

Profitability Ratio Comparison Before and After Acquisition: A Study of PT Elang Mahkota Teknologi Tbk

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Abstract

PT Elang Mahkota Teknologi Tbk (EMTEK) acquired a majority stake in PT Sarana Meditama Metropolitan Tbk (SAME) in 2020, raising the question of how its profitability changed afterwards. This study compares EMTEK's Return on Assets (ROA), Return on Equity (ROE), Net Profit Margin (NPM), and Gross Profit Margin (GPM) before and after the acquisition using a quantitative comparative design and audited annual financial statements for 2016–2019 (pre-acquisition) and 2021–2024 (post-acquisition); 2020, the transaction year, is excluded. Because each period has only four observations, the primary tests are Welch's t-test and the exact Mann–Whitney U test, supported by Hedges' g and confidence intervals; a Paired Sample t-Test is reported as a supplementary specification. Mean ROA fell from 3.59% to 1.71% and mean ROE from 4.74% to 1.95%, large declines relative to within-period variability, but neither was significant under Welch's test (Sig. = 0.181 and 0.128) or the Mann–Whitney test (Sig. = 0.200 for both); only the paired test, whose year-by-year pairing has no substantive basis, was significant (Sig. = 0.005 and 0.008). NPM (8.61% to 5.92%) and GPM (34.37% to 31.70%) showed no significant difference under any test. The ROA and ROE declines are therefore suggestive rather than conclusive. Because the design is a single-firm before–after comparison, the results describe association and cannot separate the acquisition from the COVID-19 shock or from changes in portfolio composition. Management and investors should judge an acquisition by how quickly the enlarged asset and equity base becomes productive, and should not read stable gross margins as proof of value creation.

Keywords: acquisition, return on assets, return on equity, net profit margin, gross profit margin

Introduction

The dynamic, complex, and competitive business environment requires companies to continuously adjust their strategies in order to sustain business continuity and improve long-term financial performance (Porter, 2008; Grant, 2019). Business competition today is no longer centered solely on a firm's ability to produce goods or services, but also on the effectiveness of resource management, the accuracy of investment decisions, and the ability to create added value for shareholders (Barney, 1991; Brigham & Houston, 2022). Within this context, public companies are increasingly required to make long-term strategic decisions, one of which is a corporate action in the form of a merger or acquisition, intended to strengthen competitiveness and firm performance (Gaughan, 2018).

From a financial management perspective, corporate strategic decisions are closely tied to efforts to maximize firm value (Brealey, Myers, & Allen, 2020), since financial management concerns the efficient acquisition, management, and use of funds to achieve corporate goals (Van Horne & Wachowicz, 2014). Every financial decision management makes, including the

decision to acquire another company, must weigh the trade-off between expected return and risk (Brealey, Myers, & Allen, 2020), and must therefore be evaluated comprehensively based on its impact on financial performance as an indicator of long-term financial goal attainment. This is consistent with Suhendi, Gojali, and Alifa (2026), who argue that an adequate accounting information system together with a comprehensive financial feasibility study are essential in assessing the condition and sustainability of a business entity's financial performance, so that every strategic decision a company takes can be more measurable and grounded in accurate financial data.

Acquisition is one of the inorganic growth strategies widely used by companies to accelerate business expansion (Gaughan, 2018). Data from the Indonesian Business Competition Supervisory Commission (KPPU RI) shows that merger and acquisition activity in Indonesia tended to increase over 2016–2022 as companies sought to strengthen their business structures and competitiveness (KPPU RI, 2023). Through an acquisition, the acquiring firm can obtain control over a target company without having to build a new entity from scratch; in practice, acquisition is often preferred because it is faster in expanding market share, acquiring particular technologies or competencies, and diversifying business lines compared with internal growth strategies (Hitt, Ireland, & Hoskisson, 2020).

From a financial-theory standpoint, acquisitions rest on synergy theory, which holds that the combined value of two merging firms is expected to exceed the sum of their individual values prior to the combination (Brealey, Myers, & Allen, 2020); such synergy may be operational, financial, or managerial in nature (Damodaran, 2015). In the signaling-theory framework, an acquisition decision can also be viewed as a positive signal from management to the market regarding confidence in the firm's future growth and performance prospects (Spence, 1973). Agency theory, however, highlights the potential for conflicts of interest between management and shareholders, in which an acquisition decision may be pursued not purely to create value but also to expand managerial power or interests (Jensen & Meckling, 1976).

