Merger and Acquisition: Do They Really Creates A Synergy Effect?

Gadis Arimbi Puspita[1], Irni Yunita[2]

[1,2]Faculty of Economic and Business, Telkom University, Indonesia
gadisarimbipuspita@telkomuniversity.ac.id

Abstract

As competition continues to intensify across various industry sectors, companies are compelled to formulate strategies to remain competitive. One commonly used strategy is expansion through Mergers and Acquisitions (M&A), which, in theory, should create synergy and added value for the company. This research aims to test the effects of post-merger synergy, specifically operational synergy tested using Sales Growth and Earnings Per Share (EPS), and financial synergy tested using Debt Equity Ratio (DER). The study examined 17 companies that underwent M&A during the years 2015-2019, with a testing period of 3 years before and after the events, divided into 12 quarters. The research results indicate no significant differences in the three variables. Meanwhile, the synergy level tests using Gain Score Analysis show that 58.82% of companies did not experience operational synergy, as tested using Sales Growth. Furthermore, 64.71% of companies did not experience operational synergy, as tested using Earnings Per Share (EPS). Additionally, 47.06% of companies did not experience financial synergy, as tested using Debt Equity Ratio (DER).

I. Introduction

In an effort to enhance competitiveness, companies need to develop appropriate strategies to strengthen their presence in the market and improve operational efficiency in order to continue growing in the midst of increasingly fierce competition. One step to increase competitiveness is through expansion. According to Husnan & Pudjiastuti (2015), there are two approaches to conducting business expansion, namely internal expansion and external expansion.

Internal expansion involves the natural growth of the business as various departments within the company grow through the allocation of capital budgets. On the other hand, external expansion refers to business development that involves external parties, such as competitors and suppliers, to consolidate business through mergers or acquisitions. Mergers and acquisitions are considered a fairly common strategy in market power expansion because they are seen as the fastest way to expand the business while also enhancing competitiveness (Dewata, 2017).

According to Gaughan (2010), in its development, merger and acquisition activities are divided into six major waves commonly referred to as the global merger waves: (1) The first wave began with horizontal mergers that occurred between 1897-1904 and was known as mergers for monopoly; (2) The second wave occurred during the period 1916 1929 and was characterized as vertical mergers. This wave saw the emergence of automotive giants and the public utility sector. The end of this wave was triggered by the Great Depression in 1929; (3) The third wave took place during the period 1965-1969 and

1991

was known as conglomerate mergers. During this time, many companies embraced the concept of diversification and business line expansion; (4) The fourth wave occurred from 1984-1989 and was called disciplinary mergers. It earned this name because most mergers during this time involved hostile takeovers that led to the replacement of target company managers; (5) The fifth wave happened in the 1990s and involved mergers aimed at increasing the size of companies. This wave was triggered by the belief that company size was crucial in competition. Key factors facilitating this wave included market deregulation and privatization; (6) Finally, from the 2000s to the present, there has been an increase in merger and acquisition activity worldwide, and there has been no interruption to this merger wave. Observers have concluded that this is because the declining financial market signals that target companies are cheaper, making it an opportune time for acquisitions.

Since the year 2000, there have been more than 790,000 announced merger and acquisition transactions worldwide, with identified values exceeding 57 trillion US dollars (IMAA Institute, 2023). This demonstrates that mergers and acquisitions continue to be considered a fast-track strategy for business development in gaining market dominance (Dewata, 2017). In Indonesia, the phenomenon of mergers and acquisitions has existed since the enactment of Law Number 1 of 1995 concerning Limited Liability Companies (UU 1/1995). However, in specific sectors, these activities have been known long before the enforcement of Law No. 1 of 1995. The development of M&A in Indonesia since 2015 has also been driven by the implementation of the ASEAN Economic Community (AEC) on December 31, 2015.
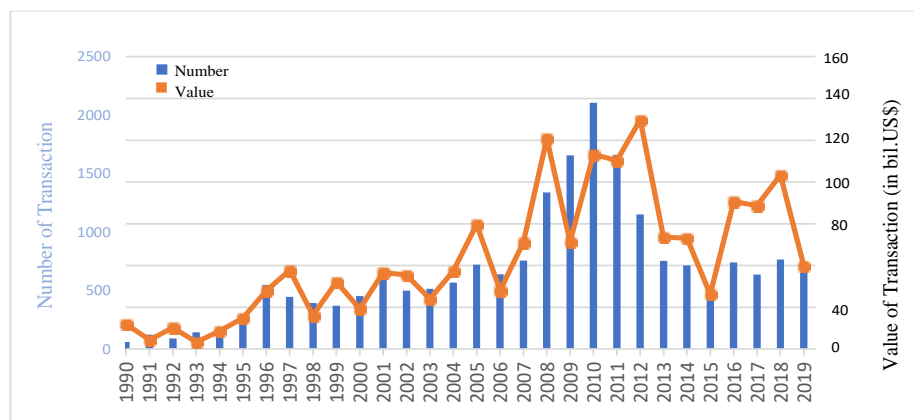

