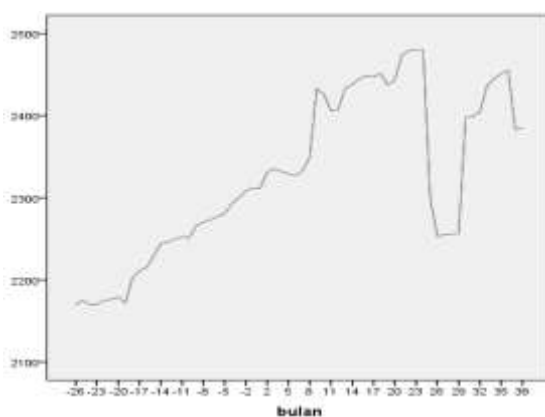


Figure 1. Number of offices before and during Covid-19

Figure 1 shows a graph of the movement of the number of offices in Sharia Commercial Banks and Sharia Business Units from 26 months before the first case of the Covid-19 pandemic in Indonesia to 38 months after the Covid-19 pandemic lasted. Initially, there was a significant growth trend in the number of offices before the Covid-19 pandemic hit. However, during the Covid-19 pandemic, data on the number of offices showed a quite striking fluctuating pattern.

In the 25th month of the Covid-19 pandemic, which falls in March 2022, there has been a drastic decline in the number of offices, with only 2,298 units remaining. A comparison with the previous month shows the closure of 182 offices. However, in the 30th month or August 2022, there was a striking recovery, with the number of offices increasing again to reach 2,398 units. This positive development appears to continue in the following months with the number of offices tending to continue to increase. Thus, Figure 1 provides an overview of the dynamics of the number of offices in the Sharia Commercial Bank and Sharia Business Unit sector during the Covid-19 pandemic, with a period of significant decline and strong recovery efforts.

3.1.2 Number of Human Resources (HR)

The results of the descriptive analysis on the variable number of human resources for Sharia Commercial Banks and Sharia Business Units can be seen in Table 2 below

	Group	N	Mean	Std. Deviation
Number of human resources	Pre Covid 19	26	55,195.27	988.380
	During Covid 19	38	55,566.00	1,652.879

Table 2 shows the results of descriptive analysis of the variable number of human resources in Sharia Commercial Banks and Sharia Business Units. This data provides a fairly clear view of changes in the number of human resources before and during the Covid-19 pandemic. Before the pandemic, the average number of human resources reached 55,195.27, with a standard deviation of around 988.380. These results indicate the level of consistency and stability in the number of human resources before the pandemic. The relatively low standard deviation indicates little variation between the numbers in the data on the number of human resources before Covid-19.

A significant increase occurred during the Covid-19 pandemic where the average number of human resources reached 55,566, with a higher standard deviation, namely around 1,652.879. This illustrates a striking change in the workforce structure of the Islamic banking sector during the pandemic. A higher standard deviation indicates greater variation in the number of human resources, which may reflect Islamic banking's efforts to face the challenges faced during the pandemic. Thus, this data indicates a significant increase in the number of human resources during the Covid-19 pandemic.

This increase in human resources suggests that Islamic banking institutions sought to strengthen operational resilience and maintain service quality during a period of high uncertainty. The expansion may also indicate greater emphasis on digital transformation, requiring new technical and managerial roles to support remote banking services. In line with Islamic finance's social and ethical orientation, maintaining and even increasing employment opportunities during the pandemic also reflects a commitment to economic stability and social responsibility.

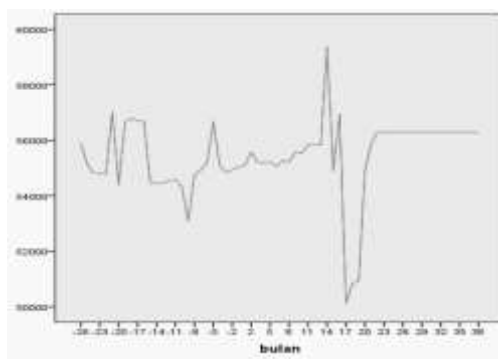


Figure 2 Number of human resources before and during Covid-19

Figure 2 reflects the movement of the number of human resources in the sharia banking sector during the period January 2018 to April 2023. This graph provides valuable insight into how the number of human resources in this sector has fluctuated, especially during the Covid-19 pandemic in Indonesia. It can be seen that before the Covid-19 pandemic (January 2018 to February 2020) it was fluctuating. The lowest point in the number of human resources occurred 9 months before the pandemic emerged, namely in June 2019 with the number of human resources reaching 53,089 people. This reflects the typical business dynamics in the banking sector, where the need for labor can vary from month to month.