These three perspectives are used here with specific, testable roles rather than as general background. Synergy theory implies that operating and cost synergies should appear first in the margin ratios, GPM and NPM, because margins are measured relative to sales and are not mechanically affected by an enlarged asset base; ROA and ROE, by contrast, are expected to lag, because consolidation enlarges total assets and equity immediately while the profit contribution of the acquired business accumulates only gradually (Brealey, Myers, & Allen, 2020; Damodaran, 2015). Signaling theory (Spence, 1973; Ross, 1977) concerns how the market reads management's decision; because accounting ratios are not market reactions, it is applied here only in a limited way, namely that the ratios investors watch most closely, ROA and ROE, should not deteriorate persistently if the acquisition conveyed credible confidence in future earnings. Agency theory (Jensen & Meckling, 1976) implies that, if an acquisition was driven partly by managerial rather than shareholder interests, returns on the capital base (ROA and ROE) would fall without a compensating improvement in margins. Taken together, a synergy-consistent pattern would be stable or improving GPM and NPM with a temporary decline in ROA and ROE, whereas a pattern in which all four ratios fall would be more consistent with the agency concern. Because the same observed pattern can be compatible with more than one theory, the theories organize the interpretation of the ratios; they are not tests of managerial motives, which are not observed in this study.

Although acquisitions are theoretically expected to improve firm performance, the realization of these benefits is not always achieved in practice. Post-acquisition integration frequently encounters obstacles such as differences in organizational culture, increased business-management complexity, cost-structure inefficiencies, and difficulties in unifying operational and financial systems (Cartwright & Schoenberg, 2006). Such conditions can directly affect a firm's financial performance, particularly its profitability (Healy, Palepu, & Ruback, 1992), making empirical evaluation necessary to determine whether an acquisition genuinely delivers positive financial outcomes or instead creates financial strain.

Profitability is one of the primary indicators used to assess a firm's financial performance (Kasmir, 2019; Brigham & Houston, 2022), reflecting a company's ability to generate profit from its operational activities and resources over a given period (Van Horne & Wachowicz, 2014) and the effectiveness of management in administering assets, capital, and operations (Ross, Westerfield, & Jordan, 2019). In financial analysis, profitability is commonly measured using financial ratios that capture the relationship between profit and sales, assets, or equity (Brealey, Myers, & Allen, 2020). Return on Assets (ROA) measures a firm's ability to generate profit from the entirety of its assets (Brigham & Houston, 2022); Return on Equity (ROE) reflects the return earned by shareholders on their invested capital (Brealey, Myers, & Allen, 2020); Gross Profit Margin (GPM) captures a firm's ability to control the cost of goods sold relative to revenue, reflecting operational efficiency at the early stage of the business process (Subramanyam & Wild, 2014); and Net Profit Margin (NPM) shows a firm's ability to generate net income from each unit of sales after accounting for all operating and non-operating expenses (Kasmir, 2019). Changes in these profitability ratios before and after an acquisition constitute an important empirical indicator for assessing the success of an acquisition strategy (Healy, Palepu, & Ruback, 1992), since an acquisition can enlarge a firm's asset base and thereby expand profit opportunities, yet may also depress profitability ratios if the growth in assets and costs is not matched by proportional profit growth (Gaughan, 2018; Damodaran, 2015).

PT Elang Mahkota Teknologi Tbk (EMTEK) offers an interesting empirical case in this regard. EMTEK is a publicly listed diversified holding company operating in media and digital technology. As part of its diversification strategy, EMTEK completed the acquisition of a majority stake in PT Sarana Meditama Metropolitan Tbk (SAME), a healthcare-services company operating the OMNI Hospital network, on 30 November 2020. The transaction involved 4,241,000,000 shares, equivalent to 71.88% ownership, valued at approximately IDR 581.017 billion, and was intended to diversify EMTEK's business into the healthcare sector, which was viewed as having long-term growth prospects. The acquisition took place during a period of global economic uncertainty caused by the COVID-19 pandemic, which Bank Indonesia reported to have contracted the domestic economy by around -2.1% in 2020 due to restricted household economic activity; changes in consumer behavior during the pandemic further affected spending patterns across sectors (Herjanto, Amin, & Mahfooz, 2022). The entry of a healthcare-services business into EMTEK's portfolio had the potential to alter both its revenue and cost structures, which may in turn be reflected in changes to its profitability ratios.

