# **Before and After Merger of Bank Performance Analysis**

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Abstract. The rapid development of the banking world has resulted in the need for mergers between banks, to make the banking world healthier and stronger in facing competition in the global economy as well as an increasingly competitive free market. The purpose of this study is to determine the performance of a bank that is doing a merger in Indonesia, seen from the measurement of thebprofitability ratios, the liquidity ratios, and the solvency ratios. The object used in this study is a banking company that joined and was registered on the Indonesia Stock Exchange within 2019. The sample in this study was 3 large Syariah bank companies using a purposive sampling method. This study uses comparative research and the data used is secondary data. The analytical method used is paired sample t-test. The results showed that in the liquidity ratio variable, there was a difference in company performance before and after the merger while in the profitability ratio and solvency ratio variable company performance, there was no difference before and after the merge.

Key Words: Merger, profitability ratio, liquidity ratio, solvency ratio, performance.

#### 1. INTRODUCTION

Banks and other financial institutions in general play a more significant part in Indonesia's economy as a result of the country's growing number of different types of businesses. As was said previously, the financial support of financial institutions is necessary for the successful implementation of growth and expansion plans. The growth of business activity encourages the establishment of new avenues for obtaining finance. These new funding sources may take the shape of banks and other financial institutions, in addition to other potential choices.

Developing strategies is necessary in order to participate in the modern global economy since so many companies are competing with one another to achieve higher levels of corporate performance. Expanding the business is one strategy that may be used; in this scenario, the company may choose to merge with other businesses, which is another term for the process that is often used. The Commission for the Supervision of Business Competition established a merger bureau with the passage of time and the development of new technologies to manage merger notifications and conduct merger reviews.

As a direct consequence of the establishment of the merger bureau, a number of different companies have begun to participate in activities linked to mergers. In order for the performance of the business to be improved as a result of the merger process, the management of the company need to ensure that the performance of the company is correctly considered. The performance of an organization may be assessed by studying the various financial measurements. These financial data include liquidity, profitability, solvency, and among other financial measures. Of the three types of ratios, the authors use 7 variables that will be used, namely Debt to Total Asset Ratio, TIE (Times Interest Earned), Current Ratio, Account Receivable Turnover, NPM (Net Profit Margin) Return on Ordinary Shareholder's Equity, and EPS (Earning Per Share).

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The expected objective of this study is to determine the difference in company performance before and after the merger, as measured by the variables Solvency ratio (Debt to Total Asset Ratio, and TIE (Times Interest Earned)), Liquidity ratio (Current Ratio, and Account Receivable Turnover), Profitability ratio (NPM (Net Profit Margin) Return

on Ordinary Shareholder's Equity, and EPS (Earning Per Share)), Performance (Total Asset, Total Liabilities, and Interest Expense). This will be accomplished by comparing the pre-merger and post-merger values of these variables and their indicators.

## 1.1. RESEARCH PROBLEMS & QUESTIONS

The key issues that will be discussed are as follows: (1) the methodology that is used to examine, analyze, and evaluate bank performance both before and after a merger; (2) the effect of ratios on banking performance; and (3) the impact of selected factors on bank performance.

Therefore, the probable research questions are as follows;

Question #1: What is the influence of Solvency ratio on bank performance?

Question #2: What is the influence of Liquidity ratio on bank performance?

Question #3: What is the influence of Profitability ratio on bank performance?

### 1.2. LIMITATIONS

The constraints pertaining to this research are as follows: (1) financial reports of the 4 banks that are publicly traded on the BEI or Bursa Efek Indonesia , more often known as JSE or the Jakarta Stock Exchange, (2) The emphasis is on the influence on performance, which is often utilized in the banking sector, and the critical performance indicators frequently employed by businesses across industries and (3) the data spans only one (1) year before and one (1) year after the merge.

# 2. LITERATURE REVIEW2.1. MERGER

According to Sudana (2010), a merger is the coming together of two companies of different sizes, of which only one survives. This means that the business with the larger corporate size is the one that emerges victorious from the merger. According to Dharmasetya and Sulaimin (2008), there have been numerous instances of corporate mergers in which a company with a higher market share or a surviving corporation was picked to ensure continuity while maintaining its name and legal status. These mergers have taken place in a number of different countries as well.

In merger activities, it is hoped that the company will be able to get good synergy results. Synergy may take on a few different forms and it is anticipated that the firm would be able to generate strong synergy outcomes as a consequence of the merger operations. The forms of synergy include the following: Financial synergy is formed if the merged firm has a solid capital structure and is able to access sources of money from outside more readily; management synergies are generated when there is a transfer of managerial ability and talents from one company to another; technology synergies that may be established by integrating diverse technological advantages in order to deliver benefits and conversions; and operational synergies that occur when the combined company achieves cost efficiency.

