Using mergers and acquisitions to increase stock returns in the banking sector: A case study on the Indonesian stock exchange

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ABSTRACT

This study aims to determine the impact of merger and acquisition (mergers and acquisitions) activity in the banking sector on stock performance. It focuses on banking companies listed on the Indonesia Stock Exchange (IDX) that carried out mergers and acquisitions from 2019 to 2021. A 15-day period was observed, consisting of seven days before and seven days after the mergers and acquisitions event and the day of the event itself. The data was analyzed using market study methods and event studies. Stock price data was used to analyze the stock returns during mergers and acquisitions events, and market studies were used to measure the reactions through changes in stock prices after certain events. The results revealed that stock returns and abnormal stock returns increased across all events (E1, E2, and E3). Additionally, cumulative abnormal returns showed a positive effect on events E1 and E3, while event E2 showed a negative effect. Overall, the findings indicated that the market responded positively to mergers and acquisitions activity in the Indonesian banking sector, and the acquired banks performed well after the mergers and acquisitions. The study's results have implications for the internal management of companies, as it suggests that mergers and acquisitions could potentially lead to profit gains in the banking sector. Moreover, investors can use this insight to make more informed decisions when considering investments in the banking sector.

Contribution/Originality: Through mergers and acquisitions, banks can access broader market segments, which can enhance the company’s value reflected through stock returns. This study focuses on stock return measurements based on mergers and acquisitions in the banking sector, which has not been used in previous research.

1. INTRODUCTION

Organizations require sufficient financial resources for operational development (Handoyo, Suharman, Ghani, & Soedarsono, 2023; Kabeyi, 2019). The development of financial resources can be obtained by creating new products, operations, and services (Jeannet, Volery, Bergmann, & Amstutz, 2021). Expanding operations requires both internal and external financial resources to achieve growth (Hilbert, Noordewier, & van Dijk, 2022). Business expansion is highly dependent on internal financial resources and processes, e.g., withholding profits. However, if internal financial resources are limited, the organization will rely on external resources (Li et al., 2020).

Organizations obtain financial resources through external factors such as bank loans, or mergers and acquisitions with other companies (Lorini, Lastrucci, Paolini, & Bonacorsì, 2020). Mergers and acquisitions are used to expand a business, and many companies use this strategy to boost business growth (Al-Binali, Aysan, Dinçer, Unal, & Yüksel, 2020).
By merging or acquiring, companies can expand their geographic reach, obtain access to new technologies or expertise, and increase market share and profits (Hossain, 2021; Jin, Yang, & Zhang, 2021). Companies undertake mergers and acquisitions since they will receive a higher value than their respective operating companies (Chakraborty & Kattuman, 2023; Rashid & Naeem, 2017). The impact can maximize shareholder wealth, reduce new business costs, ensure survival in a dynamic environment, and increase return on equity (Fraunhofer, Kim, & Schiereck, 2018; Mihaiu et al., 2021). In addition, companies can also achieve operational synergies, gain access to new markets, increase competitiveness, and optimize the use of resources (Mihaiu et al., 2021).

In developing countries such as Indonesia, merger and acquisition strategies are useful in accelerating business growth and expansion. To meet business capital, banks have two options: 1) issue new shares, which allows banks to raise additional funds from the capital market, and 2) merge with or acquire another company, which can provide significant benefits in growing the business (Neamat, 2022). However, achieving the synergies expected from mergers and acquisitions is not always easy. Many mergers and acquisitions fail because businesses are unable to properly integrate the acquired company into the existing structure and strategy. An unsuccessful integration can lead to a loss of value and a waste of time and resources (Takhtehkar & Rademakers, 2020). Mergers and acquisitions can be expensive; transactions, integration, and operational restructuring can cost significant amounts of money. If the company fails to generate the expected economic benefits from a merger or acquisition, this can lead to serious financial stress, increased debt, and decreased stock value. Mergers and acquisitions can also create excessive market dominance, reduce consumer choice, increase prices, stifle innovation, and limit opportunities for small or new competitors (Chu, Chu, & Liu, 2021).