Figure 1. *Growth of M&A in Indonesia*

Abdul Moin (2010:48) asserts that, in principle, there are two main reasons that drive companies to engage in mergers, namely Economic Motives and Non-Economic Motives. Economic motives tend to relate to a company's efforts to enhance total value. Conversely, non-economic motives refer more to the personal desires of the owners or management of the company. Another perspective, according to DePamphilis (2021), states that one common underlying reason for mergers and acquisitions is synergy. The concept of synergy refers to a situation where the value generated from the merger of companies is greater than the value of each separate company. Synergy occurs when the merger has the potential to create new economies of scale (Husnan & Pudjiastuti, 2015). According to Manurung (2011), the motive for synergy is divided into Operational Synergy and Financial Synergy.

Several companies engage in M&A for various reasons. Out of the 17 companies studied, 23.5% undertook M&A for Expansion, 29.4% for Financial reasons, 23.4% for Operational motives, and 23.5% for other reasons such as pooling of interest. The number of companies engaging in mergers indicates the perspective that such actions are seen as strategies for business growth and enhancing competitiveness without starting from scratch (Dewata, 2017). However, this strategy needs further examination regarding the value-added benefits it will bring. Some cases indicate that merger and acquisition activities bring their own uncertainties (Gaughan, 2017:126).

In this study, the variables Sales Growth and Earnings Per Share (EPS) will be used to measure operational synergy, while the Debt Equity Ratio (DER) will be used to measure financial synergy. The method used is Gain Score analysis to determine the level of synergy of each research object

II. Review of Literature

In this section, the previous studies on synergy effect and financial performance in merger and acquisition will be presented and it is aimed at strength research background, which have similarities in variables, topics, and objects with this research. The research conducted by Adhikari et al. (2023), which evaluates the impact of M&A on the financial performance of commercial banks in Nepal, indicates a significant increase in the company's Earnings Per Share (EPS).

Gupta et al. (2021) conducted a study on the impact of M&A on the financial performance of the construction and real estate industry in India, implying that the construction sector supports the synergy hypothesis, which states that M&A will enhance synergy due to the consolidation of resources from two companies. This aligns with the research by Almurni & Azhar (2019), which analyzed the performance differences of companies before and after mergers in publicly listed companies on the Indonesia Stock Exchange, showing differences in Earnings Per Share (EPS) and Debt Equity Ratio (DER) before and after the merger. Ondieki & John (2015) also conducted research to analyze the impact of mergers on the performance of banks in Kenya, with results indicating that 31% of merger activities had a significant effect on Sales Growth and Earnings Per Share (EPS).

In contrast to previous research findings, some studies actually show opposite results. Natanegara (2016) conducted research to examine the differences in operational synergy resulting from the merger of telecommunications companies in Indonesia. This study indicated that there was no significant difference in the Earnings Per Share (EPS) of the company before and after the merger. Another study conducted by Faoziah & Norita (2016), which examined the impact of mergers on operational and financial synergy, showed no differences in Sales Growth and Debt Equity Ratio (DER) of the companies.