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According to Wijaya (2012), numerous theories may inspire corporations to engage in mergers, including the efficiency theory, the diversification theory, the market power theory, the tax benefit theory, and the undervaluation hypothesis. According to Harianto and Sudomo (2001), the advantage of a company that is merging is that it will find it easier to acquire other companies to be merged than in other takeover processes that are not part of the merger criteria, whereas the disadvantage of a merger is that the company must obtain shareholder approval. The process of merging shares and securing clearance might be lengthy.

Meanwhile, when viewed in terms of economic activity, Moin (2001) categorizes mergers into five categories: horizontal mergers, in which two or more companies in the same industry merge; vertical mergers, in which companies involved in different stages of the production process work together; conglomerate mergers, in which two or more companies in unrelated industries merge; and market extension mergers, which aim to strengthen a product's position in the market. This product extension merger procedure may then be used to mergers that attempt to extend their respective product lines, with the expectation that the firm will be able to reach a broader customer base.

## 2.2. PROFITABILITY RATIO ANALYSIS

Profitability ratios are used to assess how successful a firm has been in terms of generating money or running its operations over a certain time period. It evaluates how the income, or lack thereof, impacts the company's capacity to get debt and equity financing, liquidity situation, and the potential to expand. These ratios include the profit

margin, asset turnover, return on assets, return on ordinary shareholders' equity, earnings per share, price-earnings ratio, and payout ratio. Other ratios include price-earnings ratio, asset turnover ratio, and return on assets ratio. For the sake of this investigation, however, the author will solely make use of profit margin, profits per share, and return on ordinary shareholders' equity.

## 2.2.1. PROFIT MARGIN

The ratio of a company's net income or profit to its total sales is referred to as the net profit margin. The term "net margin" is often sometimes used interchangeably with "net profit margin." The percentage of a company's or industry's sales that are contributed by net profits may be referred to as the net profit margin. The term "net profit margin" is almost often presented in the form of a percentage, however it may alternatively be spelled down as a decimal. A company's net profit margin may be thought of as the percentage of each dollar of sales that ultimately results in a profit for the company.

It takes the total revenues and divides them by the net income to determine how much of a profit was made overall. In addition, investors are able to determine, with the assistance of the net profit margin, whether or not the management of a business is successfully earning a sufficient amount

of profit from the firm's sales and whether or not operating expenses and overhead costs are being controlled. It is one of the most critical indications that can be used to gauge how a firm is doing financially overall. This ratio can be calculated by the formula:

$$Profit margin = \frac{Net Income}{Net Sales}$$

#### 2.2.2. EARNINGS PER SHARE (EPS)

Earning per share is an important indicator to determine the valuation of the value of a company's shares. It has become the main goal of a company to get profits for managers and shareholders. The profit given to investors is in the form of dividends. Thus, it is certain that a shareholder knows how to calculate earnings per share.

EPS, which stands for earnings per share, is a common metric that is used when attempting to estimate the value of a business. This is because EPS indicates the amount of profit that a company generates for each share of stock that it has outstanding. Investors are willing to pay a greater

price for a business's shares if they feel the firm earns more money relative to the price of the company's shares, therefore a higher EPS indicates a bigger value. Calculating earnings per share (EPS) may be done in a variety of different ways, such as by excluding odd items or operations that have been discontinued, or by using diluted earnings as the foundation.

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It is possible to assert that the worth of the firm is satisfactory if it can be shown that the company's performance is also great. It is possible to deduce the worth of the business by looking at the value of its shares; if the value of the shares is high, then the value of the company must also be high or excellent. The earnings per share (EPS) metric takes into account both the method by which the company generates revenue and the amount of rupiah that it brings in each share. This ratio reflects

the amount of money gained for each share of common stock that was issued. This ratio can be calculated by the formula:

# 2.2.3. RETURN ON ORDINARY SHAREHOLDER'S EOUITY

Adding to your portfolio with investments in businesses that generate income in a more effective manner than their rivals might result in significant financial gain. Return on equity, often known as ROE, is a metric that may be used by investors to distinguish between businesses that make profits and those that only consume earnings. It provides an indication of how much the net income of company made for each dollar invested by its shareholders in a firm.

