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Evaluating the Financial Performance of Indonesian Fintech Lending Firms During and Post COVID-19

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A B S T R A C T

The COVID-19 pandemic has disrupted the world economy. Technological developments in the financial sector make it easier for everyone to carry out activities and transactions. Fintech lending is one of the fintech in great demand since the COVID-19 pandemic, where people can apply for credit other than through banking. Fintech lending distribution has increased since the pandemic and has affected the financial performance of fintech lending companies. This research aims to analyze whether there are changes and differences in the financial performance of fintech lending companies during and after the pandemic. The research object is a fintech lending company registered with Indonesia's Financial Services Authority (OJK). This research uses a data analysis tool in the form of SPSS version 26. The results of this research show that the performance of fintech lending companies shows that there have been changed in terms of liquidity, solvency, activity, and profitability during and after the pandemic. The analysis results on the current ratio, fixed asset turnover ratio, total debt to total assets ratio, and bad debt ratio show differences in performance during and after the COVID-19 pandemic. Meanwhile, the cash ratio, receivables turnover ratio, average receivables turnover period, ROA, and ROE show no difference in the financial performance of fintech lending companies during and after the COVID-19 pandemic.

KATA KUNCI

Fintech Lending, Pandemi COVID-19, Kinerja Keuangan, Otoritas Jasa Keuangan, Uji Beda

A B S T R A K

Krisis pandemi COVID-19 telah mengganggu perekonomian dunia. Perkembangan teknologi di sektor keuangan memudahkan setiap orang untuk melakukan aktivitas dan transaksi. *Fintech lending* merupakan salah satu *fintech* yang banyak diminati sejak pandemi COVID-19, di mana masyarakat dapat mengajukan kredit selain melalui perbankan. Distribusi *fintech lending* telah meningkat sejak pandemi dan telah mempengaruhi kinerja keuangan perusahaan *fintech lending*. Penelitian ini bertujuan untuk menganalisis apakah ada perubahan dan perbedaan kinerja keuangan perusahaan *fintech lending* selama dan setelah pandemi. Objek penelitian adalah perusahaan *fintech lending* yang terdaftar di Otoritas Jasa Keuangan (OJK) Indonesia. Penelitian ini menggunakan alat analisis data berupa SPSS versi 26. Hasil penelitian ini menunjukkan bahwa kinerja perusahaan *fintech lending* menunjukkan bahwa telah terjadi perubahan kinerja likuiditas, solvabilitas, aktivitas, dan profitabilitas selama dan setelah pandemi. Hasil analisis rasio lancar, rasio perputaran aset tetap, rasio total utang terhadap total aset dan rasio utang macet menunjukkan perbedaan kinerja selama dan setelah pandemi COVID-19. Sementara itu, rasio kas, rasio perputaran piutang, periode perputaran piutang rata-rata, ROA, dan ROE tidak menunjukkan perbedaan kinerja keuangan perusahaan *fintech lending* selama dan setelah pandemi COVID-19.

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1. Introduction

One of the biggest crises in the world was the COVID-19 pandemic, which occurred from 2020 to early 2023. As a result, the COVID-19 pandemic developed into a real global crisis, directly impacting almost every location. It is undeniable that the COVID-19 crisis has disrupted the global economy. One of the impacts is the development of digital finance and financial technology (fintech) as a response to the economic shock [1]. The COVID-19 pandemic altered many sectors' business models [2]. Although it cannot be denied that there are still human resource difficulties in the quickly developing financial technology industry [3]. One of the developments in the fintech industry is the emergence of fintech lending companies. According to data from the official website of the Financial Services Authority (OJK), as of August 2023, there are 101 companies offering fintech lending, comprising 94 conventional providers and seven Shariah providers.