This study is necessary since mergers and acquisitions are strategic decisions that potentially affect a company's value. In the context of the banking sector, this research can help determine the impact of merger and acquisition transactions on stock returns, abnormal returns, and cumulative abnormal stock returns on the Indonesia Stock Exchange. Company management and investors need to identify opportunities and risks. Based on the literature review, there is still a lack of information regarding the effect of the increase of stock prices after experiencing a merger or acquisition to maximize shareholder wealth in the banking sector. Shareholder wealth becomes an important signal of a bank's ability to make a profit and offer good returns for its investors.

This study analyzes the impact of mergers and acquisitions on increasing shareholder wealth and banking sector performance regarding abnormal returns and cumulative abnormal returns on stock prices after mergers and acquisitions activity in Indonesia's banking sector. The findings of this research can provide information that can be used by companies, and especially the banking sector, when making decisions regarding merger and acquisition activities. It also can add insight and information for writers and readers regarding mergers and acquisitions and their effect on stock returns in terms of increasing shareholder wealth.

2. LITERATURE REVIEW

Mergers and acquisitions are commonly used by companies to achieve growth, expansion, and synergy by combining resources (Holtström & Anderson, 2021; Suryaningrum, Abdul Rahman, Meero, & Cakranegara, 2023). However, there are various challenges and negative impacts that companies can face during and after the process (Yipeng Liu, Bebenroth, & Yang, 2022; Sherman & Pryzant, 2021). Mergers and acquisitions provide many potential benefits, but the reality is that achieving the desired synergies does not always go smoothly. Integration challenges between the acquired company and the acquiring company are often significant (Thelisson, 2023). The study by Kang, Woo, Burton, and Mitchell (2018) shows that mergers and acquisitions can be very expensive. Transaction costs, which include advocacy, consulting, and negotiating costs, as well as operational integration and restructuring costs can be significant for the companies involved. Improper planning and inefficient management of these costs can lead to increased financial stress for companies undertaking mergers or acquisitions. A review of the literature on mergers and acquisitions integration challenges was undertaken to understand the root causes of integration failures and the
steps that can be taken to address any gaps. It is also important to understand and adjust to the differences in organizational culture between the acquired company and the acquiring company. Differences in values, norms, and work practices can hinder effective collaboration and cause significant friction during the integration process. The negative impact of a less successful mergers and acquisitions can led to an increase in corporate debt and a decrease in share value, reducing investor confidence and undermining a company’s financial stability (Giannopoulos, Lianou, & Elmarzouky, 2023). Research shows that mergers and acquisitions failures are caused by a lack of adequate integration planning, leading to ambiguity and detrimental conflicts over integration goals, strategies, and processes. The inability of the management teams and employees of both companies to communicate effectively and openly can complicate the integration process (Appelbaum, Lefrancois, Tonna, & Shapiro, 2007). Time, effort, and energy can be wasted due to unsuccessful integration, which will have a negative impact on company performance. For example, synergies expected from a merger or acquisition may not be achieved, and the acquiring company’s stock value may suffer a decline (Grankvist & Persson, 2005). A successful merger or acquisition can create a large, dominant company that can block opportunities for small or new competitors to compete in a market. These impacts can reduce innovation and limit choices for consumers (Haucap, Rasch, & Stiebale, 2019).

To increase mergers and acquisitions success, it is important to conduct a thorough evaluation of the prospects of the company to be acquired before the bidding process begins. This includes an in-depth understanding of the culture, assets, and risks associated with the target company. Establishing an integration team comprising members from both companies to combine expertise and experience can facilitate an effective integration process (Steigenberger, 2017). Setting clear and measurable integration goals and objectives helps to create a consistent direction for all parties involved, thereby reducing ambiguity and conflict (Rainey & Jung, 2015). Open, honest, and regular communication between all parties involved in the integration process is a critical step to overcoming differences and building mutual understanding (Le & Correia, 2021).

The challenge of integration in a merger or acquisition is a critical issue that must be carefully understood and addressed. By understanding the drivers of the integration gap and adopting the right strategic measures, companies can increase the chances of mergers and acquisitions success, achieve the desired synergies, and avoid value loss and wasted resources.