The return on equity or ROE is determined by dividing its annual net income, by the total amount of equity held by the shareholders. This yields percentage that indicates the profitability of the company as a whole. ROE may be skewed by a number of the circumstances, such as a corporation having a significant write down and the beginning a program of share buybacks. Both of these examples are common causes of ROE distortion. When calculating the value of a stock, utilizing ROE has the disadvantage of ignoring a company's intangible assets for example the intellectual property and the brand recognition. This is just one of the ways in which ROE is flawed as a measure

of stock value. The return on equity (ROE) provides a measurement of the amount of profit that can be generated from a company's assets. This is done by calculating the profits that can be generated from the assets. ROE is a useful metric for investors since it enables the investors to evaluate a company's potential as either a lean and profit generating machine and an inefficient operator.

The businesses that are successful in wringing profits out from the operations often have a competitive edge, which is a quality, that typically translates into increase returns on investment for the company's shareholders. The return on equity (ROE) is a particularly useful indicator to analyze because of the connection that exists between the profit of the firm and the return on investment for the investor. Investors may utilize the average of five years of the ROE of firms operating within the same industry to uncover companies that have a competitive edge over their peers. This ratio can be calculated by the formula:

ROE = Net Income - Preference Divindends

Average Ordinary Shareholder's Equity

### 2.3. SOLVENCY RATIO ANALYSIS

Solvency ratios are a method of determining a company's potential for continued existence over a considerable amount of time. Both the Debt of Total Assets ratio and the Times Interest Earned ratio are examples of ratios that may be used to get information about a company's capacity to pay back its debt. Solvency ratios are often used by investors, creditors, and analysts in order to evaluate a company's financial stability and its capacity to pay off its obligations over the course of the long term. They are also used by regulators to verify that corporations comply with capital standards and to prevent insolvency or bankruptcy from occurring in the company.

## 2.3.1. DEBT TOTAL ASSET RATIO

Debt to Asset Ratio is used to measure the ratio between total debt and total assets. It can be interpreted that how much the company's assets are financed by debt or how much the company's debt affects asset management.

It measures the percentage of the total assets of creditors provide. Analysts are able to compare the leverage of one firm to that of other companies operating within the same industry by making use of this indicator. This information may be used to determine how secure a company's financial position. The greater ratio, the higher the Degree of Leverage or DOL, and thus, the larger the risk of investing in that particular firm. The ratio of an organization's total debt to its total assets illustrates the extent to which the organization has relied on debt in order to fund its assets. This ratio can be calculated by the formula bellow:

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 $Debt to Total Asset = \underbrace{Total Debt}_{Total Asset}$ 

### 2.3.2. TIMES INTEREST EARNED (TIE)

This interest coverage ratio determines the number of times that a company's available profits are sufficient to cover the interest expense of the company's current interest payment. In other words, it determines how much room for error a corporation has when TIE comes to the interest payments that are due on its debt over a certain time period. The interest coverage ratio is a tool that may be used to assess how easily a firm is able to meet the interest payments that are due on its existing debt. To get the ratio, take a company's profits EBIT or Earning Before Interest and Taxes for a certain period of time and divide that number by the interest expenditure for that same period. The lower the ratio, the more the financial strain that the corporation is under as a result of its debt obligations. The position of ration is when a company's interest coverage ratio is 1.5 or lower than that, or even higher, the legitimacy of the company's capacity to fund its interest expenditures is called into doubt.

In order for businesses to be able to weather future (and maybe unforeseen) difficulties in their financial situation, they need to have profits that are much higher than the amount needed to cover their interest expenses. The capacity of a firm, to satisfy its interest commitments is one component of its solvency. As a result, the ability to do so is a highly essential factor in the return for the shareholders. When it comes to using ratios in the study of a corporation, interpretation is of the utmost importance. The point, the interest coverage is a solid indicator ratio of the short term financial of a business. This ratio can be calculated by the formula:

 $TIE = \frac{EBIT}{Interest \ Expense}$ 

# 2.4. LIQUIDITY RATIO ANALYSIS

The liquidity ratio is a measurement of a short term ability to fulfill its maturing financial obligations as well as unforeseen financial needs. Particularly concerned in the evaluation of liquidity are short-term creditors such as lenders and suppliers. The current ratio, the acid-test ratio, the turnover of accounts receivable, and the turnover of inventory are some of the ratios that are included in this category. For the sake of this investigation, however, the author will solely make use of current ratio and account receivable turnover.

