



Comparative Analysis of Pra-Post Merger and Acquisition Financial Performance Reviewed From EVA, MVA and Financial Ratio Methods (Empirical Study of Non-Financial Sector Companies Listed on the IDX for the Period 2015-2020)

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ABSTRACT: This study aims to compare the pre-post M&A financial performance of non-financial companies listed on the Indonesia Stock Exchange (IDX) in the 2-year period before mergers and acquisitions (M&A), in the year of M&A, and 2 years after M&A. Performance was measured using Economic Value Added (EVA), Market Value Added (MVA), and financial ratios. The research sample consisted of 22 companies selected by purposive sampling, and secondary data were analyzed from financial statements. Partial analysis was conducted with the Wilcoxon Sign Test because the data was not normally distributed, while simultaneous analysis used the MANOVA test with the STATA version 17 application. The results of simultaneous testing showed no significant difference in financial performance between before and after M&A. However, partial test results found significant differences in MVA variables in the period 2 years before, 1 and 2 years after M&A, as well as in the year of M&A. In addition, the ROA variable also shows significant differences in the 2-year period before, 1 and 2 years after M&A. However, the effect of M&A on MVA and ROA variables tends to be negative.

KEYWORDS: Acquisition, Economic Value Added, Financial Performance, Financial Ratio, Market Value Added, Merger.

INTRODUCTION

In response to the rapidly changing economic conditions, especially after the global pandemic caused by the novel coronavirus (Covid-19), there was an increase in merger and acquisition activity in various industrial sectors in Indonesia. This was due to the fact that the pandemic was a contributing factor to the decline in economic growth in Indonesia and the world. A review of the official website of the Business Competition Supervisory Commission (kppu.go.id) indicates that there has been a notable increase in merger and acquisition activities in Indonesia. In the year preceding the onset of the global pandemic in 2018, there were 74 notifications of business merger activities. This figure increased to 120 in 2019, the year of the pandemic, and further to 194 in 2020. The year 2022 is expected to represent the zenith of the M&A increase, with 323 notifications. The increasing trend of mergers and acquisitions can be attributed to the growing number of companies that have been unable to survive during the pandemic. In order to continue to grow, companies must implement market expansion strategies, including taking steps to acquire or merge.

The phenomenon of mergers and acquisitions has been widely acknowledged in the global business community as a strategic corporate strategy in recent decades. These approaches have been successfully implemented by a significant number of companies, both national and multinational. (Rahman et al., 2018). Mergers and acquisitions (M&A) have become a significant aspect of corporate restructuring in both developed and developing countries. A substantial body of literature has emerged to examine the post-merger performance and consequences of such transactions (Chakraborty & Kattuman, 2023). According to data from PwC.com, the M&A market exhibited remarkable growth in 2021, with the number of announced deals reaching 62,000, representing a significant increase of 24% compared to the previous year. Moreover, the aggregate value of publicly disclosed mergers and acquisitions transactions reached a historical high of US\$5.1 trillion. This phenomenon also included 130 "jumbo" deals with a value of US\$5 billion each, representing a 57% increase from the previous year. This figure exceeds the previous record of US\$4.2 billion in 2007, indicating a growing dynamism in the M&A market.

In addition, the correlation between mergers and acquisitions and economic dynamics, as well as corporate financial performance, has become increasingly crucial. The success of mergers and acquisitions can be evaluated in terms of financial performance. Financial theory posits that effective financial performance provides useful information about firm value, research



investment, and corporate development (Erdogan & Yamaltdinova, 2019). Financial performance can be quantified through a number of methodologies, including the use of economic value added (EVA). The EVA value is a reliable indicator of financial performance, as it accurately reflects the true value of the company and demonstrates that the company is generating added value and economic returns. This is evidenced by the fact that the operating profit exceeds the cost of capital (Ende, 2017). A positive economic value added (EVA) indicates that the company generates a return that exceeds its capital costs, resulting in a return on investor investment (Fitriyah, 2011). Macro value added can also be employed as an indicator of financial performance. An increase in market value added (MVA) has been demonstrated to significantly affect abnormal stock returns, thereby establishing MVA as a key factor in stock purchase decisions (Maulana et al., 2022). Financial analysis employing accounting ratios can assist small business proprietors in making optimal financial and investment decisions, thereby maximizing wealth (Milojević et al., 2021). Consequently, the utilization of financial ratios serves as a pivotal indicator of a company's financial performance, enabling stakeholders to assess a multitude of facets of its operations.

Previous studies have revealed that merger and acquisition activities have a considerable influence on the achievement of corporate financial performance. (Ogada et al., 2016; Sathishkumar & Tamby, 2018; M.E.&A.S, 2016; Chakraborty & Kattuman, 2023; Boloupremo & Ogege, 2019; Emildasari & Tamara, 2021; Meiryani et al., 2021; Yadav & Jang, 2021; Mahamuni & Jumle, 2018; Watakah, 2022).