Fintech is an industry comprising diversified companies that combine financial services with innovative technologies offered to financial service providers. Fintech has several advantages over conventional banks. Fintech Lending/provides financial services to bring

together lenders and borrowers to carry out lending and borrowing agreements in rupiah currency directly through an electronic system. Fintech lending is also known as Technology-Based Money Lending and Borrowing Services. Fintech lending is one of the fintechs in great demand since the COVID-19 pandemic, where people can apply for credit other than through banking. Fintech promises to shape the financial industry by cutting costs, improving the quality of financial services, and creating a more diverse and stable financial landscape. Fintech also creates a new paradigm in which information technology is a significant driving force that gives rise to innovation [4]. The distribution of fintech lending loans continues to increase yearly, as seen in Figure 1. From 2021 to 2022, the distribution of fintech lending loans continues to increase both on Java and outside Java. This indicates that many people are interested in fintech peer-to-peer lending.

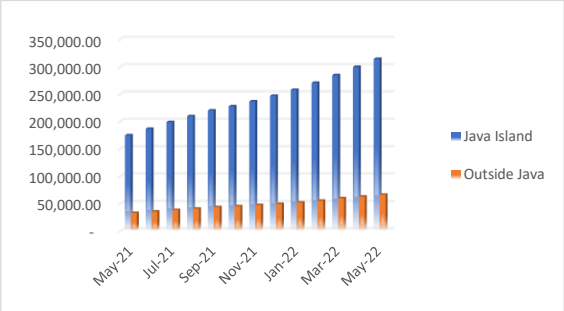

Figure 1. Accumulated Distribution of Fintech Lending

The term "fintech" is derived from "financial technology." Fintech is described as "innovation in financial services," which is an invention in the financial sector with a dash of contemporary technology, by the National Digital Research Centre (NDRC) in Dublin, Ireland. Financial transactions through fintech include payments, investments, borrowing money, transfers, financial plans, and comparing financial products [5].

Fintech comes from "Financial" and "Technology," broadly defined as technological innovation in financial services. According to Bank Indonesia Financial Technology, FinTech combines financial services and technology, making conventional business models more moderate. Information technology-based money lending and borrowing services state that technology-based money lending and borrowing services, or peer-to-peer lending, provide financial services that bring together lenders and borrowers through an electronic system using the internet to carry out loan and borrowing agreements [6].

Financial performance is the result or achievement that has been achieved by company management in managing company assets effectively during a specific period [7]. Financial performance includes liquidity ratios, which can be measured by the liquidity ratio, which shows the company to fulfill its current obligations. Activities analyze the company's effectiveness and efficiency in using its assets. Solvency is a ratio used to measure the extent to which a company can fulfill its total obligations. Profitability shows the company's ability to earn profits [8].

The COVID-19 pandemic has impacted economic activity around the world. Uncertainty in terms of magnitude and duration resulted in the collapse of economic activity in various countries. The impact of the ongoing COVID-19 pandemic could result in a recession in most world economies. The world economy experienced a quite sharp recession, ranging between 4.4%-5.2%. The pandemic has put pressure on economic and social conditions in the world, including Indonesia [9]. Research conducted shows that during the COVID-19 pandemic, the performance of financial technology lending companies has increased, even though loan growth was still below before the COVID-19 pandemic occurred in Indonesia [10]. In the second quarter of 2020, fintech lending loan growth decreased compared to the previous quarter. However, in the third and fourth quarters of 2020, fintech lending began to grow significantly.

Fintech was considered more competitive than traditional banking systems during the COVID-19 crisis. Fintech lending, as one of the services provided by fintech, has become an alternative for lending during the COVID-19 pandemic. Increasing the number of financing distributions through fintech lending services during the COVID-19 pandemic can strengthen the intermediary role of financial institutions [1]. For bad credit represented by TWP90 before and during the COVID-19 pandemic, based on the paired sample test, it is known that there are differences [11]. During the pandemic, TWP90 tends to be higher; however, the current credit category still dominates at above 90%. High TWP90 levels can affect solvency ratios.

There are previous studies that analyze the financial performance of the companies impacted by the COVID-19 pandemic. The study's findings show that the profitability of Fintech companies with female CEOs was not substantially different from that of companies with male CEOs when the average age of the company's board members is relatively low [10]. Other research shows that bad credit, represented by TWP90 in fintech lending companies before and during the COVID-19 pandemic, based on the paired sample test, is known to have differences [11]. Other research using default rate 90 or TWP 90 data shows that fintech's performance before and during the pandemic is different. During the pandemic, the 90-day Wan Achievement Rate of fintech lending trended higher than before the pandemic [12].