Fluctuations appeared to be more extensive during the Covid-19 pandemic in Indonesia. In the 14th month, precisely in April 2021, there was a significant increase in the number of human resources, reaching 59,365 people. This illustrates the response of the sharia banking sector to changes in human resource needs during the pandemic. However, in the same period, in the 17th month, the number of human resources experienced a sharp decline, reaching 50,128 people. This reflects instability in the number of human resources during the pandemic, which can be caused by various external factors such as changes in demand for banking services or policies implemented by companies in dealing with changing situations.

This graph shows that the Islamic banking sector faced significant dynamics during the Covid-19 pandemic, with greater fluctuations in the number of human resources. The significant increase and decrease in the number of human resources during the pandemic reflects companies' efforts to manage their workforce in the face of an unstable situation.

3.1.3 Outstanding Financing

The results of the descriptive analysis on the *outstanding* financing variable for Sharia Commercial Banks and Sharia Business Units can be seen in Table 3. Outstanding financing is an important variable that reflects the total amount of financing that customers still have to pay to banks in the sharia banking sector. Table 3 provides an interesting picture of how this variable experienced significant changes in the period before and during the Covid-19 pandemic in Indonesia. The average outstanding financing before the pandemic was around 319,587.12 billion rupiah, with a standard deviation of 23,690.15. These results indicate variations in the amount

of financing that customers still have to pay to the bank. Before the pandemic, the Islamic banking sector seemed to experience a level of consistency in terms of outstanding financing.

Table 3. Descriptive Analysis of Financing Outstanding

	Group	N	Mean	Std. Deviation
Outstanding Financing	Pre Covid 19	26	319,587.1158	23,690.15374
	During Covid 19	38	416,850.2750	46,385.28706

Meanwhile, during the period during which the Covid-19 pandemic hit Indonesia, there was a significant change in the average outstanding financing at Sharia Commercial Banks and Sharia Business Units. This average increased drastically to around 416,850.28 billion rupiah, with a standard deviation the higher one is around 46,368.29. This shows that during the pandemic there was a very real increase in the total amount of financing that customers still had to pay to banks. In addition, this fairly large average increase shows significant changes in customer behavior and sharia banking business dynamics during this global health crisis.

This increase may indicate that Islamic banks played a more active role in providing financing to support affected businesses and individuals during the pandemic. It also suggests a possible expansion of financing portfolios as part of economic recovery efforts and government stimulus implementation. However, the higher variability implies growing risks and the need for more robust credit risk management in maintaining financial stability.

Figure 3 shows changes in outstanding financing in the sharia banking sector, both in Sharia Commercial Banks and Sharia Business Units. This data covers two main periods, namely before the emergence of the pandemic and during the Covid-19 pandemic. This comparison provides a deeper understanding of how the Islamic banking sector is responding to the emergence of this global health crisis.

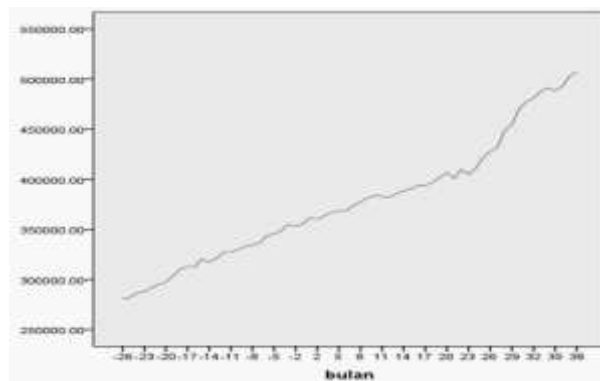


Figure 3 Outstanding financing before and during Covid-19

In the period before the pandemic, as seen in January 2018 (26 months before the emergence of Covid-19), the lowest outstanding financing value was 280,631.44 billion rupiah. Meanwhile, the highest outstanding financing value was achieved in February 2020 with a figure of around 355,297.97 billion rupiah. These fluctuations reflect common business dynamics in the banking sector where customers' financing and payment needs can change from month to month.

The period during the pandemic shows that the data is also experiencing an upward trend like before the Covid-19 pandemic. In this period, the lowest value was obtained during the month when Covid-19 occurred, precisely April 2020, with a value of 382,112.63 billion rupiah. Meanwhile, the highest value was reached in the last month where Covid-19 was declared over (April 2023) amounting to 507,087.58 billion rupiah. The consistent increase during the pandemic illustrates the efforts of the sharia banking sector to provide additional financing and manage its customers during the unstable economic conditions resulting from the pandemic.