THEORETICAL BASE

Synergy Theory

Synergy is a concept that describes the systemic process by which business units of a diversified organization can create greater value by operating as a system rather than as separate entities (Beneke et al., 2007). The synergy effect of M&A is an important indicator to evaluate the performance of M&As (Zhu & Meng, 2021). Synergy-driven M&As result in significantly higher long-term post-M&A performance than agency-driven M&As (Rani et al., 2020).

Synergies allow two or more firms to merge to generate more profits and minimize costs, and can provide operational, financial, market, and managerial benefits (Akhtar & Nosheen, 2022). The synergy effect of mergers and acquisitions occurs when the combined value of two firms exceeds the value of each firm individually. In other words, when two companies merge or one company acquires another, they are expected to be able to create more value. According to Akhtar & Nosheen, (2022), the creation of synergy theory in M&A is used as a strategy to increase the competitiveness of the company. This is also supported by the statement of Rodionov et al. (2023) that based on synergy theory, mergers and acquisitions can generate economic value growth and an integrated business structure.

M&A synergies are well reflected in accounting measures in both the long and short term (Akhtar & Nosheen, 2022). The synergies resulting from M&A, whether in the form of operational efficiencies, cost savings, or increased shareholder value, are clearly visible in the financial statements. In other words, the positive effects of the merger or acquisition are measurable and have an ongoing positive impact on the financial health of the company, creating value that can be identified through accounting tools. The synergy impact on the number of M&A transactions refers to how many mergers or acquisitions take place, while the impact on the transaction value refers to how much financial value is involved in the process.

Mergers and Acquisitions

Mergers and acquisitions (M&A) are defined as transactions that involve the transfer or combination of ownership of a company, another business organization, or its operating units (Zhang et al., 2017). In a merger, two companies merge into one new entity in two ways: by closing the old entity to form a new entity or by one company absorbing the other. In other words, one company is formed from the consolidation of existing companies (Ahuja & Patra, 2020). Concurrently, the corporate action designated as an acquisition encompasses the purchase of the majority or entirety of a target company's shares by another entity, with the objective of assuming control. Acquisitions are frequently pursued as a component of a company's growth strategy, whereby the acquisition of an existing company's operations and market position is more lucrative than pursuing independent expansion (Ahuja & Patra, 2020).

As defined by Kudryashova & Taran (2021), mergers and acquisitions entail an agreement between two companies to merge into a single, new entity. The implications of such an agreement vary depending on the scale of the companies involved. Mergers and acquisitions are horizontal and vertical deals that contribute to economic growth (Chernenko et al., 2021). In general,



mergers and acquisitions are regarded as strategic instruments that can form more robust economic entities and facilitate economic growth through increased efficiency, control, and value-added creation across various industry sectors. Mergers and acquisitions are defined as transactions between companies where only one survives. In contrast, acquisitions involve the acquired company continuing to exist as a subsidiary of the initiator (Reshetnikova & Valieva, 2017). Mergers and acquisitions (M&A) entail the consolidation of the resources and capabilities of two companies. The success or failure of the integration process is contingent upon micro-fundamental factors such as structures, processes, routines, and skills that cut across functional boundaries (Haapanen et al., 2019). Additionally, an M&A transaction entails the consolidation of the assets, liabilities, and business operations of two companies under the control of a single entity (Sami, 2014). The success or failure of the integration process in M&A is largely contingent upon the ability of the company in question to effectively manage and unify the aforementioned elements.

From a global business strategy perspective, mergers and acquisitions provide companies with the opportunity to enter potential new markets or new business areas (Malik et al., 2014). In instances where companies seek accelerated growth or wish to extend their reach into new regions or industries, they may opt to merge with companies that are similar to theirs or to acquire established companies in the desired business area. Mergers and acquisitions (M&A) represent a significant driver of change in the context of corporate restructuring, which often gives rise to a series of changes involving a range of legal structures and strategies (DePamphilis, 2015). Mergers or acquisitions permit companies to alter their internal dynamics in ways that may not be feasible through alternative strategies. Furthermore, legal considerations are a significant aspect of M&A, with the necessity to harmonize the regulations and policies that apply in both companies that merge or engage in acquisition transactions. M&A is therefore regarded as a significant driver of change in the context of corporate restructuring, facilitating adaptation to market challenges or strategic changes on a larger scale.