Two features of this case limit what a before–after comparison can reveal, and they are acknowledged here at the outset. First, the acquisition coincides with the COVID-19 shock, so any change between 2016–2019 and 2021–2024 may reflect the pandemic and its aftermath as much as the transaction. Second, the transaction moved EMTEK into a new line of business,

so a change in a ratio may reflect a change in the composition of the consolidated portfolio rather than a change in how efficiently existing operations are run. The transaction value also puts the scale in perspective: at IDR 581.017 billion for 71.88%, SAME's equity is valued at roughly IDR 808 billion at the transaction price, which is small relative to the increase of about IDR 20.6 trillion in EMTEK's consolidated total assets between 2019 and 2021 reported in the Results. The increase in the consolidated balance sheet is therefore unlikely to be explained by the SAME consolidation alone, although the transaction price measures the value of SAME's equity stake and not its total assets, so this comparison is indicative only. The design used here, a comparison of two periods for a single firm, cannot separate these effects, so the results are interpreted as differences associated with the post-acquisition period and not as the causal effect of the acquisition. The research gap is accordingly a descriptive and statistical one: previous Indonesian studies of post-acquisition performance have mostly examined manufacturing, banking, property, or multi-sector samples (Fitriani, 2020; Panduwinata, Andriana, & Thamrin, 2022; Putra & Makaliwe, 2022; Swari & Masdiantini, 2024), and none of the studies reviewed for this paper examines a diversified media-and-technology holding company that entered healthcare during the pandemic using all four of ROA, ROE, NPM, and GPM, or reports how sensitive the conclusions are to the choice of test when each period contains only four annual observations.

Based on this background, the problems addressed in this study are formulated as follows: (1) how did EMTEK's Return on Assets (ROA) differ before and after the acquisition of SAME in 2020; (2) how did EMTEK's Return on Equity (ROE) differ before and after the acquisition; (3) how did EMTEK's Net Profit Margin (NPM) differ before and after the acquisition; and (4) how did EMTEK's Gross Profit Margin (GPM) differ before and after the acquisition. Accordingly, this study aims to analyze the differences in ROA, ROE, NPM, and GPM of PT Elang Mahkota Teknologi Tbk before and after its acquisition of PT Sarana Meditama Metropolitan Tbk in 2020, so as to provide empirically grounded, academically accountable information for corporate management, investors, and future research in the field of financial management. The study is comparative and descriptive in design and does not estimate the causal effect of the acquisition.

Method

This study employs a quantitative approach with a comparative method, aimed at comparing the company's financial performance before and after the acquisition. The quantitative approach was chosen because the study relies on numerical data in the form of financial statements that are statistically analyzed to test for differences in financial performance across a defined observation period. The comparative method was selected because the study focuses on comparing two conditions that had already occurred, namely financial performance before and after the acquisition. The design is a single-firm before–after comparison without a control group; it is therefore suited to describing and testing differences between the two periods but not to establishing that the acquisition caused them.

The object of this research is PT Elang Mahkota Teknologi Tbk (EMTEK), specifically its financial performance before and after the acquisition. The data used are secondary data obtained from the company's annual financial statements, officially published through the Indonesia Stock Exchange (IDX, www.idx.co.id) and the company's official website. The population comprises all of EMTEK's officially published and publicly accessible financial statements, covering the periods before and after the acquisition. EMTEK was selected as the

research object because it is a publicly listed company on the IDX that actively undertakes acquisitions and has complete, openly accessible financial statement data.

The unit of analysis is the firm-year. Selection followed a purposive logic with explicit criteria: (1) the firm must be the acquirer in an identifiable acquisition with a known completion date, which for EMTEK is 30 November 2020; (2) audited annual financial statements for every year of the observation window must be published through the IDX and the company's official website; and (3) the windows before and after the transaction must be of equal length. Because the research object is a single firm, every fiscal year that satisfies these criteria is included, so within the window the procedure is a census and the sample is not a probability sample; the description 'total (saturated) sampling' refers only to this feature, while the purposive criteria determine which years enter the window. The pre-acquisition period comprises 2016–2019 and the post-acquisition period comprises 2021–2024, giving four observations in each period and eight in total. Fiscal year 2020 is excluded as a transition year: the transaction was completed on 30 November 2020, so the 2020 statements contain SAME for only about one month and mix pre- and post-acquisition conditions, and 2020 is also the year of the domestic economic contraction reported by Bank Indonesia. Four years were used on each side to obtain equal, symmetric windows that end at the latest audited fiscal year (2024) and are long enough for integration effects to appear (Putra & Makaliwe, 2022, report that acquirers began to improve only in the third year after a transaction), while limiting contamination by unrelated later events. The small number of observations is a limitation that is addressed in the analysis and the conclusion.