Another study by Larasati et al. (2017), which examined 24 companies listed on the Indonesia Stock Exchange, showed results that there were no differences in the Debt Equity Ratio and Net Profit Margin (NPM) of the companies. Mashkour et al. (2021) also conducted an analysis of financial synergy in companies listed on the Iraq Stock Exchange. They concluded that out of the four indicators, which included Return on Asset (ROA), Return on Equity (ROE), and Earnings per Share (EPS), only EPS did not show a significant difference before and after the merger.

III. Research Methods

This study employs a comparative descriptive method. Within the framework of this research, descriptive analysis aims to explain how operational synergy and financial synergy of companies have changed before and after merger and acquisition events involving listed companies on the Indonesia Stock Exchange (BEI) that conducted M&A during the period 2015-2019. Meanwhile, the comparative approach is used to identify differences in Sales Growth, Earnings Per Share (EPS), and Debt Equity Ratio (DER) before and after merger and acquisition events.

This research was conducted on 17 companies listed on the Indonesia Stock Exchange (BEI) that underwent mergers and acquisitions during the period 2015-2019. The sample was selected using purposive sampling method. The objective of this research is hypothesis testing with a group difference approach. Hypothesis testing in this study aims to explain the nature of the relationship between mergers and company synergy. This research compares the same groups at different times, namely Sales Growth, Earnings Per Share (EPS), and Debt Equity Ratio (DER) before and after the merger and acquisition events.

The data used are historical secondary data including sales, net profit, debt and equity of the company which access by IDX and Company's Website. The analytical method employed involves conducting a difference test over a 6-year window period, divided into 12 quarters before and 12 quarters after the event. The data is processed using the Paired Sample t-Test and Wilcoxon Signed Rank Test methods using SPSS to determine is there a significant differences between before and after event. Meanwhile Gain Score analysis is used to determine the level of synergy of each researched object.

IV. Result and Discussion

The 1st hypothesis of this research suggests that there exists a substantial disparity in Sales Growth among the companies listed on the IDX before and after the declaration of mergers and acquisitions between 2015 and 2019. To evaluate this hypothesis, the Wilcoxon Sign-Rank Test is employed as the statistical testing method. The selection of this method is grounded on the results of a normality test, which indicated that the average sales growth data for both groups do not follow a normal distribution.

Table 1. Wilcoxon Sign-Rank Test of Sales Growth

Test Statics[a]	
	Before – After
Z	-.371[b]
Asymp. Sig (2-tailed)	.710

Source : Processed Data, 2023

It is observed using Wilcoxon Sign-Rank Test that the calculated z-value is -0,371 with an Asymp sig. (2-tailed) value of 0,710. This significances value is greater than than α (>0.05), thus H0 is accepted. This implies that it can be concluded that there is no significant difference between the earning per share of IDX-listed companies before and after the announcement of mergers and acquisitions during the period 2015-2019.

In theory, operational synergy can be achieved by companies, one of which is through Revenue-Enhancing Synergy. Increasing revenue can be attained through new opportunities arising from the restructuring of two companies, such as the division of

market opportunities and the expansion of distribution channels post-merger. The variable sales growth was chosen because it can depict and measure the increase in sales after a merger. However, the M&A events of IDX-listed companies during the period 2015-2019 were not deemed sufficient to generate operational synergy and enhance the company's revenue.

The 2nd hypothesis of this research suggests that there is a notable variation in Earnings Per Share (EPS) among the companies listed on the IDX before and after the declaration of mergers and acquisitions between 2015 and 2019. To examine this hypothesis, the statistical testing method employed is the Paired Sample t-Test. The selection of this method is founded on the results of a normality test, which indicated that the average earnings per share data for both groups do not exhibit a normal distribution.

Table 2. Paired Sample t-Test of Earning Per Share (EPS)

				Paired Samples Test				
				Paired Differences				
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference		t	df	Sig. (2-tailed)
				Lower	Upper			
Before - After	62.75308	99.82960	20.37763	20.59874	104.90743	3.080	23	.005

Source: Processed Data, 2023

It is observed that the calculated t-value is 3.08 with a significance value (2-tailed) of 0,005. The significance value is equal to α (≥0.05), therefore H_0 is accepted, indicating there is no significant difference in earning per share among companies listed on the IDX before and after the announcement of M&A during the period 2015-2019.