Financial Performance Analysis

Financial performance can be defined as the result or achievement achieved by company management in the effective management of company assets over a specified period (Gumelar & Evianti, 2022). Financial performance serves as an indicator of a company's financial stability, health, and capacity to generate income, enhance credibility, and repay debt (Xue et al., 2020). Financial performance analysis employs financial ratios as the primary means of evaluating the probability of a company's survival and growth (Basha & Haralayya, 2021). Financial performance is a multifaceted indicator that gauges profitability, growth, productivity, and value creation, thereby confirming the profitability of a business (Hada, 2020). The use of financial ratios in financial performance analysis enables the anticipation of future conditions and the prediction of actions or strategies to enhance company performance in the future (Yanti, 2011).

Financial performance is influenced by a multitude of factors, including organizational, technological, and governmental factors that directly impact the efficacy of financial management systems (Chen et al., 2022). Personal competence factors, system/administrative factors, and political factors also influence the quality of financial reports, though they do not directly impact performance (Nirwana & Haliah, 2018).

Economic Value Added (EVA)

Economic Value Added (EVA) is a key performance indicator that measures the creation of value for shareholders by a company, which includes operating costs and capital costs (Chakrabarti, 2000). The concept of economic value creation is at the core of EVA. This is defined as the generation of income by a company in excess of the cost of capital employed to generate that income. In other words, EVA attempts to quantify the extent to which a company is able to create added value after accounting for the cost of capital. Synergy theory posits that the combination of companies through mergers and acquisitions can enhance economic value growth and operational efficiency (Rodionov et al., 2023). EVA represents a measure of a company's financial performance, calculated by subtracting the cost of capital from operating profit, with adjustments made for taxes on a cash basis (Hammer & Siegfried, 2022). The concept of economic value added (EVA) has been demonstrated to correlate with financial performance, as evidenced by studies conducted by Leepsa and Mishra (2013), Gulati and Garg (2022), Apreku-Djan et al. (2022), and Bhan (2009). H_1 : There is a difference in Economic Value Added (EVA) in non-financial sector companies both before M&A, during M&A, and after M&A.



Market Value Added

Market Value Added (MVA) is a formula employed to inform investment decisions, enabling investors to ascertain the suitability of a given company for investment (Thomas, 2021). MVA, as an indicator of a company's financial performance, can be interpreted more effectively through alternative approaches such as MVA changes and three-year growth rates adjusted for market returns (Sareewiwatthana & Wanidwaranan, 2019). The Market Value Added (MVA) metric reflects the financial performance of a company following a merger, demonstrating an increase in market value that exceeds the capital invested by shareholders. Should the merger prove successful in generating operational efficiencies, value addition, risk reduction, or financial gains, MVA may increase, indicating that the market recognizes the benefits of such synergies. An increase in MVA may be indicative of investors' recognition of the positive effects generated by the merger in terms of firm value growth and value creation, thereby strengthening the position of the firm post-integration. There is a growing body of evidence that leverage value is a reliable indicator of financial performance (Sa'diyah et al., 2015; Sareewiwatthana & Wanidwaranan, 2019; Zulvina & Musdholifah, 2010).

H₂ : There is a difference in Market Value Added (MVA) in non-financial sector companies both before M&A, during M&A, and after M&A.

Financial Ratio

Financial ratios are employed in the field of business analysis to juxtapose and investigate the relationship between elements of financial information, thereby facilitating an understanding of the financial health of the organization (Gaytán Cortés, 2022). Financial ratios play a pivotal role in elucidating the financial well-being of companies and anticipating financial challenges in transition countries, with discrepancies emerging from fluctuating political, market, and economic circumstances (Kliestik et al., 2020). The evaluation of a company's financial position and stability, as well as the facilitation of management decision-making, can be facilitated by financial ratios (Hada & Marginean, 2014).

In accordance with the tenets of synergy theory, the consolidation of two or more corporate entities can engender augmented profitability. Mergers and acquisitions (M&A) transactions are associated with more stable profitability and superior performance for companies that merge compared to companies that do not merge (Pazarskis et al., 2022). Mergers and acquisitions are employed by companies as a strategy to increase profitability. This is achieved by expanding the reach of the company, fostering cooperation with similar companies, or acquiring companies that already have a stable customer base (S. Praveen & Suneetha Rani Tatineni, 2019). The value of profitability has been demonstrated to reflect financial performance (Rani et al., 2015; A. S. & S. J., 2016; Gupta et al., 2023; Aggarwal & Garg, 2022; Chukwunweike EHIEDU et al., 2023; Koroleva et al., 2022).

Companies with high liquidity are also more likely to participate in the M&A bidding process and use cash payments in acquisitions, particularly impacting financially constrained bidders (Kliestik et al., 2020). Changes in liquidity after a merger are fully explained by changes in firm characteristics, such as an increase in analysts, shareholders, market makers, firm size and volume, or a decrease in volatility (Lipson & Mortal, 2003). Liquidity values have been shown to reflect financial performance (Amudha & Kaviarasan, 2015; Kliestik et al., 2020; Pownall et al., 2011).