# 2.4.1. CURRENT RATIO

According to Kashmir 2018, The current ratio is a ratio to measure a company's ability to pay shortterm obligations or debts that are due soon when billed. The current ratio is a measurement of a company's, to pay its current obligations; debts and payable, using its current assets, and it also known as short term assets, for example cash, inventory, and receivables. If a company has a current ratio that is less than 1 (one), this position indicates that the company does not have sufficient liquid assets to meet their short term obligations in the event that they are all due at the same time. On the other hand, if the company has a current ratio is greater than 1 (one), this position indicates that the company possesses the financial resources necessary to maintain its financial health in the short term. This ratio can be calculated by the formula:

Current ratio = <u>Current Assets</u> Current Liabilities

# 2.4.2. ACCOUNTS RECEIVABLE TURNOVER

In accounting, a company's capacity to collect its accounts receivable, also known as the money owed to it by its customers or clients, is evaluated with the use of a measure known as the account receivables turnover ratio. This ratio evaluates the effectiveness with which a company uses and manages the consumer credit it extends, as well as the rate at which short-term debt is collected or paid back; in other words, it measures a company's credit utilization and management efficiency. A company that is skilled in the process of recovering payments that are overdue, they will have a higher accounts receivable turnover ratio. It is beneficial to compare the ratio of one firm to that of its

competitors in the same industry as a means of determining whether or not the company in question is competitive.

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When the receivables turnover ratio is high, it can be indicated that the company's receivable collection results are efficient and the company has quality customers who pay their debts on time or quickly. This is because a high receivables turnover ratio indicates that a company's accounts receivable is turned over frequently. The low receivables turnover ratio might be the result of a number of factors, including an ineffective collection procedure at the firm, unfavorable credit policies, or clients who are unable to pay their bills or who are not creditworthy. It is important for a business to keep a close eye on and keep track of its account receivables turnover ratio so that the organization can evaluate whether or not a pattern or trend is emerging over time. This ratio can be calculated by the formula:

 $\begin{tabular}{lll} Accounts Receivable Turnover = & & Net Credit Sales \\ \hline & Average Net Accounts Receivable \\ \hline \end{tabular}$ 

| No | Ratio        | Formula   | Purpose of Use  |  |  |
|----|--------------|---|---|--|--|
| 1. | Profitabilit | y   |   |  |  |
|    | NPM          | Net Income<br>Net Sales   | Measures net<br>income generated<br>by each currency<br>unit sales. |  |  |
|    | EPS          | Net Income – Preference Divindends Weighted Average Ordinary Shares Outstanding | Measures net income earned on                                       |  |  |

|    |                                   |  | each ordinary<br>share  Measures the<br>profitability of<br>owners'<br>investment |  |  |  |  |  |  |
|----|-----------------------------------|--|---|--|--|--|--|--|--|
| 2. | Liquidity                         |  |   |  |  |  |  |  |  |
|    | Current<br>Ratio                  | Current Assets Current Liabilities               | Measure short-<br>term debt-paying<br>ability                                     |  |  |  |  |  |  |
|    | Account<br>Receivable<br>Turnover | Net Credit Sales Average Net Accounts Receivable | Measure liquidity<br>of accounts<br>receivable                                    |  |  |  |  |  |  |
| 3. | Solvency                          |  |   |  |  |  |  |  |  |
|    | Debt to<br>Total<br>Assets        | Total Debt<br>Total Asset                        | Measures the total<br>percentage of<br>total assets<br>provided by<br>creditors   |  |  |  |  |  |  |
|    | TIE                               | EBIT<br>Interest Expense                         | Measures the<br>ability to meet<br>interest payments<br>as they come due          |  |  |  |  |  |  |

#### 2.5. PERFORMANCE

Individual and team performance organization may be managed via a process called performance management, which is focused on achieving objectives and planning development based on individual and team performance. The end aim of performance management is to increase organizational performance. The goals management performance are to manage employees so that they regularly meet the

organization's goal through reward and punishment, motivation, feedback, and coaching; to have a clear image on the expected achievements, who is responsible to it, and what contribution is to be made; and to accomplish all of these goals by forcing every member of the organization to perform to the best of their potential. When every member of an organization is able to communicate effectively and comprehend with each task that is given to achieve certain goals set by the organization, which will improve the financial performance, then an effective and efficient performance management system has been

established. It is possible that metrics based on financial accounting will need to be integrated in order to assess the performance.

The source of financial information that is used in analyzing the performances of banks is found in the financial statements of such institutions. When discussing the balance sheets, the most important aspects to bring up are total assets, total liabilities, and interest expense. This is because these problems could reflect the majority of the operations that banks engage in.

## 2.5.1. TOTAL ASSET

Every business relies on its assets to carry out day-to-day operations like production and sales, which are necessary for the delivery of future services and advantages, such as the accumulation of cash inflows and profits. The assessment, in terms of assets, by examining the outcomes of activities such as production and sales that create profit will ultimately increase additional assets in the future. This will happen as a consequence of the evaluation. This is the reason why assets are among the most critical components of a company, including a bank, to have. On the other hand, the total assets of banks are made up of a few components that are a little bit different from those of other firms.