The test results indicating no significant difference imply that, in general, there was no operational synergy resulting from the mergers and acquisitions of IDX-listed companies during the period 2015-2019. The proxy variable used in this study is Earnings Per Share (EPS), which provides an insight into how efficiently a company generates net profit that can be distributed to its shareholders. The absence of operational synergy through EPS indicates that, overall, companies have not succeeded in increasing net profit for distribution to shareholders.

The 3rd hypothesis of this research suggests that there is a notable variation in Debt Equity Ratio (DER) among firms listed on the IDX before and after the declaration of mergers and acquisitions between 2015 and 2019. To assess this hypothesis, the Wilcoxon Sign-Rank Test is employed as the statistical testing method. The selection of this approach is grounded on the results of a normality test, which reveals that the data for average debt equity ratio are not distributed normally.

Table 3. Wilcoxon Sign-Rank Test of Debt Equity Ratio (DER)

Test Statics[a]	
	Before – After
Z	-2.714[b]
Asymp. Sig (2-tailed)	.007

Source: Processed Data, 2023

It is observed using Wilcoxon Sign-Rank Test that the calculated z-value is -2,714 with an Asymp sig. (2-tailed) value of 0,007. This significances value is greater than than α

(>0.05), thus H_0 is accepted. This implies that it can be concluded that there is no significant difference between the debt equity ratio of IDX-listed companies before and after the announcement of mergers and acquisitions during the period 2015-2019.

In theory, financial synergy refers to the integration effect of combining the finances of two companies to create greater added value. This strategy can be achieved by strengthening the capital structure, which involves determining the mix of debt and equity. In this study, financial synergy resulting from the merger process did not occur because there was no significant difference in both test groups, although Group 2 companies showed a significant negative difference. The mergers and acquisitions conducted allowed companies to access external sources of funds more easily and inexpensively. However, this resulted in an imbalance between the amount of debt (liabilities) and equity for some companies. Most companies tended to have liabilities exceeding their assets and equity (e.g., ACST, SRIL, AGRS, MDKA, DNAR, etc.).

The synergy test used in this study is the gain score analysis. Gain Score is a method used to measure the changes or improvements in a specific variable between two measurement times. The gain score test aims to determine the effectiveness of using a specific treatment in the research. Here are the results of the Operational Synergy Test (Sales Growth and Earning Per Share) and Financial Synergy Test (Debt Equity Ratio) as a result of the phenomenon of announcing mergers and acquisitions of IDX-listed companies during the period 2015-2019.

Table 4. Operating Synergy Test using Sales Growth

SG	N	Pre-Test	Post-Test	Gain	
				Statistic	Interpret
BLTZ	12	.1161541	.0522139	-.0723432	None
SILO	12	.0600088	.0260936	.0360803	None
AMFG	12	.0134274	.1622869	.1508855	High
ACST	12	.0988960	.0453501	.1600771	None
ITMG	12	-.0117186	.0182489	.0064547	None
MASA	12	.0202887	.0557977	.0362443	Low
INDY	12	.0428539	.0155931	.0610639	None
SRIL	12	.0191061	.0381292	.0193937	Low
ROTI	12	.0221437	.0180038	.0042336	None
KBLI	12	.0541700	.0525440	.0017191	None
AGRS	12	-.0948998	.0375803	.1209974	High
MDKA	12	.1799290	.1401988	.0484472	None
PGAS	12	.0538051	.0063994	.0501014	None
BTPN	12	.0141704	.0152064	.0010509	Low
DNAR	12	.0556260	.0689207	.0140778	Low
AMRT	12	.0299048	.0298897	.0000155	None
IPTV	12	.3833376	.1087554	.4452716	High

One-Group Gain Score

Source: Processed Data, 2023

Table 1 shows the results of the operational synergy test for sales growth using the gain score method. The results indicate that 10 out of 17 companies (58.82%) have gain values less than 0, indicating no operational synergy. Meanwhile, 3 out of 17 companies

(17.65%) have a low level of operational synergy (n gain < 0.3). One company (5.88%) has a moderate level of operational synergy, and 3 companies (17.65%) have a high level of operational synergy (n gain > 0.7)