The increased post-merger leverage for acquiring firms is associated with the merged firm's capacity to generate significantly greater growth opportunities and to incur lower bankruptcy costs and volatility (Agliardi et al., 2012). Higher leverage results in greater acquisition benefits and increased managerial decision-making in mergers and acquisitions (Maloney et al., 1993). The longer the anticipated post-merger integration period, the less probable it is that the acquirer will arrange the financing of the consolidated entity in a manner that enhances the company's leverage (Cheng, 2017). Empirical evidence indicates that leverage is positively correlated with financial performance (Rani et al., 2015; Amudha & Kaviarasan, 2015; Dooley & Zimmerman, 2003). An increase in leverage may result in gains for bidding shareholders, as the new debt structure may enhance the potential return on their equity. Conversely, however, bondholders may experience a loss as a consequence of the increase in leverage. This is because the increase in leverage may increase the risk associated with paying interest and principal on the debt. This change in leverage is not in the form of a payment or signaling effect, but rather is a direct result of the change in the capital structure of the firm following the merger.

H₃ : There is a difference in Financial Ratio in non-financial sector companies both before M&A, during M&A, and after M&A.



RESEARCH METHODS

This research is a quantitative study in which the data used is secondary data in the form of panel data derived from the annual financial statements of companies in the non-financial sector listed on the Indonesia Stock Exchange for the period between 2015 and 2020. The research approach applied is the comparative study method, which involves comparing the pre-post M&A financial performance of non-financial companies listed on the Indonesia Stock Exchange (IDX) over a two-year period before mergers and acquisitions (M&A), in the year of M&A, and two years after in the 2015-2020 M&A period. A partial analysis was conducted using the Wilcoxon Sign Test, while a simultaneous analysis employed the MANOVA test with the STATA version 17 application. The population under investigation comprised all non-financial sector companies listed on the IDX that underwent M&A during the 2015-2020 period. The research sample consisted of 22 companies selected by purposive sampling, and secondary data were analyzed from financial reports.

Variable Measurement Scale

The financial performance that will be compared in this study consists of 5 variables, namely, EVA, MVA, ROA, CR, and DER with the following measurement scale:

Table 1. Variable Measurement Scale

Variable	Code	Indikator	Scale
Economic Value Added	EVA	$EVA = NOPAT - Capital\ Charges$	Ratio
Market Value Added	MVA	$MVA = Market\ Capitalization - Invested\ Capital$	Ratio
Profitability	PFT	$Return\ on\ Assets = Net\ Income / Total\ Assets \times 100\%$	Ratio
Liquidity	LKD	$Current\ Ratio = Current\ Assets / Current\ Liabilities \times 100\%$	Ratio
Leverage	LVR	$DER = Total\ Debt / Total\ Equity \times 100\%$	Ratio

RESEARCH RESULTS

Descriptive Statistics

The objective of the descriptive statistical analysis in this research is to provide a comprehensive visual representation of the variables under study, encompassing the mean value, data distribution, and the highest and lowest values for each variable.

Table 2. Results of Descriptive Statistical Analysis

Variable	Obs	Mean	Std. dev.	Min	Max
EVA2yearsbefore	22	4.65E+09	2.00E+11	-7.95E+11	2.96E+11
EVA1yearsbefore	22	6.98E+09	2.28E+11	-8.59E+11	4.97E+11
EVAofM&Ayear	22	-5.01E+10	4.96E+11	-2.18E+12	6.60E+11
EVA1yearsafter	22	4.29E+10	8.93E+10	-4.08E+10	2.53E+11
EVA2yearsafter	22	5.87E+09	1.10E+11	-3.53E+11	2.62E+11
MVA2yearsbefore	22	1.58E+13	2.36E+13	-4.35E+11	1.00E+14
MVA1yearsbefore	22	4.21E+12	1.80E+13	-1.14E+13	7.90E+13
MVAofM&Ayear	22	6.46E+12	2.41E+13	-1.48E+13	9.47E+13
MVA1yearsafter	22	8.62E+12	3.08E+13	-1.65E+13	1.05E+14
MVA2yearsafter	22	1.67E+12	1.21E+13	-2.03E+13	3.34E+13
ROA2yearsbefore	22	0.054778	0.059451	-0.11808	0.178655
ROA1yearsbefore	22	0.070325	0.125039	0.000885	0.608878
ROAofM&Ayear	22	0.045758	0.06385	-0.12104	0.187679