Thus, research and knowledge can contribute to improving the success and efficiency of the mergers and acquisitions process. Additionally, with a deep understanding of mergers and acquisitions challenges, companies can take the appropriate steps to mitigate risks and achieve success.

3. RESEARCH METHODOLOGY

The study population comprises 11 companies listed on the IDX that made notifications of mergers and acquisitions to the Indonesian Business Competition Supervision Commission in 2019 to 2021. The purposive sampling method was used, meaning that the sample is based on certain criteria set by the researcher. These criteria are as follows:

1. Banking sector companies listed on the IDX that carried out mergers and acquisitions between 2019 and 2021 and have notified the Indonesian Business Competition Supervisory Commission of the mergers and acquisitions.
2. Banking sector companies with a clear merger and acquisition date and a clear target company.
3. Banking sector companies that are active in their stock price movements on the IDX and Yahoo Finance.

Based on the criteria that have been stated, three banking sector companies are obtained, which will become research samples in this study, as shown in the following table:

Table 1 presents the banking sector companies listed on the Indonesian Stock Exchange (IDX) that conducted mergers and acquisitions from 2019 to 2021.
The market study method used in this research involves a thorough analysis of the impact associated with the events in the sample (Rahman, Ali, & Jebran, 2018). Studies use stock price data to analyze stock returns during mergers and acquisitions events, and market studies focus on measuring market reactions through changes in stock prices after certain events (El Ghoul, Guedhami, Mansi, & Sy, 2023). A market study has been implemented to evaluate how mergers and acquisitions affect a company’s stock value. The study used stock returns, abnormal returns, and cumulative abnormal returns to determine the effect of events on stock performance before and after mergers and acquisitions announcements (Huang, Yang, & Zhu, 2021; Lim & Tan, 2022). Stock returns are obtained by calculating the difference between the stock price on the day of observation and the stock price on the previous day (day-1) divided by the stock price on the previous day (day-1). Abnormal returns (AR) show the difference between actual and expected market stock returns (Zhong & Enke, 2019). Cumulative abnormal returns (CAR) are obtained by summing up all abnormal returns in the event study. The market study method examines the impact of sample events by analyzing stock price data, including stock returns, abnormal returns, and cumulative abnormal returns (El Ghoul et al., 2023).

### 3.1. Event Day and Event Window

In this study, events are defined as the day a company announces its mergers and acquisitions and are used to determine the impact of these transactions on stock performance. These study events were obtained from the Indonesia Stock Exchange website (Robiyanto & Yunitaria, 2022).

Events refer to periods during which the various activities, such as stock returns, abnormal returns, and cumulative abnormal returns, of a stock are valued. Different studies use different events to measure stock price returns. According to efficient market theory, shorter events can be chosen to observe any immediate changes in stock prices resulting from these events (Woo, Mai, McAleer, & Wong, 2020).

This study uses the actual event days and the seven days before and the seven days after, giving a total event period of 15 days. This makes it possible to review stock price behavior and other variables (Klein, 2020).

### 3.2. Determining Abnormal Returns and Cumulative Abnormal Returns

The market study method is often used to measure the impact of mergers and acquisitions on the stock prices of the acquiring and merging banks. This study uses a market model that allows the inclusion of various sample events and provides accurate results for the analysis of mergers and acquisitions (El Ghoul et al., 2023). This method allows researchers to maintain frequent events and ensure a more comprehensive mergers and acquisitions analysis. The model has been adjusted for risk to account for market fluctuations and factors affecting stock prices (Vertakova, Vselevskaya, & Plotnikov, 2021). Risk-adjusted market models may show insignificant abnormal returns (Egger & Zhu, 2021). Abnormal returns are not as expected under normal market conditions (Caporale & Plastun, 2021; Egger
When market conditions are normal, the market model can return a particular bank stock ($R_{it}$) at a given time ($t$) proportional to the overall market return (Caporale & Plastun, 2021).