## 2.5.2. INTEREST EXPENSE

In general, an expenditure is the cost that is incurred as a result of the consumption of assets or the usage of services in the production of revenue. The interest payable on short-term and long-term borrowings, such as federal funds from other depository institutions and subordinated notes, are two examples of interest expenditures. The interest

on deposits typically accounts for approximately 60 percent of a bank's overall interest cost.

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The majority of a bank's profit comes from the margin earned on its principal operations, such as borrowing money from depositors and lending money to borrowers. In other words, banks make money by lending money to those who need it. The return on a bank's loan or investment that bears interest will be such a possible source of revenue termed interest income, and it will be used to pay for many of the bank's primary expenditures, such as interest on deposits and operating costs. Therefore, the ideal difference between the composition of interest supplied to depositors and borrowers might impact the performance of the bank.

### 2.5.3. TOTAL LIABILITIES

The amount of a company's liabilities is another metric that may be used to evaluate its success. The debt and obligations that need to be paid by a company are referred to as its liability. This includes credit purchases, payables such as taxes and salaries payable, and money borrowed since many firms regularly utilize it to accomplish its operations.

The example of the current account; savings account, time deposit, revenue sharing investment, liabilities to Bank Indonesia, interbank liabilities, spot and derivatives liabilities, liabilities on securities sold under repurchase agreement or repo, acceptance liabilities, and issued securitizations are that can be found on the liability side of an institution's balance sheet. Bank Indonesia, in its role as the central bank of Indonesia, provides advice to Indonesian banks regarding the composition of their total liabilities by adding up all of the items on the liability side of their balance on previous years and current year.

## 2.5.4. PREVIOUS STUDIES

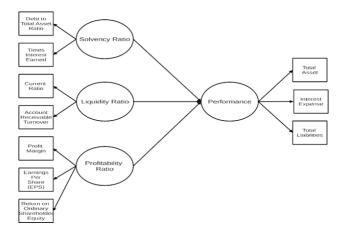
| Titles & Names   | Variables & Indicators   | Brief Findings  |  |  |
|--|--|---|--|--|
| 1. ANALISIS YURIDIS MENGENAI MERGER BANK SYARIAH MANDIRI, BRI SYARIAH, DAN BNI SYARIAH MENJADI BANK SYARIAH INDONESIA (BSI) (2022-08-29) (Yultriani Rantemangiling, Elko L Mamesah, Donna O. Setiabudhi) | Juridical Analysis   | The merger procedure for the three banks complies with bank merger procedures according to the Limited Liability Company Law Number 40 of 2007 and Government Regulation Number 27 of 1998 concerning Mergers, Consolidations and Acquisitions of Limited Liability Companies, procedures for company mergers |  |  |
| Pengaruh Merger     Tiga Bank Syariah     Bumn Terhadap     Perkembangan     Ekonomi Syariah di     Indonesia (2021-06- 02)     (Hasan Sultoni, Kiki     Mardiana)                                       | Impact of the merger     Sharia Economics     Islamic Bank.  | The development and growth of Islamic banks in Indonesia have recorded and produced a good embodiment of the Islamic economy in Indonesia   |  |  |
| 3. A Study on Merger<br>and Operating<br>Performance of<br>Commercial Banks of<br>Nepal (2018-09-02)<br>(Sajena Dwa, Ajay<br>Kumar Shah)   | Operating profit margin Net profit margin Return on assets, Return on equity Debt equity ratio Return on loan loss provision Return on staff expenses Return on operating expenses | The analysis reveals that merger plays an important role in solving problems such as, increasing capital base, making the BFIs financially strong, reducing the number of BFIs and so on. But it is also observed that merger may not have positive impact on operating performance for every institution     |  |  |

| 1. Merger & acquisition strategy for growth, improved performance and survival in the financial sector (2018-06-02) (Farhan Ahmed, Aneeta Manwani, Shafique Ahmed) | Earning Per Share (EPS)     Return On Assets (ROA)     Return On Equity (ROE)     Net Profit Margin (NPM) | The analysis of ten banks gives insight that overall profitability of banks after merger and acquisition has decreased The economic factors also has impact on bank's performance like financial crises of 2008 This study has revealed that mergers and acquisitions in Pakistan are not being successful from the performance aspect of the banking sector  |
|--|---|---|
| 2. DINAMIKA<br>MERGERNYA BANK<br>SYARIAH TERBESAR<br>DI INDONESIA (2021-<br>09-25)<br>(Aldiansyah)   | Regulation     Law     Dinamic  | The results of this study are the regulation of the implementation of the merger that can be carried out by complying with every applicable law, the dynamics of the merger of Bank Syariah Indonesia which began with the establishment of Bank Islam Malaysia Berhad (BIMB) in 1983 until finally in 2020, and the legal impact the merger of Bank Syriah Indonesia on the stability of economic has positive and negative impacts. |