ROA1yearsafter	22	0.0422	0.056202	-0.12421	0.157717
ROA2yearsafter	22	0.022961	0.058887	-0.12365	0.122828
CR2yearsbefore	22	1.819053	0.984011	0.269033	4.319594
CR1yearsbefore	22	1.971477	1.510585	0.315562	7.386991
CRofM&Ayear	22	1.568642	0.828033	0.386388	3.571241
CR1yearsafter	22	1.686647	1.2409	0.234245	5.522597
CR2yearsafter	22	1.881992	1.535389	0.127197	5.291505
DER2yearsbefore	22	1.573392	1.609648	0.244239	7.036151
DER1yearsbefore	22	1.706795	1.815301	0.20589	6.91228
DERofM&Ayear	22	1.40696	1.034849	0.203176	4.589376
DER1yearsafter	22	1.584506	1.296633	0.133644	5.263271
DER2yearsafter	22	2.945943	7.324115	0.114607	35.4656

Normality Test

Normality testing in this study uses the Shapiro Wilk W test using tools in the form of the Stata Version 17 application. This normality test is used to determine whether the sample data is normal or not. If the sample data is normal, the sample is eligible for the Paired Sample T-test and if the sample data is not normal, the sample data will be followed up using the Wilcoxon Signed Rank test. Sample data is categorised as normally distributed if the Prob value is > 0.05 and will be categorised as abnormal if the prob value is < 0.05.

Table 3. Results of Shapiro-Wilk W Test

Variable	Obs	W	V	z	Prob>z
EVA2yearsbefore	22	0.53504	11.779	5.001	0.0000
EVA1yearsbefore	22	0.53847	11.692	4.986	0.0000
EVAofM&Ayear	22	0.38795	15.505	5.558	0.0000
EVA1yearsafter	22	0.61643	9.717	4.611	0.0000
EVA2yearsafter	22	0.68380	8.011	4.219	0.00001
MVA2yearsbefore	22	0.68689	7.932	4.199	0.00001
MVA1yearsbefore	22	0.56478	11.026	4.867	0.0000
MVAofM&Ayear	22	0.57799	10.691	4.804	0.0000
MVA1yearsafter	22	0.54545	11.515	4.955	0.0000
MVA2yearsafter	22	0.95023	1.261	0.47	0.31917
ROA2yearsbefore	22	0.92867	1.807	1.2	0.11514
ROA1yearsbefore	22	0.45369	13.84	5.328	0.0000
ROAofM&Ayear	22	0.90740	2.346	1.729	0.0419
ROA1yearsafter	22	0.90842	2.32	1.707	0.04395
ROA2yearsafter	22	0.91790	2.08	1.485	0.0688
CR2yearsbefore	22	0.94013	1.517	0.845	0.19919
CR1yearsbefore	22	0.77743	5.638	3.507	0.00023
CRofM&Ayear	22	0.95038	1.257	0.464	0.32143
CR1yearsafter	22	0.85418	3.694	2.65	0.00403
CR2yearsafter	22	0.83379	4.211	2.915	0.00178
DER2yearsbefore	22	0.73502	6.713	3.861	0.00006



DER1yearsbefore	22	0.71912	7.116	3.979	0.00003
DERofM&Ayear	22	0.87007	3.291	2.416	0.00785
DER1yearsafter	22	0.87737	3.107	2.299	0.01077
DER2yearsafter	22	0.32787	17.027	5.748	0.0000

Hypothesis Test

If the significance value is smaller than 0.05, it is confirmed that there is a significant difference between the two variables tested or the hypothesis stating that there are differences in performance before and after mergers and acquisitions can be accepted. This hypothesis test will be carried out using the Wilcoxon Sign Ranked hypothesis test and the Manova Test.