$$R_{it} = \alpha + \beta R_{xt} + \varepsilon_{it}$$

Where $R_{it}$ is the realized return of stock $i$ at time $t$ (in days), $\alpha$ and $\beta$ are the market model parameters for stock $i$ using the ordinary least squares (OLS) method, $R_{xt}$ is the return of the market portfolio $x$ at time $t$ (in days), and $\varepsilon_{it}$ is the statistical error term. The $\alpha$ and $\beta$ parameters in Equation 1 are used to calculate the estimated returns, as shown in Equation 2, for each bank stock in the study sample.

$$ER_{it} = \alpha + \beta R_{xt}$$

Where $ER_{it}$ is the expected return of stock $i$ at time $t$ (in days), $R_{xt}$ is the return of market portfolio $x$ at time $t$ (in days), and $\alpha$ and $\beta$ are the parameters for stock $i$.

Abnormal returns, as shown in Equation 3, are calculated after determining the actual and expected returns of stock $i$.

$$AR_{it} = R_{it} - ER_{it}$$

Where $AR_{it}$ is the abnormal return for stock $i$ on day $t$.

The stock’s cumulative abnormal returns, as shown in Equation 4, are measured in the event window of the study.

$$CAR_{i,x,y} = \sum_{t=x}^{t=y} AR_{i,t}$$

Where $CAR_{i,x,y}$ are the aggregate abnormal returns from day $x$ to day $y$.

<table>
<thead>
<tr>
<th>Event</th>
<th>Stock return</th>
<th>During the event day</th>
<th>Pre-event</th>
<th>Post-event</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>E1</td>
<td>AR</td>
<td>-0.004</td>
<td>-0.003</td>
<td>0.003</td>
<td>0.006</td>
</tr>
<tr>
<td></td>
<td>CAR</td>
<td>-0.024</td>
<td>-0.014</td>
<td>-0.004</td>
<td>0.01</td>
</tr>
<tr>
<td>E2</td>
<td>AR</td>
<td>-0.017</td>
<td>-0.036</td>
<td>0.010</td>
<td>0.046</td>
</tr>
<tr>
<td></td>
<td>CAR</td>
<td>-0.071</td>
<td>-0.035</td>
<td>-0.055</td>
<td>-0.02</td>
</tr>
<tr>
<td>E3</td>
<td>AR</td>
<td>0.161</td>
<td>-0.042</td>
<td>0.019</td>
<td>0.061</td>
</tr>
<tr>
<td></td>
<td>CAR</td>
<td>-0.130</td>
<td>-0.142</td>
<td>-0.079</td>
<td>0.063</td>
</tr>
</tbody>
</table>

Table 2 presents the calculations for the abnormal returns (AR) and cumulative abnormal returns (CAR) before and after the mergers and acquisitions.

### 4. RESULTS AND DISCUSSION

The average return is calculated to get an idea of the average stock price change that occurs due to the mergers and acquisitions of the selected bank. An increase in the average returns has a positive impact after an mergers and acquisitions, while a decrease has a negative impact (Klitzka, He, & Schiereck, 2022; Yue Liu, 2019). Table 3 shows the details of the stock prices’ average returns before and after mergers and acquisitions events and the differences in the stock prices’ average returns in banking sector mergers and acquisitions transactions. The average returns increased in all events (E1, E2, and E3), which indicates a much higher impact on shareholder wealth (stock price). The highest increase was obtained on E3 (0.061%), while the lowest increase was on E1 (0.006%). The yield in these three events increased after the mergers and acquisitions.

<table>
<thead>
<tr>
<th>Event</th>
<th>Pre-event</th>
<th>Post-event</th>
<th>% Change</th>
<th>Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>E1</td>
<td>-0.001</td>
<td>0.005</td>
<td>0.006</td>
<td>Increase</td>
</tr>
<tr>
<td>E2</td>
<td>0.001</td>
<td>0.019</td>
<td>0.018</td>
<td>Increase</td>
</tr>
<tr>
<td>E3</td>
<td>-0.056</td>
<td>0.005</td>
<td>0.061</td>
<td>Increase</td>
</tr>
</tbody>
</table>
The study analyzed the ability of mergers and acquisitions to increase shareholder wealth in Indonesia’s banking sector (Giannopoulos et al., 2023) by calculating abnormal returns (AR) and cumulative abnormal returns (CAR) from three mergers and acquisitions events to find the impacts on stock prices before and after the announcement.