Profitability was measured using four indicators: Return on Assets (ROA), Return on Equity (ROE), Net Profit Margin (NPM), and Gross Profit Margin (GPM), chosen because together they provide a comprehensive picture of a firm's ability to generate profit from different aspects of its operations. The operationalization of each variable is summarized in Table 1.

Table 1. Operationalization of Variables

Variable	Formula	Data Source
Return on Assets (ROA)	$\text{Net Income} / \text{Total Assets} \times 100\%$	Statement of Financial Position; Income Statement
Return on Equity (ROE)	$\text{Net Income} / \text{Total Equity} \times 100\%$	Statement of Financial Position; Income Statement
Net Profit Margin (NPM)	$\text{Net Income} / \text{Net Sales} \times 100\%$	Income Statement
Gross Profit Margin (GPM)	$\text{Gross Profit} / \text{Net Sales} \times 100\%$	Income Statement

Note. Source: EMTEK financial statements, processed by the researcher, 2026.

Data were collected using a documentation technique, i.e., by studying, recording, and processing data from written documents relevant to the object of study, including annual reports and official corporate publications. This technique was chosen because the study relies on secondary data that had already been compiled and published by credible, authoritative parties, and had gone through an audit process, so that its use can be academically justified.

Data analysis proceeded in four stages. First, descriptive statistics were computed for each ratio in each period. Second, a normality test was performed on each series using the

Shapiro-Wilk test at $\alpha = 0.05$, chosen over the Kolmogorov-Smirnov test because it is considered more appropriate for small samples ($n < 50$) (Razali & Wah, 2011). Because each series has only four observations, the test has very low power, so a significance value above 0.05 is read as an absence of evidence against normality and not as proof that the data are normal (Ghasemi & Zahediasl, 2012). Third, the primary comparison of the two periods used tests that do not require a one-to-one pairing of years: Welch's t-test for independent samples with unequal variances (Delacre, Lakens, & Leys, 2017); the exact Mann–Whitney U test (Mann & Whitney, 1947), a nonparametric alternative that does not rely on normality; and Hedges' g (Hedges, 1981) together with the 95% confidence interval of the mean difference to describe the size and precision of each difference. Fourth, the Paired Sample t-Test (Ghozali, 2018) is reported as a supplementary specification, because it was the original specification of this study and is widely used in comparable studies. It requires a defensible one-to-one pairing of observations; here the observations were paired by their position within each window (2016 with 2021, 2017 with 2022, 2018 with 2023, and 2019 with 2024). This pairing is a convention of the design and has no substantive basis, because a pre-acquisition year is not linked to a particular post-acquisition year by any firm-specific relationship; the paired results are therefore reported for comparison and are not used as the basis for conclusions. The Wilcoxon signed-rank test was not used as the nonparametric counterpart of the paired test because, with four pairs, its smallest attainable two-sided exact significance value is 0.125, so it cannot reject the null hypothesis at $\alpha = 0.05$ whatever the data. A difference is described as robust only when the Welch and Mann–Whitney results agree; all tests are two-sided at $\alpha = 0.05$.

The theoretical expectations set out in the Introduction are translated into four hypotheses, each tested two-sided because the theories do not predict a single direction for every ratio:

H1: There is a significant difference in EMTEK's ROA before and after the acquisition of SAME (H0: there is no difference).

H2: There is a significant difference in EMTEK's ROE before and after the acquisition of SAME (H0: there is no difference).

H3: There is a significant difference in EMTEK's NPM before and after the acquisition of SAME (H0: there is no difference).

H4: There is a significant difference in EMTEK's GPM before and after the acquisition of SAME (H0: there is no difference).

Rejecting H0 for a ratio is interpreted only as evidence of a statistical difference between the two periods; it is not evidence that the acquisition caused it.

Results and Discussion

Descriptive Statistics

Descriptive statistics of EMTEK's profitability ratios over 2016–2019 and 2021–2024 are presented in Table 2.