Previous research assessing the performance of fintech lending emphasized only solvency performance. This research analyzes the fintech lending company's performance, especially on profitability, liquidity, solvency, and activity. The financial performance of fintech lending companies can be analyzed through the

financial reports [13]. Ratio analysis is a measuring tool used to analyze financial reports. This research analyzed the changes in the financial performance of fintech lending companies through time series analysis and conducted different tests during and after the COVID-19 pandemic.

2. Research Method

This research uses a quantitative approach, with the research object being fintech lending companies in Indonesia. The type of data in this research is secondary data for the 2021-2023 period. This research uses a population in Indonesia's fintech lending industry. The sampling technique used in this research uses a purposive sampling method with the criteria [14]. The company studied is a fintech lending company registered with the Financial Services Authority (OJK) for the 2021-2023 period.

The data collection technique uses documentation, where the data used is taken from the official website of the Financial Services Authority (OJK). This study uses accumulated data from fintech companies' peer-to-peer lending. Table 1 refers to the number of Fintech Peer to Peer Lending companies that have been registered with the OJK during and after the pandemic. The data used is monthly during and after the pandemic. There are 13 months during and 13 months after the pandemic.

Table 1. List of Sample Peer-to-Peer Lending Fintech Companies that have been Registered in the OJK

Criteria	2021	2022	2023
A peer-to-peer lending fintech *company* that has been registered with the Financial Services Authority (OJK)	103	102	101

2.1. Operational Definition of Variables

In this research, the following financial ratios are used that can be shown on Table 2.

Table 2. Financial Ratios [15], [16]

Variable	Details	Equation
Liquidity, a ratio that measures a company's ability to meet its short-term obligations	The liquidity ratios used are the current ratio and cash ratio	Current ratio = Current Assets/Current Liabilities Cash Ratio = (Cash + Cash Equivalent)/Current Liability
Activity, financial ratios that measure how efficiently a company uses its assets to generate sales or revenue.	The activity ratios used are the Fixed Assets Turnover Ratio, the Receivable Turnover (RTO), and the Average Collection Period of Receivable (ACP)	FAT = Sales/Net Fixed Assets RTO = Credit Sales/Average Receivable ACP = (360 X Total Receivable)/Credit Sales
Solvency, the capability of P2P lending to fulfil the liability	The solvency ratios used are the ratio of total debt to total assets (debt ratio) and the ratio of bad debt (bad debt ratio)	DAR = Total Debt/Total Assets BDR = Bad Debt/Total Receivable
Profitability, the capability of P2P lending get the profit	The profitability ratios used are ROA (Return On Assets) and ROE (Return On Equity)	ROA = Net Income/Total Assets ROE = Net Income/Common Equity

2.2. Data Analysis Technique

In this research, the technical data analysis used is as follows:

a. Descriptive Analysis. Descriptive statistics are used as a tool to analyze and present quantitative data that aims to provide an overview of the companies for which researchers use samples [17].

b. Hypothesis testing

There have been changes in financial performance in fintech lending companies during and after the COVID-19 pandemic. To find out whether there has been a change in the financial performance of fintech lending companies before and after the COVID-19 pandemic, use common-size balance sheet and profit and loss analysis techniques, time series analysis, and percentage change analysis. These analyses present the financial performance of fintech lending companies on a monthly basis to identify changes in their financial performance.

c. There are differences in the financial performance of fintech lending companies during and after the COVID-19 pandemic. Testing whether there are differences in the financial performance of fintech lending companies during and after the COVID-19 pandemic uses the Wilcoxon analysis technique.