Table 5. Operating Synergy Test using Earning Per Share (EPS)

EPS	N	Pre-Test	Post-Test	Gain	
				Statistic	Interpret
BLTZ	12	-74.5002	12.2686	.49724	Moderate
SILO	12	49.5248	-1.43355	-1.0095	None
AMFG	12	706.108	9.98867	1.1485	High
ACST	12	79.6070	-29.1429	-5.3327	None
ITMG	12	1,028.62	1,121.5	-.10004	None
MASA	12	-66.3662	25.6734	.553235	Moderate
INDY	12	-20.5063	-27.3258	-.056590	None
SRIL	12	26.6428	10.9806	-.213506	None
ROTI	12	27.9544	9.77577	-.252322	None
KBLI	12	40.3846	10.1496	-.507169	None
AGRS	12	0.29717	-5.63527	-.059501	None
MDKA	12	23.6446	20.5063	-.041101	None
PGAS	12	66.9693	7.64636	-1.79599	None
BTPN	12	44.0901	99.2869	.987246	High
DNAR	12	3.48859	.100347	-.035107	None
AMRT	12	5.89800	13.0302	.075792	Low
IPTV	12	-18.8463	-.741000	.152343	Low

Source: Processed Data, 2023

Another proxy for operational synergy is Earnings per Share (EPS) presented in Table 2. The results show that 11 out of 17 companies (64.71%) have gain values less than 0, indicating no operational synergy. Meanwhile, 2 out of 17 companies (11.76%) have a low level of operational synergy (n gain < 0.3). Two companies (11.76%) have a moderate level of operational synergy, and the remaining 2 companies (11.76%) have a high level of operational synergy (n gain > 0.7)

Table 6. Financial Synergy Test using Debt Equity Ratio (DER)

SG	N	Pre-Test	Post-Test	Gain	
				Statistic	Interpret
BLTZ	12	.778422	.542652	-1.06404	None
SILO	12	.689420	.284245	-1.30457	None
AMFG	12	.322612	1.33163	1.48958	High
ACST	12	.349160	1.48262	1.74153	High
ITMG	12	.396314	.464290	.112601	Low
MASA	12	.774495	1.01502	1.06662	High
INDY	12	1.99954	3.05955	-1.06048	None
SRIL	12	1.85409	1.26834	.685810	Moderate
ROTI	12	1.15112	.515093	4.20863	High

KBLI	12	.543512	.474959	-.150174	None
AGRS	12	6.24789	4.27911	-2.00594	None
MDKA	12	.936881	.812813	-1.96563	None
PGAS	12	1.13413	1.75368	-4.61894	None
BTPN	12	4.68887	4.85673	-.045505	None
DNAR	12	4.13695	1.56958	.818428	High
AMRT	12	2.95765	2.40630	.281635	Low
IPTV	12	2.09058	.560207	1.40326	High

Source: Processed Data, 2023

Table 3 shows the results of the financial synergy test for debt equity ratio using the gain score method. The results indicate that 8 out of 17 companies (47.06%) have gain values less than 0, indicating no financial synergy. Meanwhile, 2 out of 17 companies (11.76%) have a low level of financial synergy (n gain < 0.3). One company (5.88%) has a moderate level of financial synergy, and 6 companies (35.29%) have a high level of financial synergy (n gain > 0.7)

V. Conclusion

The main purpose of this research is to determine whether there is operational and financial synergy following corporate actions such as Mergers and Acquisitions (M&A). The research results indicate that none of the test variables show significant differences before and after M&A events. This outcome is further confirmed by the synergy level tests, which reveal that 58.82% of companies did not experience operational synergy when tested using Sales Growth. Additionally, 64.71% of companies did not experience operational synergy when tested using Earnings Per Share (EPS). Furthermore, 47.06% of companies did not experience financial synergy when tested using Debt Equity Ratio (DER). These results suggest that, although M&A and acquisitions remain favored strategies for enhancing a company's value in response to market competition, merger actions have their own uncertainties. It is essential to understand that Mergers and Acquisitions are complex processes, and their outcomes may not always align with existing conceptual frameworks.