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# 2.6. RESEARCH MODEL & HYPOTHESIS

The Research model of this study as the bellow:



Referring to this, the following hypotheses are formulated as follows;

H1: The influence of Solvency ratio on bank performance. H2: The influence of Liquidity ratio on bank performance. H3: The influence of Profitability ratio on bank performance.

# 3. METHODOLOGY

# 3. RESEARCH METHOD

# 3.1. OVERVIEW

The descriptive-quantitative research approach is the one that was used for this study. This study relies entirely on secondary sources for its data, particularly the annual reports and financial statements of those publicly-traded banks. It also makes use for references, such as books, journals, and other articles on previously published research on the subject of banks' performance evaluations. Despite the fact that this research is mostly based on quantitative methodology, a qualitative approximation is also carried out in order to investigate the problems that are associated with publicly listed banks. The strategy of purposive sampling is used so that the focus may be placed on publicly-traded banks. The author would then proceed to analyze via a total of three phases, namely normality testing, testing a variety of paired sample tests (Paired Sample test), and doing the Mann Whitney test.

The normality test to determine whether the data

| Paired Samples Statistics |         |         |   |                   |                    |  |
|---------------------------|---------|---------|---|-------------------|--------------------|--|
|                           |         | Mean    | N | Std.<br>Deviation | Std. Error<br>Mean |  |
| Pair 1                    | NPMBFR  | 6.6200  | 3 | .82073            | .47385             |  |
|                           | NPMAFR  | 6.1233  | 3 | .26407            | .15246             |  |
| Pair 2                    | EPSBFR  | 74.7767 | 3 | 109.75013         | 63.36427           |  |
|                           | EPSAFR  | 69.8867 | 3 | 97.62960          | 56.36648           |  |
| Pair 3                    | ROEBFR  | 8.2000  | 3 | 4.02456           | 2.32358            |  |
|                           | ROEAFR  | 10.0100 | 3 | 5.00012           | 2.88682            |  |
| Pair 4                    | CRNTBFR | 5.1533  | 3 | 1.09295           | .63101             |  |
|                           | CRNTAFR | 3.5133  | 3 | .46801            | .27021             |  |
| Pair 5                    | ARTBFR  | .9233   | 3 | .07234            | .04177             |  |
|                           | ARTAFR  | 1.3167  | 3 | .29771            | .17188             |  |
| Pair 6                    | DTABFR  | 22.0000 | 3 | 7.01338           | 4.04918            |  |
|                           | DTAAFR  | 28.6667 | 3 | 3.21455           | 1.85592            |  |
| Pair 7                    | TIEBFR  | 3.7033  | 3 | .47184            | .27242             |  |
|                           | TIEAFR  | 3.4467  | 3 | .76173            | .43979             |  |

contained in the study is normally distributed or not and a different t-test is performed to determine whether there is a significant difference between the selected financial ratio criteria and the Bank's performance in the period before and after the merger, while the Mann Whitney test used if the data obtained is not normally distributed then the test step is using the Mann Whitney test using SPSS software.

### 3.2. DATA COLLECTION

The following table shows all the banks that would be analyzed on this research:

No Code Company Name

1. BRIS Bank Syariah Indonesia Tbk.

- 2. BMRI Bank Mandiri (Persero) Tbk.
- 3. BBRI Bank Rakyat Indonesia (Persero) Tbk.

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4. BBNI Bank Negara Indonesia (Persero) Tbk.

#### 3.3. VARIABLES

All of the variables considered in this research are derived from the annual reports or financial statements of the Banks. The information is summarized below

| summama                | zeu below.                      |   |  |  |
|------------------------|---------------------------------|---|--|--|
| Variables              | Indicators                      | Explanation   |  |  |
| Solvency               | Debt to Total Asset             | Measures the total percentage of total ass<br>provided by creditors                   |  |  |
| Ratio                  | Times Interest Earned (TIE)     | Measures the ability to meet interest<br>payments as they come due                    |  |  |
| Liquidity              | Current Ratio                   | Measure short-term debt-paying ability  |  |  |
| Ratio                  | Accounts Receivable<br>Turnover | Measure liquidity of accounts receivable  |  |  |
|                        | Profit Margin                   | Measures net income generated by each<br>currency unit sales.                         |  |  |
| Profitability<br>Ratio | Earnings per Share (EPS)        | Measures net income earned on each<br>ordinary share.                                 |  |  |
|                        | Return on Ordinary              | Measures the profitability of owners'   |  |  |
|                        | Shareholder's Equity (ROE)      | investment  |  |  |
|                        | Total Assets                    | It is expected that the higher level of total assets mirrors better performance.      |  |  |
| Performance            | Interest Expense                | It is expected that the lower level of interest<br>expense mirrors better performance |  |  |
|                        | Total Liabilities               | It is expected that the lower level of interest<br>expense mirrors better performance |  |  |