3.1.4. Non Forming Finance (NPF)

Table 4 presents the results of descriptive analysis for the *Non-Performing Financing* (NPF) variable in Sharia Commercial Banks and Sharia Business Units before and during the Covid-19 pandemic. The NPF refers to the amount of financing that is not repaid according to the payment schedule. The analysis results in Table 4 provide an overview of how NPF in the Islamic banking sector developed during two different periods, namely before and during the Covid-19 pandemic. Before the emergence of the pandemic, the average NPF was around 10738.99 billion rupiah, with a standard deviation of around 795.96. This data reflects the level of consistency in

the amount of financing that is not repaid according to the payment schedule in this sector. Meanwhile, the relatively low standard deviation indicates little variance between monthly figures, indicating stability in business conditions before the pandemic.

Table 4. NPF Descriptive Analysis

	Group	N	Mean	Std. Deviation
NPF	Pre Covid 19	26	10738.9888	795.96040
	During Covid 19	38	11798.2487	566.64996

The period during the Covid-19 pandemic saw an increase in the average NPF to around 11798.25 billion rupiah, with a standard deviation of around 566.65. It was calculated that the difference in the average increase in NPF between before and during Covid-19 reached 1059.26 billion rupiah. Even though the increase is not drastic, this change indicates a real impact on the performance of the sharia banking sector. Thus, relatively speaking, it can be said that there has been a significant increase because it indicates a significant change in the level of financing arrears.

The moderate but consistent rise in NPF during the pandemic suggests that Islamic banks faced growing credit risks as many customers experienced financial distress. This condition highlights the importance of effective risk mitigation and restructuring policies implemented by Islamic banks to maintain portfolio quality while still upholding sharia principles of fairness and mutual assistance.

Next, Figure 4 visualizes changes in the value of Non-Performing Financing (NPF) before and during the Covid-19 period in Sharia Commercial Banks and Sharia Business Units. It can be seen that before the emergence of the pandemic, there was a downward trend in the NPF value from January 2018 to December 2018 and reached its lowest point at 9130.90 billion rupiah. However, after that, this period was followed by a significant increase, with the NPF value reaching a peak in January 2020 of 11625.42 billion rupiah. As such, this period reflects fluctuations in business conditions prior to the pandemic, with factors such as financing payments and customers' financial situations contributing to these changes.

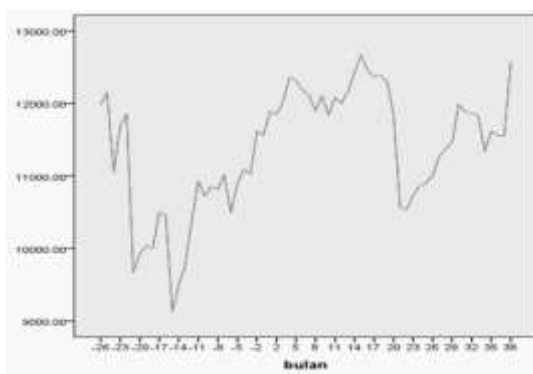


Figure 4. NPF before and during Covid-19

During the Covid-19 pandemic, the graph shows more significant fluctuations in the NPF value. The NPF value tended to increase at the beginning of the pandemic until it reached its largest value in that period of 12670.43 billion rupiah in the 15th month of the pandemic, namely May 2021. However, after reaching this peak, there was a significant decline until December 2021, the NPF value reached 10540.05 billion rupiah. This shows that at the start of the Covid pandemic, economic conditions became unstable where several businesses were forced to stop operations or face a significant decline in income.

3.2 Normality Test

The normality test is a critical step in statistical research which aims to assess whether the data collected has a distribution that follows a normal distribution or not. The results of this normality test influence the selection of the appropriate type of statistical analysis in research. If the data has a distribution that is close to normal, then the parametric approach in comparative analysis is the independent sample t-test. However, on the contrary, if the data does not meet the assumption of normality, a non-parametric statistical approach, namely the Mann-Whitney test, is used as an alternative.

Normality testing in this research was carried out using the two independent sample Kolmogorov Smirnov test on each variable investigated. Data is said to be normally distributed if the significance value obtained is greater than 0.05. On the other hand, data is said to not meet the normal distribution assumption if the significance value is greater than 0.05.

Table 5. Normality Test

		Number of offices	Number of Human Resources	Financing	NPF
Most Extreme Differences	Absolute	.842	.547	1.000	.611
	Positive	.000	.178	.000	.000
	Negative	-.842	-.547	-1.000	-.611
Kolmogorov-Smirnov Z		3.309	2.147	3.929	2.402
Asymp. Sig. (2-tailed)		.000	.000	.000	.000

Table 5 shows the SPSS output results where the Asymp value is obtained. Sig (2-tailed) on the variables number of offices, number of human resources, outstanding financing, and NPF is 0.000, which is less than 0.05. Thus, these four variables did not meet the assumption of data normality so they continued with nonparametric statistical testing.