3. Result and Discussion

3.1. Descriptive Analysis

An overview of the data can be obtained using descriptive statistical analysis, using the mean, standard deviation, minimum, and maximum values, which can be seen on Table 3. Information about the use of variables in research is provided by descriptive statistical analysis. The SPSS version 26 program was utilized to process this data. Table 3 shows statistical descriptions. It can be seen that financial ratios have increased or even decreased on average during and after the pandemic. The ratios that have increased on average after the pandemic are the fixed asset turnover ratio, receivables turnover ratio, total debt to total assets ratio, and bad debt ratio. The current ratio, cash ratio, average

receivables turnover period, ROA, and ROE experienced an average decrease after the pandemic. The following is a graph of loan distribution before and during the COVID-19 pandemic.

Table 3. Descriptive Statistics [17]

Variables	Measurements	Time	N	Minimum	Maximum	Mean	Deviation St
Liquidity Ratio	Current ratio	During the Pandemic	13	1.9350	2.3399	2.0960	0.1263
		After the Pandemic	13	1.4248	2.0698	1.7322	0.2336
	Cash Ratio	During the Pandemic	13	0.8221	1.0572	0.9134	0.0719
		After the Pandemic	13	0.6546	0.9980	0.8414	0.1219
Activity Ratio	Fixed Asset Turnover Ratio	During the Pandemic	13	6.2186	12.1334	8.8922	2.1742
		After the Pandemic	13	10.5375	13.1314	12.0078	0.9412
	Receivables turnover ratio	During the Pandemic	13	9,1965	9.9036	9.5867	0.2154
		After the Pandemic	13	9.0306	12.1531	10.4699	1.1853
	Avg receivables collection period	During the Pandemic	13	36.3505	39.1454	37.5697	0.8454
		After the Pandemic	13	29.6221	39.8643	34.7896	3.8872
Solvency Ratio	The total debt to total assets	During the Pandemic	13	0.3895	0.4419	0.4198	0.0166
		After the Pandemic	13	0.4166	0.5474	0.4780	0.0470
	Debt ratio	During the Pandemic	13	0.0153	0.0252	0.0208	0.0033
		After the Pandemic	13	0.0253	0.0336	0.0288	0.0024
Profitability Ratio	ROA	During the Pandemic	13	-0.0229	0.0639	0.0189	0.0307
		After the Pandemic	13	-0.0354	0.0660	0.0034	0.0362
	ROE	During the Pandemic	13	-0.0392	0.1085	0.0319	0.0519
		After the Pandemic	13	-0.0662	0.1348	0.0110	0.0709

In general, the concentration of fintech lending during the COVID-19 pandemic was higher in Java than outside Java. The Figure 2 shows the graph of the loan distribution in the final position after the COVID-19 pandemic.