A proactive and responsive attitude from stakeholders is necessary to ensure that the merger will play a role in supporting the company in achieving its core objectives, which is to create value for shareholders. Companies also need to consider the presence of various hidden costs associated with the merger process. Therefore, stakeholders need to facilitate efficient capital allocation strategies.

References

Adhikari, B., Kavanagh, M., & Hampson, B. (2023). Analysis of the pre-post-merger and acquisition financial performance of selected banks in Nepal. Asia Pacific Management Review. https://doi.org/10.1016/J.APMRV.2023.02.001

Ahmed, M., & Ahmed, Z. (2014). Mergers and Acquisitions: Effect on Financial Performance of Manufacturing Companies of Pakistan. Middle-East Journal of Scientific Research, 21(4), 689–699. https://doi.org/10.5829/idosi.mejsr.2014.21.04.21442

Almurni, S., & Azhar, E. (2019). Comparative Analysis of Corporate Performance before and after the Merger (Empiric study on public companies). www.idx.co.id.

Barney, J. B., & Hesterly, W. S. (2012). Strategic Management and Competitive Advantage.

DePamphilis, D. (2021). Mergers, Acquisitions, and Other Restructuring Activities : An Integrated Approach to Process, Tools, Cases, and Solutions (11th ed.). Academic Press.

Faoziyah, N. P., & Norita. (2016). Analisis Operating Synergy, Financial Synergy dan Kinerja Keuangan serta Return Saham Sebagai Akibat d Proses Merger (Studi Kasus pada PT Smartfren Telecom Tbk).

Gaughan, P. A. (2010). Mergers, Acquisitions, and Corporate Restructurings (5th Edition). Wiley. https://doi.org/10.1002/9781118269077

Gupta, I., Raman, T. V., & Tripathy, N. (2021). Impact of Merger and Acquisition on Financial Performance: Evidence from Construction and Real Estate Industry of India. FIIB Business Review, 12(1), 74–84. https://doi.org/10.1177/23197145211053400

Jallow, M. S., Masazing, M., & Basit, A. (2017). THE EFFECTS OF MERGERS & ACQUISITIONS ON FINANCIAL PERFORMANCE: CASE STUDY OF UK COMPANIES. International Journal of Accounting & Business Management, 5(1). www.ftms.edu.my/journals/index.php/journals/ijabm

Manurung, A. H. (2011). Restrukturisasi Perusahaan : Merger, Akuisisi, dan Konsolidasi Serta Pembiayaannya. PT Adler Manurung Press.

Mardiyanto, H. (2009). Intisari Manajemen Keuangan. PT. Gramedia Widiasarana Indonesia (Grasindo).

Mashkour, S., Khlaif, A. A., & Imran, I. K. (2021). The Effect Of Merger And Acquisition On Financial Performance Of Companies In Iraq. International Journal Documentation and Research Institute. https://doi.org/10.5281/zenodo.5676419

Natanegara, H. L. (2016). Pengaruh Sinergi Operasional Akibat Proses Merger Terhadap Imbal Hasil Saham (Studi Kasus: Pt. Smartfren Telecom Tbk.).

Patel, R. (2018). Pre & Post-Merger Financial Performance: An Indian Perspective. In Journal of Central Banking Theory and Practice (Vol. 7, Issue 3, pp. 181–200). Sciendo. https://doi.org/10.2478/jcbtp-2018-0029

Puspita, G., & Yunita, I. (2022). Market Reaction and Share Performance Towards the Merger and Acquisition Announcement of 2015-2019. https://doi.org/10.34010/JIKA.V12I1.7231

Sekaran, U., & Bougie, R. (2016). Research Methods for Business 7th Edition. In John Wiley & Sons Ltd. (7th ed.). John Wiley & Sons Ltd.

Singh, S. S. (2018). Profitability of Mergers and Acquisitions: Evidence from India's High-Tech Industries. The Indian Economic Journal, 66(3–4), 223–249. https://doi.org/10.1177/0019466220934616

Yadong, C., Lee, L. C., Kee, P. L., & Quah, K. (2019). The Impact of Merges and Acquisition on Financial Performance of Listed Companies in China. International Journal of Entrepreneurship and Management Practice, 2(8).