Table 2. Descriptive Statistics of EMTEK's Profitability Ratios

Variable	N	Mean	Std. Dev.	Min	Max
ROA – Before Acquisition	4	3.59%	1.84	1.65%	5.90%
ROA – After Acquisition	4	1.71%	1.67	-0.47%	3.55%
ROE – Before Acquisition	4	4.74%	2.49	2.08%	7.65%
ROE – After Acquisition	4	1.95%	1.90	-0.52%	4.03%
NPM – Before Acquisition	4	8.61%	5.49	3.59%	16.37%



Variable	N	Mean	Std. Dev.	Min	Max
NPM – After Acquisition	4	5.92%	5.59	-2.18%	10.56%
GPM – Before Acquisition	4	34.37%	7.87	25.02%	43.43%
GPM – After Acquisition	4	31.70%	2.22	28.88%	33.71%

Note. Std. Dev. is expressed in percentage points. Source: SPSS output, processed by the researcher, 2026.

EMTEK's ROA displayed a fluctuating pattern before the acquisition, peaking at 5.90% in 2016 before declining to 1.65% in 2018 and partially recovering to 4.09% in 2019. After the acquisition, ROA was lower overall, falling to a negative value of -0.47% in 2023, the year EMTEK recorded a net loss of roughly IDR 201 billion, before recovering to 2.19% in 2024. Total assets rose from IDR 17,540.6 billion in 2019 to IDR 38,168.5 billion in 2021, more than doubling, while net income grew only modestly, which pulled the average ROA down from 3.59% to 1.71%. The size of this increase is far larger than SAME's equity value implied by the transaction price (about IDR 0.81 trillion), so it cannot be attributed to the SAME consolidation alone; the data used in this study do not allow the increase to be decomposed by source.

A similar pattern is evident in ROE, which declined from an average of 4.74% before the acquisition to 1.95% afterward. Total equity rose from IDR 12,265.3 billion in 2019 to IDR 33,668.9 billion in 2021, about 2.7 times the 2019 level, enlarging the denominator of the ROE formula, while net income fluctuated sharply, including the 2023 net loss, before ROE improved to 2.54% in 2024. As with total assets, the sources of the increase in equity are not decomposed here.

NPM decreased from an average of 8.61% before the acquisition to 5.92% afterward, with both periods exhibiting high variability (standard deviations of 5.49 and 5.59 percentage points, respectively). NPM fell to -2.18% in 2023 before recovering to 8.22% in 2024, a level close to the pre-acquisition average; this recovery is consistent with a temporary dip, but one year of data cannot establish whether the decline was cyclical or structural. GPM proved comparatively stable, falling only modestly from an average of 34.37% before the acquisition to 31.70% afterward, with the post-acquisition standard deviation (2.22) lower than the pre-acquisition figure (7.87), indicating less year-to-year dispersion in gross margin after SAME's healthcare business entered the group.

Normality Test

Because each group contained only four observations, the Shapiro-Wilk test was used to assess normality. All eight series (ROA, ROE, NPM, and GPM, before and after the acquisition) yielded significance values above 0.05, ranging from 0.241 (NPM after acquisition) to 0.983 (GPM before acquisition), so the null hypothesis of normality was not rejected. This result must be read cautiously: with four observations the test can detect only extreme departures from normality, and a value above 0.05 does not demonstrate that the data are normally distributed (Ghasemi & Zahediasl, 2012). The normality assumption of the t-tests is therefore not firmly established, which is why the exact Mann–Whitney U test, which does not rely on it, is reported alongside the parametric tests in the robustness analysis below.

Paired Sample t-Test (Supplementary Specification)

Table 3 summarizes the results of the Paired Sample t-Test for each profitability ratio, tested at a 95% confidence level ($\alpha = 0.05$). Observations were paired by position within each window, as described in the Method section. Because this pairing is a design convention, the results below are supplementary; the primary comparison is the Welch and Mann–Whitney analysis that follows Table 3.

Table 3 Summary of Paired Sample t-Test Results

Variable	Mean Before	Mean After	t-value	df	Sig. (2-tailed)	Result
ROA	3.59%	1.71%	7.228	3	0.005	Significant*
ROE	4.74%	1.95%	6.391	3	0.008	Significant*
NPM	8.61%	5.92%	1.442	3	0.245	Not significant
GPM	34.37%	31.70%	0.568	3	0.610	Not significant

Note. * Significant at $\alpha = 0.05$. Source: SPSS output, processed by the researcher, 2026.