3.3 Hypothesis Testing

Hypothesis testing in this study used the Mann Whitney test because the results of the previous normality test showed that all research variables did not follow a normal distribution. The Mann Whitney test is a non-parametric statistic used to compare two independent groups in terms of data distribution that does not follow a normal distribution. The criteria for drawing conclusions in this test are if the significance value is less than 0.05 then H_0 it is rejected or H_1 accepted. Vice versa, if the significance value is greater than 0.05 then H_0 it is accepted.

The Mann Whitney test tests whether there are significant differences in each variable (number of offices, number of human resources, outstanding financing, NPF) between before and during the Covid-19 pandemic in Indonesia.

Table 6. Mann-Whitney Test

	Number of offices	Number of Human Resources	Financing	NPF
Mann-Whitney U	40.000	309.000	.000	144.000
Wilcoxon W	391.000	660.000	351.000	495.000
Z	-6.207	-2.553	-6.753	-4.784
Asymp. Sig. (2-tailed)	.000	.011	.000	.000

Table 6 shows the results of the Mann-Whitney test on the variables number of offices, number of human resources, outstanding financing, and NPF which each obtained a significance value of 0.000; 0.011; 0.000 and 0.000. The overall significance value of these variables is less than 0.05 so reject H_0 for all these variables. This means that there are significant differences in the variables of number of offices, number of human resources, outstanding financing, and NPF before and during Covid-19.

Changes in the number of offices before and during Covid-19 experienced significant differences, reflecting a strategic response from the sharia banking sector. This finding is in accordance with the results of the descriptive analysis in Table 1 which shows an increase in the average number of offices during the Covid-19 pandemic in Indonesia. This is an interesting finding where the number of offices can reflect adaptation to changes in customer behavior during the pandemic.

The significant increase in the number of offices also has an impact on increasing the human resources needed to manage and run these new offices. This response includes expanding the office network to reach more customers or cover a wider area, thus requiring additional human resources to support larger operations. Thus, this is the strategy and business of sharia commercial banks and sharia business units to remain relevant and competitive despite the turmoil of the Covid-19 pandemic.

Meanwhile, the Outstanding financing variable also shows a significant difference between the period before and during Covid-19. This indicates a change in demand for financing during the pandemic. The Covid-19 pandemic has had various economic impacts, including decreased business activity, reduced income, and financial difficulties for individuals and companies. The increase in *outstanding* financing reflects efforts to help overcome financial difficulties arising from the pandemic. Through providing more financing, Islamic banks can help individuals and businesses meet their liquidity needs, maintain business continuity, or even support investments that may be needed to deal with changing economic conditions.

Furthermore, in the NPF variable there are also significant differences between the two periods which illustrate the increase in credit risk during the pandemic. As a result of the pandemic, customers experienced difficulties in repaying their financing, which affected the quality of bank assets. Meanwhile, large financing problems will cause the bank to experience losses and the bank's health level will deteriorate so that the level of public trust will decrease. This problematic financing will have a negative impact on the profitability of Islamic

banks, namely causing a decrease in the profits of Islamic banks. This is reinforced by research results which state that problematic financing has a significant effect on the profitability of Islamic banks in a negative relationship, meaning that the greater the level of problematic financing of Islamic banks, the smaller the level of profitability, conversely the smaller the level of problematic financing, the higher the level of profitability of Islamic banks. the greater it is. One way to resolve problematic financing is through billing, restructuring or subpoenas and *writing off* books (Damayanti, 2020). This is a significant challenge for sharia commercial banks and sharia business units in managing credit risk properly. Thus, the Covid-19 pandemic has forced Islamic banking to adapt quickly to changes in economic conditions and customer behavior.

4. Conclusion

The Mann Whitney test on all research variables shows that there are significant differences between the period before and during the Covid-19 pandemic in the sharia banking sector. The variables number of offices, number of human resources, *outstanding* financing, and NPF all experienced significant changes during the pandemic. These results indicate that the sharia banking sector has responded strategically to the economic situation and customer behavior, adapting itself to the significant changes that occurred during the pandemic. The implication of these findings is the importance of appropriate adjustments and planning in dealing with fluctuating economic situations, especially in the Islamic banking sector. This research is expected to provide valuable insight into the adaptation of the Islamic banking sector in facing the pandemic, as well as the importance of better risk management in managing business growth and credit risk. Meanwhile, further research can be carried out by monitoring developments in the sharia banking sector and conducting further studies regarding more effective risk management in dealing with ongoing economic uncertainty.

Future research can extend this study by incorporating longer time-series data, analyzing other financial indicators such as profitability or liquidity ratios, or applying panel data approaches to capture institutional-level variations more comprehensively

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