Table 4. Results of Wilcoxon Sign Ranked Hypothesis Test

Variable	Comparison Period	Z	Prob	α	Conclusion
EVA	2 Years Before and 1 Year After M&A	0.016	0.987	0.05	No Difference
	2 Years Before and 2 Year After M&A	-0.308	0.7578	0.05	No Difference
	2 Years Before and Year of M&A	0.698	0.4852	0.05	No Difference
	1 Year Before and 1 Year After M&A	0.925	0.3548	0.05	No Difference
	1 Year Before and 2 Year After M&A	0.3548	0.5699	0.05	No Difference
	1 Years Before and Year of M&A	-0.081	0.9353	0.05	No Difference
MVA	2 Years Before and 1 Year After M&A	-3.133	0.0017	0.05	Differences
	2 Years Before and 2 Year After M&A	-3.295	0.001	0.05	Differences
	2 Years Before and Year of M&A	-3.49	0.0005	0.05	Differences
	1 Year Before and 1 Year After M&A	-0.406	0.6849	0.05	No Difference
	1 Year Before and 2 Year After M&A	-1.023	0.3065	0.05	No Difference
	1 Years Before and Year of M&A	0.276	0.7826	0.05	No Difference
ROA	2 Years Before and 1 Year After M&A	-2.678	0.0074	0.05	Differences
	2 Years Before and 2 Year After M&A	2.549	0.0108	0.05	Differences
	2 Years Before and Year of M&A	-1.672	0.0945	0.05	No Difference
	1 Year Before and 1 Year After M&A	-0.081	0.9353	0.05	No Difference
	1 Year Before and 2 Year After M&A	-1.282	0.1997	0.05	No Difference
	1 Years Before and Year of M&A	-0.828	0.4077	0.05	No Difference
CR	2 Years Before and 1 Year After M&A	0.4077	0.2768	0.05	No Difference
	2 Years Before and 2 Year After M&A	-0.049	0.9612	0.05	No Difference
	2 Years Before and Year of M&A	1.023	0.3065	0.05	No Difference
	1 Year Before and 1 Year After M&A	0.114	0.9095	0.05	No Difference
	1 Year Before and 2 Year After M&A	0.308	0.7578	0.05	No Difference
	1 Years Before and Year of M&A	-0.503	0.6148	0.05	No Difference
DER	2 Years Before and 1 Year After M&A	0.276	0.7826	0.05	No Difference
	2 Years Before and 2 Year After M&A	0.243	0.8076	0.05	No Difference
	2 Years Before and Year of M&A	0.503	0.6148	0.05	No Difference
	1 Year Before and 1 Year After M&A	-0.211	0.8329	0.05	No Difference
	1 Year Before and 2 Year After M&A	0.114	0.9095	0.05	No Difference
	1 Years Before and Year of M&A	-0.049	0.9612	0.05	No Difference



Table 5. Results of MANOVA Test

Source	Statistic	dF	F(df1, df2) =	F	Prob>F			
Thn	W	0.925	9	9.0	100.0	0.90	0.5276	E
	P	0.075		9.0	100.0	0.90	0.5276	E
	L	0.0811		9.0	100.0	0.90	0.5276	E
	R	0.0811		9.0	100.0	0.90	0.5276	E
Residual	100							
Total	109							

e = exact, a = approximate, u = upper bound on F

DISCUSSION

Comparative Analysis of Pre-Post Merger and Acquisition EVA (Economic Value Added) Value

The results of the Wilcoxon Signed Rank Test explain that there is no significant difference in EVA value between pre-M&A and post-M&A. Of the 22 companies used as the research sample, 9 companies tend to create synergies on EVA value after conducting M&A, 2 companies do not experience a significant increase and decrease, and 11 companies tend to experience a decrease in EVA value after M&A. Synergy theory suggests that M&A transactions are undertaken to create synergies that increase the overall value of the merged entity (Kumar & Bansal, 2008; Čirjevskis, 2021). Overestimating the potential for synergies is a common mistake in M&A deals, leading to suboptimal outcomes (Fiorentino & Garzella, 2015). Gupta et al. (2021) highlight that differences between M&A-participating firms can pose challenges to merger success, and the duration of post-merger integration can affect merger outcomes.

The decline in Economic Value Added (EVA) following mergers and acquisitions (M&A) is often due to high integration costs, as these are additional expenses that reduce profits. In addition, debt financing of acquisitions increases interest expense, while increased depreciation of new assets reduces net income. Changes in capital structure that increase the weighted average cost of capital (WACC), management distraction during the M&A process, the gap between projected synergies and actual post-M&A results, and overpaying for acquisitions can also reduce post-M&A EVA. If the premium paid for an acquisition does not match the actual realisation of synergies, this can have a negative impact on the financial performance of the acquiring company, including EVA (Čirjevskis, 2021).

The economic conditions in the year of the M&A also affect the pre-post EVA value. From the results of the study, it is known that companies that conduct M&A in 2015, 2016, 2017 and 2018 tend to experience a decrease in EVA value during the period of that year when there was a slowdown in economic growth, a weakening rupiah value, an increase in capital market volatility inflation and a decrease in the composite stock price index (JCI). On the other hand, companies that engage in mergers and acquisitions in 2019 and 2020 tend to experience an increase in EVA value despite the global CO-19 pandemic occurring in that year. This may be because many companies experienced a decline in valuation at the start of the COVID-19 pandemic. The acquisition of assets by companies with strong resources at a discounted price can increase EVA if the company is able to optimise the use of these assets. In addition, many governments and central banks around the world have provided fiscal and monetary stimulus to support the economy. This support can provide additional liquidity and better financing conditions, which companies can use to undertake M&A with lower financing costs.