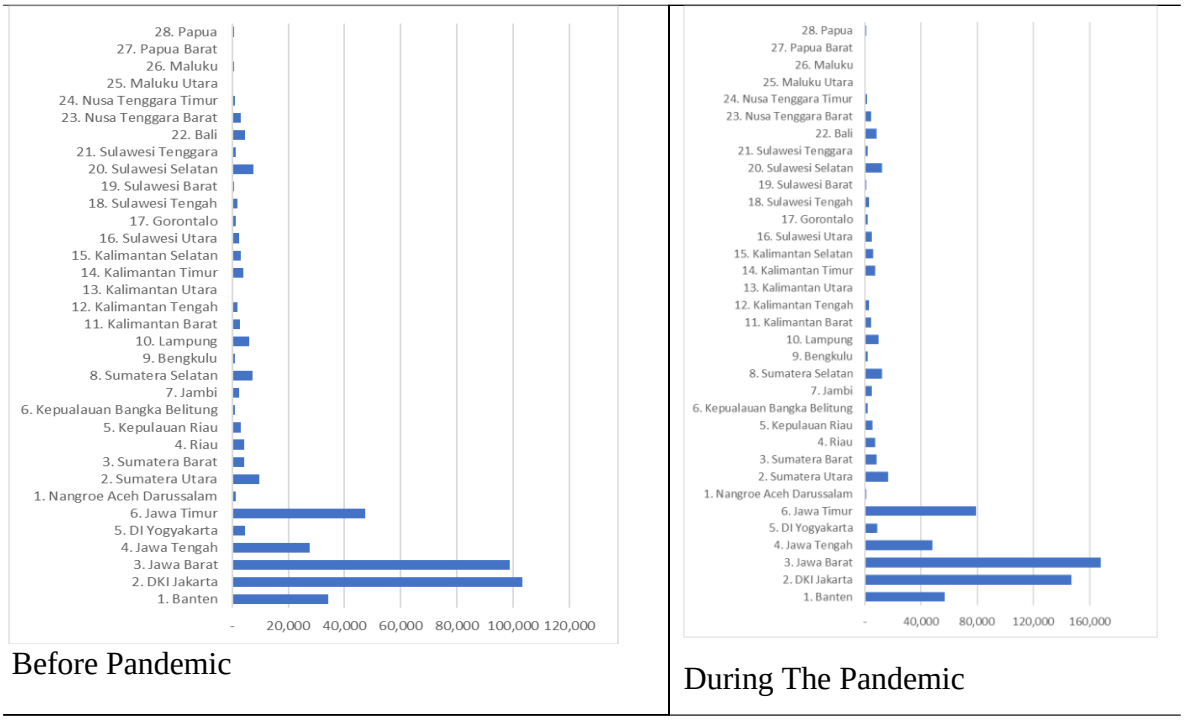

Figure 2. Distribution of Loans During and Post the COVID-19 Pandemic

3.2. Time Series Analysis

Based on the graph on Figure 3, during the pandemic, the current ratio increased month by month, whereas after the pandemic, it decreased. The cash ratio increased month by month during the pandemic, whereas it decreased after the pandemic. During the pandemic, the fixed asset turnover ratio continued to increase from month to month, whereas after the pandemic, it decreased. During the pandemic, the receivables turnover ratio experienced a stable situation from month to month. It started to decline in the 10th month, whereas after the pandemic, it increased. During the pandemic, the receivables turnover ratio experienced a stable situation from month to month and started to decline in the 10th month, whereas, after the pandemic, it increased. The average receivable turnover experienced a stable condition from month to month during the pandemic. It began to experience a slight increase in the ninth month. In contrast, after the

pandemic, it experienced a decline in the ratio of total debt to total assets.