## 3.4. DATA ANALYSIS TECHNIQUE

In this research, the author will use a descriptive analytic approach with a single method, namely assessing the various sample tests in pairs (Paired Sample test). The t-test was conducted to determine whether there is a significant difference between the selected financial ratio criteria and the bank's performance in the period before and after the merger. The testing procedure was conducted using the SPSS software. In this research using hypothesis testing which will compare the results of statistical tests with a significance level ( $\alpha$ ) of 0.05. If the statistical test value is <

0.05 (5%) then Ha is accepted, if the statistical test value is  $\geq 0.05$  (5%) then Ha is rejected.

## 4. RESULT

# 4.1. DESCRIPTIVE STATISTICS

The results of descriptive statistical analysis are used to analyze data, and the datas is done by describing them and that has been collected without aiming to make general conclusions.

In the Paired Samples Statistics table above it is explained that the Profit Margin indicator before the merger had an average of 6.6200 and an average after the merger of 6.1233 while the standard deviations for both were 0.82073 and 0.26407. Meanwhile, the Earnings per Share indicator before the merger had an average of 74.7767 and an average after the merger of 69.8867 while the standard deviations for both were 109.75013 and 97.62960. Furthermore, the Return on Ordinary Shareholder's Equity indicator before the merger

has an average of 8.2000 and an average after the merger of 10.01000 while the standard deviations for both are 4.02456 and 5.00012. As for the Current Ratio indicator before the merger, it has an average of 5.1533 and an average after the

merger of 3.5133 while the standard deviations for both are 1.09295 and 0.46801. Furthermore, the Accounts Receivable Turnover indicator before the merger had an average of 0.9233 and an average after the merger of 1.3167 while the standard deviations for both were 0.07234 and 0.29771. Furthermore, the Debt to Total Assets indicator before the merger has an average of 22.0000 and an average after the merger of 28.6667 while the standard deviations for both are 7.01338 and 3.21455. Finally, the Times Interest Earned indicator before the merger has an average of 3.7033 and an average after the merger of 3.4467 while the standard deviations for both are 0.47184 and 0.76173.

## 4.2. STATISTICAL TEST RESULT

a. Paired Sample T-test Difference Test Results (Paired Samples)

|        |                   | Paired Differences |                   |                    |                                     |          |        |    |                     |
|--------|-------------------|--------------------|-------------------|--------------------|-------------------------------------|----------|--------|----|---------------------|
|        |                   | Mean               | Std.<br>Deviation | Std. Error<br>Mean | 95% Confidenc<br>the Diffe<br>Lower |          | t      | df | Sig. (2-<br>tailed) |
| Pair 1 | NPMBFR - NPMAFR   | .49667             | .56012            | .32338             | 89475                               | 1.88808  | 1.536  | 2  | .264                |
| Pair 2 | EPSBFR - EPSAFR   | 4.89000            | 12.33815          | 7.12344            | -25.75967                           | 35.53967 | .686   | 2  | .563                |
| Pair 3 | ROEBFR - ROEAFR   | -1.81000           | 4.07651           | 2.35357            | -11.93660                           | 8.31660  | 769    | 2  | .522                |
| Pair 4 | CRNTBFR - CRNTAFR | 1.64000            | .65475            | .37802             | .01351                              | 3.26649  | 4.338  | 2  | .049                |
| Pair 5 | ARTBFR - ARTAFR   | 39333              | .37005            | .21365             | -1.31258                            | .52591   | -1.841 | 2  | .207                |
| Pair 6 | DTABFR - DTAAFR   | -6.66667           | 5.12551           | 2.95921            | -19.39913                           | 6.06580  | -2.253 | 2  | .153                |
| Pair 7 | TIEBFR - TIEAFR   | .25667             | .32501            | .18765             | 55071                               | 1.06404  | 1.368  | 2  | .305                |

Paired sample T-test. This is a test conducted on two paired samples. Paired samples can be interpreted as samples with the same subject. In this hypothesis test will compare the results of statistical tests with a significance level ( $\alpha$ ) of 0.05. If the statistical test value  $\leq 0.05$  then the hypothesis is accepted, if the statistical test value  $\geq 0.05$  then the hypothesis is rejected.