Comparative Analysis of MVA (Market Value Added) Pre-Post Mergers and Acquisitions

The results of the Wilcoxon Signed Rank Test explain that there is a significant difference in MVA value between pre-M&A and post-M&A. Of the 22 companies used as the research sample, only 4 companies experienced synergy in MVA value after M&A, 2 companies did not experience significant increase and decrease, and 16 companies tended to experience decrease in MVA value after M&A. This shows that M&A has an impact on MVA, but the impact tends to be negative for most companies in the sample. The decrease in MVA value before and after M&A may be caused by the failure to realise synergies due to insufficient organisational integration or incompatible operations. In addition, according to Čirjevskis (2021), companies that do not use ambidexterity to create synergies may not see a significant difference in MVA value after M&A.



The significant decline in Market Value Added (MVA) in the two-year pre-merger period, the one-year and two-year post-merger periods, and in the year of the merger is due to several main reasons related to the complexity and challenges of long-term integration, including ongoing integration costs, companies often experiencing operational disruptions and reduced efficiency due to the complex integration process, market expectations of M&A synergies being too high, and the use of large amounts of debt to finance acquisitions. In addition, management often has to divide its focus and resources between managing the core business and integrating the operations of the merged company, which can disrupt operational performance in the short term. In some cases, the acquiring company has to pay a high premium to acquire the target company. All these factors contribute to a significant decrease in the MVA value compared to the comparative period 2 years before and 1 and 2 years after the M&A, as well as in the year of the M&A. The economic conditions in the M&A year also affect the pre-post MVA value. From the results of the study, companies that conducted M&A in 2015, 2016, 2017 and 2018 tend to experience a decrease in MVA value during the period of that year when there was a slowdown in economic growth, weakening of the rupiah, increased capital market volatility and a decline in the composite stock price index (JCI). On the other hand, companies that undertake mergers and acquisitions in 2019 and 2020 tend to experience an increase in EVA value, despite the global CO-19 pandemic occurring in that year. The realisation of domestic investment (PMDN) and foreign investment (PMA) in 2019 again increased by 14.4 percent and 12.2 percent, respectively, compared to the previous year. In 2020, Bank Indonesia lowered its benchmark BI 7-day reverse repo rate five times, from 5% to 3.75%, which lowered the cost of corporate debt and increased profits. The Indonesian government also provided various fiscal and monetary stimulus measures to support the economy amid the COVID-19 pandemic, which helped maintain people's purchasing power.

Comparative Analysis of Pre-Post Merger and Acquisition ROA (Return On Asset) Value

The results of the Wilcoxon signed-rank test indicate a statistically significant difference in the ROA value between the pre-merger and post-merger periods. Of the 22 companies utilized as research samples, only four demonstrated the generation of synergies in ROA value subsequent to the execution of a merger and acquisition (M&A) transaction. Three companies exhibited no notable increase or decrease in ROA value, while 15 companies displayed a tendency towards a reduction in ROA value following an M&A event. This indicates that M&A has an impact on ROA, although the effect is typically negative for the majority of companies in the sample.

A notable decline in return on assets (ROA) can result from the elevated integration costs that frequently arise following mergers and acquisitions (M&A). These costs can lead to an increase in operating expenses and a reduction in net profit, which ultimately contributes to a decline in ROA. Furthermore, the expansion of total assets is not necessarily correlated with the company's net profit, which may not increase in proportion due to the presence of high integration costs. In certain instances, mergers and acquisitions may result in a transient reduction in sales due to operational disruptions, loss of customers, or alterations in marketing strategy. In the event that the decline in sales is not compensated for by sufficient cost efficiency, the company's net profit will decline. The economic conditions prevailing in the year of the M&A also exert an influence on the value of the ROA, both before and after the M&A. The findings of the research indicate that companies that engage in mergers and acquisitions (M&A) during the years 2015, 2016, 2017, 2018, and 2019 tend to experience a decline in their return on assets (ROA) value. This can be attributed to a decline in economic growth, a depreciation of the rupiah exchange rate, an increase in interest rates, and an escalation in the price of subsidized fuel. Conversely, companies that conducted M&A in 2020 exhibited an increase in ROA value. This phenomenon can be attributed to the simultaneous occurrence of a decline in interest rates and a reduction in subsidized fuel prices during that year.

Comparative Analysis of CR (Current Ratio) Value Pre-Post Merger and Acquisition

The Wilcoxon Signed Rank test results indicate that there is no statistically significant difference in CR value between the pre-M&A and post-M&A periods. Of the 22 companies utilized as research samples, eight companies tend to produce synergies in CR value following the completion of M&A activities. Three companies do not experience a significant increase or decrease, and 11 companies tend to experience a decrease in CR value following the completion of M&A activities. Advisors are crucial in identifying synergistic combinations and ensuring a larger share of synergies is allocated to the bidder. This indicates that the involvement of skilled financial advisors can result in more efficient post-merger operations, and potentially maintain current ratios at similar levels pre- and post-merger.