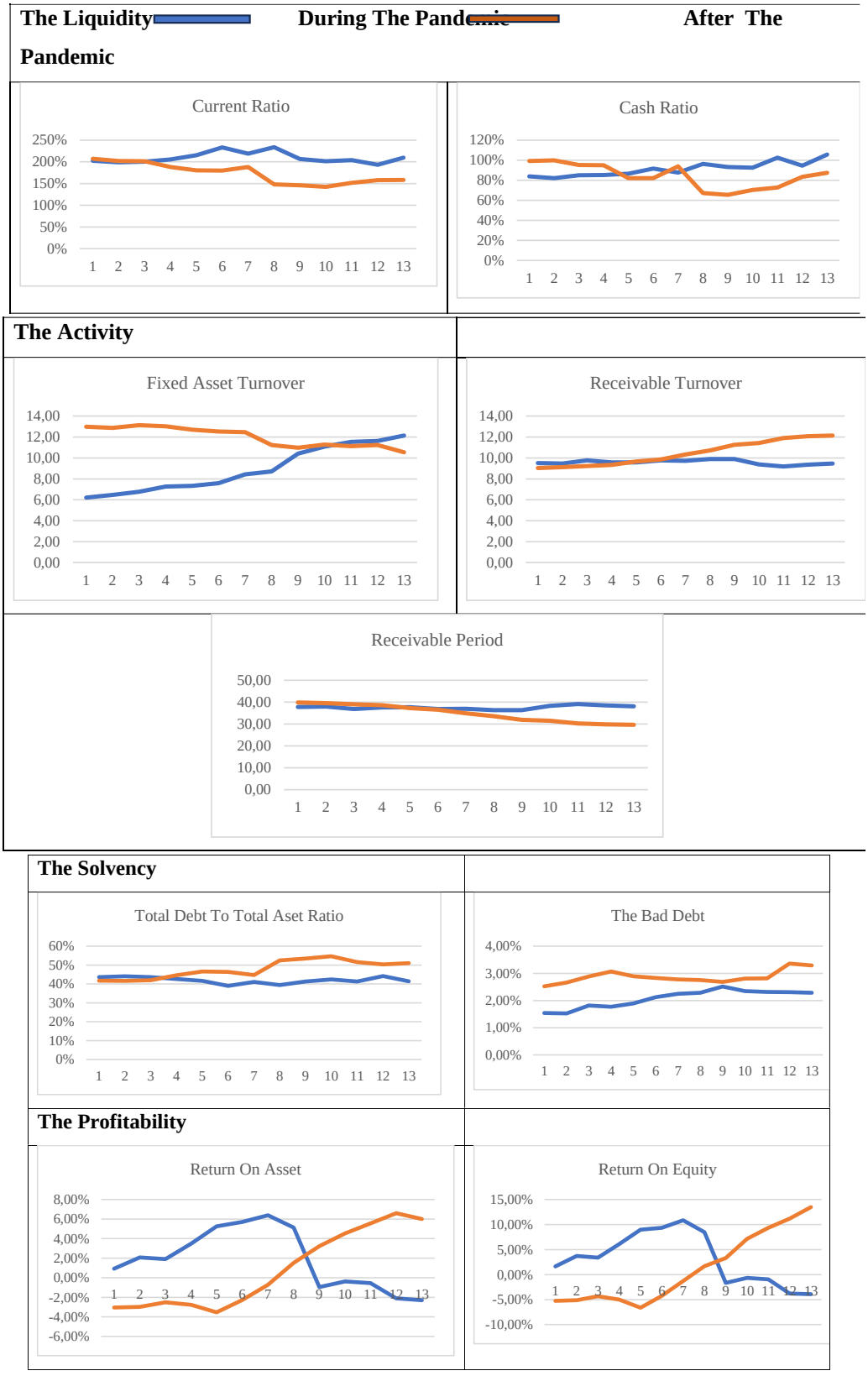

Figure 3. Time Series Performance Analysis During and Post the COVID-19 Pandemic

Based on the graph, during the pandemic, the ratio of total debt to total assets was stable monthly, whereas after the pandemic, it increased. The ratio of bad debts increased from month to month during the pandemic. In contrast, after the pandemic, it experienced a higher increase than during the pandemic. ROA experienced a reasonably high increase during the pandemic. In the eighth month, it started to decline until the end of the pandemic period. In contrast, after the pandemic, it experienced a quite significant increase. During the pandemic, ROE experienced a reasonably high increase, and in the eighth month, it started to decline until the end of the pandemic period, whereas after the pandemic, it experienced a quite significant increase.

3.3. Difference Analysis

In this study, only 13 data points were used, of which there were fewer than 30. It was said that the data was not normally distributed, so the Wilcoxon test was used. The tools used for processing this data were the SPSS version 26 application program.

3.4. The Discussion

3.4.1. The Liquidity

Based on the results of the Wilcoxon difference test in Tables 4 and 5 show that the cash ratio, average receivables collection period, Return on Assets, and Return on Equity show no difference in performance during and after the COVID-19 pandemic. Meanwhile, what shows differences in performance during and after the pandemic, Current Ratio, Fixed Asset Turnover, Receivable Turnover, Debt to Total Asset Ratio Bad Debt show differences in performance during and after the COVID-19 pandemic.

3.4.2. Current Ratio

Current Ratio show the liquidity performance [16]. Based on the Wilcoxon difference test on Table 4 and 5, on the current ratio shows that the financial performance of the current ratio during the pandemic and after the pandemic has a statistically significant difference. The average during the pandemic is higher than after the pandemic. During the pandemic, fintech lending companies still maintained their liquidity so that they still kept their current ratio high, and after the pandemic, when people started to carry out economic activities, fintech lending companies started to expand their business, thereby reducing the current ratio slightly. These results are supported by study, which states that there are differences in the financial performance of the current ratio during and after the COVID-19 pandemic [18], [19], [20]. There is no difference in cash ratio financial performance during and after the COVID-19 pandemic.