The Paired Sample t-Test for ROA produced a t-value of 7.228 with $df = 3$ and a significance value of 0.005 (< 0.05), leading to rejection of H_0 under this specification, with a mean difference of 1.88 percentage points. For ROE, the test produced a t-value of 6.391 with a significance value of 0.008 (< 0.05), also leading to rejection of H_0 , with a mean difference of 2.795 percentage points. In contrast, NPM produced a t-value of 1.442 with a significance value of 0.245 (> 0.05), failing to reject H_0 despite a mean difference of 2.693 percentage points. Similarly, GPM produced a very small t-value of 0.568 with a significance value of 0.610 (> 0.05), also failing to reject H_0 despite a mean difference of 2.6675 percentage points.

Primary Comparison: Welch and Mann–Whitney Tests

Table 4 reports the primary comparison, which does not require year-by-year pairing. The mean differences are those of Table 3; Welch's t-test, the confidence intervals, and Hedges' g are computed from the means and standard deviations in Table 2, and the exact Mann–Whitney U test uses the ranks of the eight observations.

Table 4 Robustness Tests of Pre- versus Post-Acquisition Differences

Ratio	Mean diff. (pp)	Welch t	df	Welch Sig.	95% CI of diff.	Hedges' g	Mann–Whitney U	Exact Sig.
ROA	1.880	1.513	5.94	0.181	−1.17 to 4.93	0.93	3	0.200
ROE	2.795	1.785	5.61	0.128	−1.10 to 6.69	1.10	3	0.200
NPM	2.693	0.687	6.00	0.518	−6.89 to 12.28	0.42	8	1.000
GPM	2.667	0.652	3.47	0.555	−9.39 to 14.73	0.40	6	0.686

Note. Mean difference = mean before – mean after, in percentage points (pp). CI = 95% confidence interval of the mean difference from Welch's t-test. U is the smaller of the two Mann–Whitney U statistics; exact two-sided significance for $n_1 = n_2 = 4$. Source: researcher's calculations, 2026.

The primary comparison determines how the findings should be read. For ROA and ROE the mean declines are large relative to the variability within each period (Hedges' g of 0.93 and 1.10), but the 95% confidence intervals of the differences include zero, and neither Welch's t -test (Sig. = 0.181 and 0.128) nor the exact Mann–Whitney U test (Sig. = 0.200 for both) reaches 0.05. The significant paired results for ROA and ROE therefore depend on the paired specification, in which the two periods are matched by calendar position and the year-by-year differences have little spread. Under tests that do not assume this matching, the evidence for a decline in ROA and ROE is consistent in direction and sizable in magnitude but not statistically conclusive. For NPM and GPM all three approaches agree that no significant difference was detected, and the effect sizes are small (Hedges' g of 0.42 and 0.40). With four observations per period the tests have low power, so a non-significant result should not be read as evidence that the acquisition had no effect: the confidence intervals for NPM and GPM are wide and are compatible with both no change and changes of several percentage points.

ROA before and after acquisition.

ROA was lower after the acquisition, but the difference is not significant under Welch's t -test or the exact Mann–Whitney U test and is significant only in the supplementary paired test, which relies on year-to-year pairing. The descriptive pattern is nonetheless consistent with the arithmetic of consolidation: total assets more than doubled between 2019 and 2021 while net income did not rise proportionally, and ROA turned negative in 2023, when EMTEK recorded a net loss of roughly IDR 201 billion. Possible contextual explanations for the 2023 loss include the costs of operating a larger and more diverse group and competitive pressure in the digital-streaming industry after the pandemic; these are offered as possibilities that were not tested in this study, and they should be checked against EMTEK's audited annual report and its notes before being treated as established causes. The pattern fits the expectation drawn from synergy theory (Brealey, Myers, & Allen, 2020) that returns on the asset base lag in the short run, since the added assets had not yet been matched by proportional earnings. It does not identify the source of the shortfall, and it cannot by itself distinguish an acquisition effect from the effects of the pandemic or from the other changes in the consolidated balance sheet noted above.

ROE before and after acquisition.

The ROE decline shows the same pattern as ROA: it is not significant under Welch's t -test (Sig. = 0.128) or the exact Mann–Whitney U test (Sig. = 0.200) and is significant only in the supplementary paired test (Sig. = 0.008). Two features of the data are consistent with the lower mean: total equity rose to about 2.7 times its 2019 level, enlarging the denominator, and net income fluctuated sharply, including the 2023 net loss. Under synergy theory (Brealey, Myers, & Allen, 2020), equity that grows faster than earnings mechanically compresses ROE even when absolute net income rises, so the pattern is compatible with a lag in earnings relative to capital. The ratios alone do not show whether management maximized shareholder value or whether the larger equity base reflects dilution; the agency and signaling perspectives are therefore noted only as possible readings that these data neither support nor refute. The direction of the result is in line with several prior studies. Widodo, Delfiana, and Manurung (2024), examining PT Indosat Ooredoo Hutchison, reported a significant post-merger ROE change relative to one pre-merger comparator but not relative to the other; Panduwinata,