A reduction in the value of the current ratio (CR) subsequent to mergers and acquisitions (M&A) can be attributed to the fact that, in the M&A process, companies frequently resort to short-term debt as a means of financing transactions or addressing working capital requirements. The ratio of current assets to current liabilities will decline if the ratio of short-term liabilities to current assets remains unchanged. Furthermore, following M&A, companies may encounter a reduction in current assets, which may result in a decline in the current ratio if not counterbalanced by a proportional decrease in current liabilities. The economic conditions prevailing in the year of the M&A also exert an influence on the pre-post M&A CR value. The results of the study indicate that companies that conducted M&A in 2015, 2016, 2017, and 2018 experienced a decrease in CR value. This period was characterized by a slowdown in economic growth, a weakening of the rupiah, increased inflation, capital market volatility, and a decrease in the composite stock price index (JCI). Conversely, companies that conducted M&A in 2019 and 2020 exhibited an increase in CR value. In 2019, the rupiah exchange rate against the US dollar was relatively stable. Additionally, Bank Indonesia reduced the benchmark interest rate. Furthermore, during the pandemic, numerous companies implemented operational cost efficiency measures. The Indonesian government also enacted various relaxation policies that could potentially reduce the company's current liabilities, such as tax debt and short-term debt.

Comparative Analysis of Pre-Post Merger and Acquisition DER (Debt to Equity Ratio) Value

The results of the Wilcoxon signed-rank test indicate that there is no statistically significant difference in the DER value between the pre-merger and post-merger periods. Of the 22 companies utilized as research samples, 12 companies exhibited a tendency to generate synergies in the DER value subsequent to conducting M&A with a declining DER value, while 10 companies demonstrated a proclivity to experience an increase in DER value following M&A. Suboptimal post-merger performance is often due to insufficient synergy potential or insufficient strategic fit, which ultimately results in the loss of synergy realization. This perspective suggests that when synergy potential is constrained, DER may remain stable both pre- and post-merger, reflecting the difficulty in achieving substantial changes in financial leverage through synergy integration.

An increase in the value of Debt to Equity Ratio (DER) after mergers and acquisitions (M&A) often occurs because companies conducting M&A tend to utilise more debt to fund acquisitions rather than relying on equity. Difficulties in achieving expected operational synergies, such as cost savings and increased revenues, may reduce the company's ability to raise equity through increased profits and revenue retention. In addition, management that is less experienced in managing the M&A integration process may fail to optimise the financing structure and manage debt effectively, leading to an increase in debt burden and a decrease in relative equity. Economic conditions in the M&A year also affect the pre-post M&A DER value. From the research results, it is known that companies that conduct M&A in 2015, 2016, and 2017 tend to experience an increase in the value of DER. In that year, Indonesia experienced significant currency fluctuations in addition to the rupiah experiencing a significant weakening against the US dollar, reaching the lowest level in several years. Indonesian bank interest rates also experienced a downward trend in evolution. For companies that conducted M&A in 2018, 2019, and 2020, the DER value decreased even though in 2020 the economic conditions were unstable. This happened because in that year there was an increase in interest rates in Indonesia, and economic growth increased. For 2020, despite the pandemic conditions, some acquisitions were made by stock exchange, not cash. This means that there is no increase in debt, but there is an increase in equity, which lowers the DER. During the pandemic, some companies may have restructured their debt with lower interest rates or deferred payments, or used cash flow from operations or M&A proceeds to pay off some of the debt. Various stimulus policies and government support during the pandemic helped companies maintain liquidity and financial stability, which may have been used to preserve equity or repay debt.

CONCLUSION

The results of simultaneous testing of all financial performance indicators in this study indicate that there is no significant difference between before and after M&A. As for the results of tests conducted partially, financial performance indicators that have significant differences only occur in the MVA variable in the comparison period covering 2 years before, 1 and 2 years after M&A, and the year of M&A. Furthermore, the ROA variable in the comparison period, comprising the two years preceding the M&A, the one year during which the M&A occurred, and the two years following it, also exhibits a significant difference. However, the impact of the M&A on the MVA and ROA variables appears to be predominantly negative.



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Cite this Article: Eunike Rosni Bohalima, Erlina, Firman Syarif (2024). Comparative Analysis of Pra-Post Merger and Acquisition Financial Performance Reviewed From EVA, MVA and Financial Ratio Methods (Empirical Study of Non-Financial Sector Companies Listed on the IDX for the Period 2015-2020). *International Journal of Current Science Research and Review*, 7(7), 5010-5023