Table 4. Wilcoxon test

		N	Mean Rank	Sum of Ranks
Current Ratio (After Pandemic) - Current Ratio (During Pandemic)	Negative Ranks	10a	8.50	85.00
	Positive Ranks	3b	2.00	6.00
	Ties	0c		
	Total	13		
Cash Ratio (After Pandemic) - Cash Ratio (During Pandemic)	Negative Ranks	8d	8.13	65.00
	Positive Ranks	5e	5.20	26.00
	Ties	0f		
	Total	13		
Fixed asset Turnover Ratio (After the pandemic) - Fixed asset Turnover Ratio (During the pandemic)	Negative Ranks	3g	3.33	10.00
	Positive Ranks	Ten h	8.10	81.00
	Ties	0i		
	Total	13		
Receivables turnover ratio (After the pandemic) - Receivables turnover ratio (During the pandemic)	Negative Ranks	Four h	4.50	18.00
	Positive Ranks	9k	8.11	73.00
	Ties	0l		
	Total	13		
Average collection period of receivables (After the pandemic) - Average collection period of receivables (During the pandemic)	Negative Ranks	9m	8.00	72.00
	Positive Ranks	4n	4.75	19.00
	Ties	0o		
	Total	13		
The ratio of total debt to total assets (After the Pandemic) - The ratio of total debt to total assets (During the Pandemic)	Negative Ranks	3p	2.33	7.00
	Positive Ranks	10q	8.40	84.00
	Ties	0r		
	Total	13		
Uncollectible debt ratio (After the pandemic) - Uncollectible debt ratio (During the pandemic)	Negative Ranks	0s	.00	.00
	Positive Ranks	13t	7.00	91.00
	Ties	0u		
	Total	13		
ROA (After the Pandemic) - ROA (During the Pandemic)	Negative Ranks	8v	7.25	58.00
	Positive Ranks	5w	6.60	33.00
	Ties	0x		
	Total	13		
ROE (After the Pandemic) - ROE (During the Pandemic)	Negative Ranks	8y	6.75	54.00
	Positive Ranks	5z	7.40	37.00
	Ties	0aa		
	Total	13		

Table 5. Wilcoxon Statistical Difference Test Results (During and After Pandemic)

	CR	Cash Ratio	FA Turnover	Receivable Turnover	Average Collection Receivable Period	DAR	Bad Debt Ratio	ROA	ROE
Z	-2,760b	-1.363b	-2.481c	-1.922c	-1.852b	-2.691c	-3.181c	-.874b	-.594b
Asymp. Sig. (2-tailed)	,006	.173	.013	,055	,064	,007	,001	,382	,552

Wilcoxon Signed Ranks Test; b. Based on positive ranks; c. Based on negative ranks

3.4.3. Cash Ratio

Based on the Wilcoxon difference test on the cash ratio shows that there is no statistically significant difference in the financial performance of the cash ratio during the pandemic and after the pandemic. This shows that fintech lending companies can maintain the payment of their current obligations using the cash and cash equivalents they have; even though they have experienced a slight decline, fintech lending companies can still maintain their condition so that they remain liquid and operate without any differences. These results are supported by a study which states that there is no difference in cash ratio financial performance during and after the COVID-19 pandemic activity [21].

3.4.4. Fixed Asset Turnover Ratio

Efficiency and effectiveness of asset investment also refer to the financial performance [22]. The Wilcoxon difference test on the fixed asset turnover ratio shows that the financial performance of the fixed asset turnover ratio during the pandemic and after the pandemic has a statistically significant difference. The average has increased since the pandemic. During the pandemic, fintech lending companies still held back credit spending because economic activity was still limited due to PPKM. After the pandemic, when people started to be able to move around, and the economy started to recover, fintech lending companies started expanding their business by distributing credit. This means that the average has increased since the pandemic. These results are supported by study which states that there are differences in the financial performance of the fixed asset turnover ratio during and after the COVID-19 pandemic [23].