Profit Margin is used to measure the net income generated by each currency of the unit sales. As seen in the table above it is explained that the average value of this indicator is 0.49667, the standard deviation is 0.56012 with the calculated t value is 1.536 while the value of sig (2-tailed) is 0.264 which means that this value exceeds the significance level ( $\alpha$ ) of 0.05 so it can be concluded that there is no difference in company performance 4 years before and after the merger as measured by Profit Margin (NPM).

Earnings per Share is used to measure net income earned on each ordinary share. If seen from the table above, it is explained that the average value of this indicator is 4.89000, the standard deviation is 12.33815 with a calculated t value of 0.686 while the value of sig (2-tailed) is 0.563 which means that this value exceeds the significance level ( $\alpha$ ) of 0.05 so it can be concluded that there is no difference in company performance 4 years before and after the merger as measured by Earning per Share (EPS).

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Return on Ordinary Shareholder's Equity is used to measure the profitability of owners' investment. If seen from the table above, it is explained that the average value of this indicator is -1.81000, the standard deviation is 4.07651 with a calculated t value of -0.769 while the value of sig (2-tailed) is 0.522 which means that this value exceeds the significance level ( $\alpha$ ) is 0.05 so it can be concluded that there is no difference in the company's performance 4 years before and after the merger as measured by Return on Ordinary Shareholder's Equity (ROE).

Current Ration is used to measure short-term debtpaying ability. If seen from the table above, it is explained that the average value of this indicator is 1.64000, the standard deviation is 0.65475 with a calculated t value of 4.338 while the value of sig (2tailed) is 0.049 which means that this value is less than the level of significance ( $\alpha$ ) of 0.05 so it can be concluded that there is a difference in company performance 4 years before and after the merger as measured by the Current Ratio (CRN).

Accounts Receivable Turnover is used to measure liquidity of accounts receivable. If seen from the table above, it is explained that the average value of this indicator is -0.39333, the standard deviation is 0.37055 with a calculated t value of -1.841 while the value of sig (2-tailed) is 0.207 which means that this value exceeds the significance level ( $\alpha$ ) is 0.05 so it can be concluded that there is no difference in the company's performance 4 years before and after the merger as measured by Accounts Receivable Turnover (ART).

Debt to Total Assets. This is used to measure the total percentage of total assets provided by creditors. If seen from the table above, it is explained that the average value of this indicator is -6.66667, the standard deviation is 5.12551 with a calculated t value of -2.253 while the value of sig (2-tailed)

is 0.153 which means that this value exceeds the significance level ( $\alpha$ ) is 0.05 so it can be concluded that there is no difference in the company's performance 4 years before and after the merger as measured by Debt to Total Assets (DTA).

Times Interest Earned is used to measure the ability to meet interest payments as they come due. If seen from the table above, they are explained that the average value of this indicator is 0.25667, the standard deviation is 0.32501 with a calculated t value of 1.368 while the value of sig (2-tailed) is 0.305 which means, this value exceeds the significance level ( $\alpha$ ) of 0.05 so it can be concluded that there is no difference in company performance 4 years before and after the merger as measured by Times Interest Earned (TIE).

### 5. CONCLUSION

Merger is an action of a company that wants to expand its business. Mergers are divided into several types and each has advantages and disadvantages. For companies that want to merge, they must really pay attention to the things that will cause good and bad influences. Based on the background, problem formulation and discussion contained in this study, it can be concluded that there is a difference in performance 4 years before and after the merger based on the CRN indicator, then there is no difference in performance 4 years before and after the merger based on NPM, EPS, ROE indicators, ART, DTA, and TIE.

Based on the results of this study, the Banks are advised to be able to manage the Bank's ability to pay short term debt. It will make the company fragile on its assets and may not be able to meet its short-term obligations if they were all due at once. Hence, it is recommended for investors to be able to really assess the health condition of the companies that will be merging so that investors do not feel hesitant to invest in companies that will carry out the merger.

It is anticipated that in the future it will be possible for academics to add to the sorts of factors that are used as benchmarks for measuring the performance of companies. Expanding the amount of time periods that may be studied as well as the number of samples that can be studied is another way in which research can be enhanced. Also, the features of the organizations that are chosen as samples need to be taken into consideration. More

specifically, it is important to choose companies that have qualities that are more comparable to one another so that the synergies that are created may be better seen.

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