Andriana, and Thamrin (2022), studying manufacturing firms on the IDX, found ROE to be the ratio most responsive to ownership and equity-structure changes following acquisition; and Widiyanto, Khristiana, and Pahlawi (2021), examining 30 publicly listed firms over 2017–2020, found significant post-M&A differences in ROE. Putra and Makaliwe (2022), studying property and real estate firms, found that acquiring firms only began to show a meaningful ROE improvement in the third year after the transaction, which suggests that positive ROE effects need an adaptation period; EMTEK's partial ROE recovery to 2.54% in 2024 is compatible with that pattern but cannot confirm it.

NPM before and after acquisition.

Average NPM declined from 8.61% to 5.92%, but the difference was not statistically significant under any of the three tests. Large swings in net income, with a standard deviation of 5.59 percentage points in the post-acquisition period, make the mean difference imprecise (95% confidence interval from –6.9 to 12.3 percentage points). Contextual factors that may have contributed to this variability include the COVID-19 pandemic, which coincided with the early post-acquisition years and may have lowered advertising-driven revenue in the broadcast-media segment while demand for healthcare services rose; these offsetting influences are possibilities that were not measured in this study. In terms of theory, the absence of a significant NPM difference is compatible with the view that operating synergies need an adaptation period before they are reflected in net margins (Hitt, Ireland, & Hoskisson, 2020) and with the observation that NPM volatility is common in the media and technology industry because revenue is heavily influenced by macroeconomic conditions and advertising-spending cycles (Kasmir, 2019), but this study does not test these mechanisms. The result is consistent with Ramadhani and Yudiantoro (2024), who found no significant post-acquisition difference in NPM among manufacturing firms, as well as with Fitriani (2020) and Widiyanto et al. (2021). It differs from Putri and Artini (2024) and Swari and Masdiantini (2024), who found significant NPM differences in non-financial firms and banking-sector firms respectively, which may reflect differences in sample composition and revenue structure. NPM's recovery to 8.22% in 2024 is close to the pre-acquisition average, but a single year does not establish whether the earlier decline was cyclical or structural.

GPM before and after acquisition.

GPM was the most stable ratio, declining from 34.37% to 31.70% with no statistically significant difference under any test, even though EMTEK added a hospital-services business whose cost structure differs from its core media and technology operations. The post-acquisition standard deviation (2.22) was lower than the pre-acquisition figure (7.87), which indicates less year-to-year dispersion in gross margin; with four observations per period this is a descriptive observation and not evidence of better cost control. The pattern is compatible with the view of Subramanyam and Wild (2014) that stable gross margins reflect a firm's ability to preserve core operating efficiency despite organizational change, and with the expectation from synergy theory that direct-cost effects would show up first in margins (Hitt, Ireland, & Hoskisson, 2020), but the data do not demonstrate that such synergies had materialized. The result aligns with Panduwinata, Andriana, and Thamrin (2022) and Fitriani (2020), both of whom found no significant post-acquisition change in GPM among the firms they studied, as well as with Milani, Sasongko, and Rahmi (2024), who found that GPM remained highly stable at PT Semen Indonesia Tbk after its acquisition despite an overall rise in profitability. It

diverges, however, from Mamahit et al. (2019) and Sarwar et al. (2023), who found significant post-M&A GPM changes in cross-industry and larger-sample studies respectively, a difference that may be attributable to greater heterogeneity in cost structures across the broader samples used in those studies.

Overall reading against the theoretical expectations.

The Introduction set out two contrasting patterns. Under the synergy reading, GPM and NPM should be stable or improving while ROA and ROE decline temporarily; under the agency reading, all four ratios should fall without a compensating gain in margins. The observed means fall in all four ratios, but unevenly: the declines in ROA and ROE are large relative to within-period variability (Hedges' g of 0.93 and 1.10) yet not statistically conclusive, whereas the declines in NPM and GPM are small relative to variability (g of 0.42 and 0.40) and cannot be distinguished from no change. The data therefore do not match the synergy pattern cleanly, because margins did not improve, and they do not establish the agency pattern either, because the margin declines are not distinguishable from zero and the lower ROA and ROE are also what a much larger asset and equity base would mechanically produce. The signaling expectation, that ROA and ROE should not deteriorate persistently, is not contradicted by the partial recoveries in 2024 (ROA of 2.19% and ROE of 2.54%), although these rest on a single year. The most defensible reading is that EMTEK's returns on its enlarged capital base were lower in the post-acquisition period, that margins showed no detectable change, and that these data cannot decide between the theories.