Abnormal returns are a measure of profit or loss that cannot be explained or predicted by general fluctuations in the stock market. In this context, an abnormal return is the difference between the actual return and the expected return of a stock based on factors affecting the market as a whole (Yue Liu, 2019). Cumulative abnormal returns are obtained by summing up all returns over the event period (Egger & Zhu, 2021). Table 2 presents the AR and CAR results for all three events. The findings positively affected all events’ abnormal returns after the mergers and acquisitions announcement (E1, E2, E3). In addition, the difference between the pre- and post-CAR results for E1 and E3 is positive, indicating an overall positive impact on shareholder wealth. However, Event 2 had the only negative difference in CAR, indicating a decline in shareholder wealth.

There are several factors that can affect stock returns and cause abnormal returns. One is new information or events that occur in a particular company or industry, such as new product launches, profits that exceed or do not reach expectations, management changes, or regulatory changes. External factors, such as economic conditions, changes in monetary policy, or political turmoil, can also affect stock returns and cause abnormal returns. These conditions can create uncertainty and inaccuracy in market return predictions (Indrayono, 2021).

It is important to understand that abnormal returns do not necessarily mean positive returns. It can also refer to unexpected losses or losses of value on an investment. Abnormal returns can be calculated by comparing a stock’s actual return to its expected return, which is often based on market indices or complex financial models (Indrayono, 2021).

The concept of abnormal returns is important in financial analysis and investment decision making. Analysts and investors use abnormal returns to gauge investment performance and identify stocks that generate returns beyond expectations. Abnormal returns are also used in the development of asset appreciation models, such as the Price Capitalization Model or the Option Valuation Model, which are used to estimate the value of stocks or investment portfolios (Dang Ngoc, Vu Thi Thuy, & Le Van, 2021).

Figures 1–3 visually represent the results of all events. Overall, it can be said that mergers and acquisitions positively influence shareholder wealth (stock returns) in Indonesia’s banking sector. These results are in line with those found by Giannopoulos et al. (2023), who showed positive returns for shareholders in similar transactions, and Flugt (2009) and Songswang (2011), who also reported positive returns as an effect of mergers and acquisitions. However, they contradict the results found by Cummins and Weiss (2004) and Rahman et al. (2018), who reported negative returns after mergers and acquisitions.
5. CONCLUSION AND IMPLICATIONS

This study analyzed the impact of mergers and acquisitions on stock returns in the Indonesian banking sector over the period from 2019 to 2021. The purpose of the study was to analyze the performance of the banking sector in terms of stock returns, abnormal returns, and cumulative abnormal stock price returns. The empirical findings revealed increased stock returns across all three mergers and acquisitions events. In addition, there was a positive effect of abnormal stock returns on all events, whereas cumulative abnormal returns showed positive effects on the E1 and E3 events but negative effects on the E2 event. Overall, the results show that the market responded positively to mergers and acquisitions activity in the Indonesian banking sector, and the acquired banks performed well after the mergers and acquisitions. Based on the analysis, it can be concluded that mergers and acquisitions in the Indonesian banking sector can potentially increase profit in terms of market value (stock price) and that companies can benefit from mergers and acquisitions activities. Therefore, company management should consider mergers and acquisitions as good business growth strategies. In addition, alternative strategies can be implemented by banks, such as enhancing the human capital quality, implementing technology advancements, increasing market share, and expanding customer markets. The government can also generate policies on mergers and acquisitions and provide
financial support during periods of loss. The performance of acquired or merged companies can be improved by positive changes in these policies. It is important to note that this research is limited to analyzing mergers and acquisitions activities in the Indonesian banking sector over a short period of time. Future research should conduct similar studies with a larger sample on banking and other sectors to assess the impact of mergers and acquisitions on stock returns in a broader event window and context.

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**REFERENCES**


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