3.4.5. Receivables Turnover Ratio

Based on the Wilcoxon difference test on the receivables turnover ratio, it shows that there is no statistical difference in the financial performance of the receivables turnover ratio during and after the pandemic. The average receivables turnover ratio after the pandemic is higher than during. During the pandemic, fintech lending companies started distributing loans, and after the pandemic, fintech lending companies also distributed loans with higher interest. So, there was an increase after the pandemic, although it was not significantly different. These results are supported by studies which states that there is no difference in the financial performance of the receivables turnover ratio during and after the COVID-19 pandemic [24], [25].

3.4.6. Average Receivables Turnover Period

Based on the Wilcoxon difference test in the average receivables turnover period, it shows that the financial performance of the average receivables turnover period during and after the pandemic did not have a statistically significant difference. On average, receivables turnover after the pandemic has become faster. During the pandemic, the average receivables turnover period was maintained at around 37 days, and after the pandemic, when community activities returned to normal, the average receivables turnover period became slightly faster. These results are supported by study which states that there is no difference in the financial performance of the receivables turnover ratio during and after the COVID-19 pandemic [26].

3.4.7. Solvency

The ratio of Total Debt to Total Assets. Based on the Wilcoxon difference test on the ratio of total debt to total assets, the results indicate that the financial performance of this ratio during and after the pandemic exhibits a statistically significant difference. The average debt-to-total assets ratio increased after the pandemic. After the pandemic, fintech lending companies increased their debt but still focused the debt on increasing assets. These results are supported by studies which states that there are differences in financial performance in the ratio of total debt to total assets during and after the COVID-19 pandemic [20], [27].

3.4.8. Bad Debt Ratio

Based on the Wilcoxon difference test on the bad debt ratio shows that there is a statistically significant difference in the financial performance of the bad debt ratio during the pandemic and after the pandemic. After the pandemic, the average bad debt ratio increased compared to during the pandemic. In this case, the pandemic impacts society, namely, the decline of the community's economy. Unstable working conditions after the pandemic have meant that people have not been able to recover economically and have caused people not to be able to pay loans straight away, thus increasing the credit risk for peer-to-peer lending fintech companies. This is reflected in the increase in TWP90 figures in peer-to-peer lending fintech companies after the pandemic. These results are supported by studies which states that there are differences in the financial performance of the bad debt ratio during and after the COVID-19 pandemic [11], [28].

3.4.9. Profitability

Return On Asset Ratio. Based on the Wilcoxon difference test on ROA shows that there is no statistically significant difference in ROA's financial performance during the pandemic and after the pandemic. The average after the pandemic has decreased compared to during the pandemic. This is due to increased credit risk due to the increase in the TWP90 figure. This causes the profits of fintech lending companies to decline even though there is no statistical difference. These results are supported by studies which states that there is no difference in ROA's financial performance during and after the COVID-19 pandemic [20], [29], [30].

Based on the Wilcoxon difference test on ROE shows that there is no difference in ROE's financial performance during the pandemic and after the pandemic. The average after the pandemic has decreased compared to during the pandemic. This is due to increased credit risk due to the increase in the TWP90 figure. This causes the profits of fintech lending companies to decline even though there is no statistical difference. These results are supported by studies which states that there is no difference in ROA's financial performance during and after the COVID-19 pandemic [20], [29].

4. Conclusion

There are changes in the financial performance of fintech lending companies based on common size, time series, and percentage change in the following ratios: current ratio, cash ratio, fixed asset turnover ratio, receivables turnover ratio, average receivables turnover period, the ratio of total debt to total assets, bad debt ratio, ROA, and ROE. There are differences in the financial performance of fintech lending companies, as measured using the Wilcoxon test, during and after the COVID-19 pandemic, in terms of the current ratio, fixed asset turnover ratio, receivables turnover ratio, average receivables turnover period, total debt to total assets ratio, and bad debt ratio. Meanwhile, the cash ratio, ROA, and ROE show no difference in the financial performance of fintech lending companies during and after the COVID-19 pandemic.

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