Conclusion

Based on the analysis of PT Elang Mahkota Teknologi Tbk's profitability ratios before and after its 2020 acquisition of PT Sarana Mediatama Metropolitan Tbk, four conclusions can be drawn, with the caveat that the design is a single-firm before–after comparison, so the conclusions describe differences between periods and not causal effects of the acquisition. First, ROA was lower after the acquisition, declining from an average of 3.59% to 1.71%; the difference was not significant under Welch's t -test (Sig. = 0.181) or the exact Mann–Whitney U test (Sig. = 0.200) and was significant only in the supplementary paired test (Sig. = 0.005), so the evidence is suggestive and depends on the test used. Second, ROE likewise declined, from an average of 4.74% to 1.95% (Welch Sig. = 0.128; Mann–Whitney exact Sig. = 0.200; supplementary paired Sig. = 0.008), with the same qualification; the declines coincided with a much larger consolidated asset and equity base and with fluctuating net income. Third, NPM declined from an average of 8.61% to 5.92%, but the difference was not statistically significant under any test (Sig. = 0.518 and 1.000 for the Welch and Mann–Whitney tests, and 0.245 for the supplementary paired test), and the high variability of net income makes this estimate imprecise. Fourth, GPM declined only marginally, from an average of 34.37% to 31.70%, with no significant difference under any test (Sig. = 0.555 and 0.686 for the Welch and Mann–Whitney tests, and 0.610 for the supplementary paired test), suggesting that gross margins were comparatively stable; given the low power of tests with four observations per period, this is read as no detectable difference and not as proof that the acquisition had no effect.

These findings should be interpreted in light of several limitations. The analysis is confined to a single company and cannot be generalized to firms with different characteristics. Each period contains only four annual observations, so the tests have low power, the Shapiro–Wilk test cannot establish normality, and the significance of the ROA and ROE differences

changes with the test used; the year-by-year pairing used in the paired test has no substantive basis. The four-year pre- and post-acquisition windows (2016–2019 and 2021–2024) may not fully capture longer-term integration effects, and excluding 2020 removes the transition year from the analysis. Only four profitability ratios were examined, excluding other dimensions of financial performance such as liquidity, solvency, or market value. The consolidated financial statements make it difficult to isolate the acquisition's effect from the performance of other subsidiaries, and the size of the increase in consolidated assets and equity relative to the value of the SAME transaction shows that factors other than the SAME consolidation contributed. External factors, most notably the COVID-19 pandemic, which coincided with the acquisition year, were not controlled for, so the design cannot separate acquisition-related changes from macroeconomic and portfolio-composition effects. Qualitative post-acquisition factors such as organizational-culture fit and leadership quality, which also influence long-term integration success, were not considered. For these reasons the conclusions are comparative and non-causal.

Based on these findings, EMTEK's management is encouraged to strengthen post-acquisition integration so that the enlarged asset and capital base can be deployed more effectively to generate profit, while reinforcing operational efficiency, cost control, and cross-unit synergy, and periodically evaluating the performance of the acquired subsidiary, preferably on a segment basis, to ensure the diversification strategy continues to add value for the company and its shareholders. Investors and prospective investors are advised to assess the impact of acquisitions on financial performance carefully, recognizing that acquisitions do not always yield positive short-term effects, particularly on asset- and equity-based profitability ratios such as ROA and ROE, and that stable gross margins alone do not show that value has been created; they should therefore weigh a company's post-acquisition ability to manage assets, capital, and earnings rather than relying on the corporate action alone. Future researchers are encouraged to extend this study using multi-firm samples and longer observation periods, to use segment-level data or a control group of comparable firms to separate acquisition effects from macroeconomic effects, to apply methods suited to short time series, such as panel-data regression, interrupted time-series analysis, or event-study approaches, and to incorporate additional variables such as liquidity, solvency, activity, or market-value ratios. Finally, this study is intended to contribute to the academic literature on financial management, particularly regarding the evaluation of post-acquisition performance among publicly listed companies in Indonesia that pursue cross-sector business diversification, and to show how sensitive such conclusions can be to the choice of test when only a few annual observations are available.

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