

Pre- and Post-M&A Financial Performance of Upstream Oil and Gas: Indonesia, Malaysia, Thailand

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ABSTRACT

The upstream oil and gas sector is experiencing intensifying pressures on firms and policymakers due to resource depletion, price volatility, and the global energy transition. In this environment, mergers and acquisitions (M&A) are widely pursued as strategic tools for portfolio optimization and reserve replacement. Therefore, it is necessary to empirically examine whether M&A activities generate significant improvements in the financial performance of acquiring firms in the upstream oil and gas industry. This study investigates whether M&A improves the firm-level financial performance of acquiring firms in the upstream oil and gas sector across Indonesia, Malaysia, and Thailand. It evaluates post-merger changes in profitability, liquidity, solvency, and shareholder value, offering comparative insights into whether M&A delivers measurable financial benefits for acquiring firms operating in the region's capital-intensive energy industry. The study applies a structured pre-post event design using a six-year observation window, comparing three years of financial ratios before and after each M&A transaction while excluding the event year (T_0). Financial and deal-level data for 34 upstream M&A events were triangulated from Rystad Energy, S&P Capital IQ, and official company reports, and analysed using descriptive statistics, the Wilcoxon Signed-Rank Test, the Mann-Whitney U Test and Regression with Clustered Robust Standard Errors (CRSE) to evaluate performance effects. The results reveal no statistically significant short-term improvement across profitability, liquidity, solvency, or shareholder-value ratios following M&A ($p > 0.05$). Profitability indicators remain largely unchanged except for a modest increase in GPM, while liquidity ratios are stable and solvency measures vary widely but with medians near zero. Shareholder-value metrics also exhibit minimal movement. Overall, early post-merger financial outcomes appear flat and uneven, indicating an absence of consistent short-term performance gains.

Keywords: Mergers and acquisitions; upstream oil and gas; Southeast Asia; acquiring firms; financial performance; profitability; solvency; shareholder value

INTRODUCTION

Mergers and acquisitions (M&A) represent a central strategy for corporate growth, broadly defined as either the combination of two firms into a single entity (merger) or the purchase of one firm by another (acquisition) (Yilmaz & Tanyeri, 2016). As a form of inorganic growth, M&A provides companies with alternatives to internal expansion through research and development, capital investment, or market penetration (Xu, 2017). Firms often pursue these transactions to obtain complementary resources, share knowledge, and reallocate capital toward more productive uses, thereby improving performance and long-term competitiveness (Denis & McKeon, 2012). However, even though companies pursue M&A with the expectation of creating synergies and increasing value, empirical studies continue to present mixed evidence on their long-term financial effects.

Global mergers and acquisitions (M&A) activity has expanded substantially over the past two decades as firms respond to technological disruptions, financial liberalization, and competitive



pressures. The surge in cross-border investment flows, portfolio restructuring, and industry consolidation reflects M&A's role as a strategic mechanism for reallocating assets and accelerating growth. The Asia-Pacific region has become a major contributor to this global pattern, now accounting for nearly one-third of worldwide M&A transactions (Boston Consulting Group, 2024). This shift is driven by deeper regional economic integration, rising capital mobility, and increased competitive intensity among firms seeking scale, market entry opportunities, and long-term resource positioning.

The upstream oil and gas (O&G) sector represent one of the most strategically important domains for M&A due to its capital intensity, geological uncertainty, and long project life cycles. Firms frequently use acquisitions to secure reserves, optimize portfolios across maturity levels, and mitigate exposure to exploration risks (Ng & Donker, 2013). Structural pressures including reserve depletion, technological complexity, and commodity-price volatility further encourage consolidation as a means to stabilize production profiles and ensure long-term resource security (Deloitte, 2023; Mohn & Misund, 2009). Given these characteristics, upstream O&G is an industry where M&A is theoretically expected to produce meaningful operational and financial effects through reserve replacement, efficiency gains, and cost rationalization.

In Southeast Asia, upstream M&A has gained additional importance as national oil companies and international firms pursue strategies that enhance resource security, improve field recovery efficiency, or reposition portfolios toward natural oil and gas. Countries such as Indonesia, Malaysia, and Thailand have a continues trend of M&A transactions as seen in Figure through asset sales, farm-outs, and acquisitions driven by declining production from mature fields, fiscal regime adjustments, and capital requirements associated with marginal or offshore developments.

Despite the strategic relevance of M&A in upstream O&G, there is limited empirical clarity on whether such transactions deliver measurable financial improvements and particularly in the short term. While synergy and efficiency theories posit that mergers should enhance profitability, liquidity, and solvency, the upstream sector's structural features suggest that these gains may unfold slowly due to long project lead times, complex integration requirements, and high post-acquisition capital commitments. Integration costs, cultural frictions, working-capital adjustments, and debt-funded acquisitions can further delay financial improvements.

However, existing empirical evidence on post-merger financial performance is largely drawn from banking and manufacturing sectors, and its applicability to Southeast Asia's upstream oil and gas industry is limited. Unlike financial or consumer-based industries, upstream O&G is characterized by capital-intensive investments, long reserve development cycles, complex regulatory regimes, and delayed cash-flow realization. As a result, short-term post-merger financial metrics may fail to capture the true performance implications of M&A in this sector. This creates a critical empirical gap in understanding whether upstream M&A in Southeast Asia yields measurable financial effects within early post-acquisition windows.

Recent empirical evidence from emerging markets shows that short-term post-merger gains are far from guaranteed. Studies in Nepal, India, and Pakistan report that profitability ratios such as return on assets (ROA) and return on equity (ROE) often remain unchanged or decline within the first three years after acquisition, while liquidity and leverage indicators show inconsistent patterns (Adhikari et al., 2023; Maani & Rajkumar, 2024). These findings suggest that early post-merger performance may not reflect long-term strategic benefits and that industry and institutional context significantly shape outcomes.

However, for Southeast Asia's upstream O&G sector, no study has systematically examined whether mergers lead to measurable improvements in acquiring firms' financial performance. This study addresses these gaps by providing a comparative, multi-Country assessment of post-merger financial performance in Indonesia, Malaysia, and Thailand, the three major upstream O&G producers in Southeast Asia. To address the problem and fill the identified gaps, the study is guided by the following overarching research question:

RQ: Do mergers and acquisitions in the upstream oil and gas sector in Southeast Asia enhance the financial performance of acquiring firms?

Specifically, it examines whether acquisitions lead to significant post-merger changes in (1) profitability, (2) liquidity, (3) solvency, and (4) financing capacity or shareholder-value

indicators. The study will be conducted in ten years period of M&A upstream oil and gas transaction between years of 2014 – 2023, with the observation window will be three years before the transaction and three years after the transaction, with the year of the transaction will be excluded.

The study covers upstream oil and gas M&A transactions completed between 2014 and 2023. This ten-year period is selected for three main reasons. First, it aligns with the empirical design adopted by (Adhikari et al., 2023), which applies a decade-long observation window to examine pre- and post-merger financial performance using ratio-based analysis. Second, the 2014–2023 period captures structurally relevant phases in the upstream oil and gas industry, including the post-commodity supercycle adjustment, periods of price volatility, and the COVID-19 shock, making it representative of contemporary restructuring dynamics. Third, transactions completed after 2023 are excluded to ensure the availability of complete three-year post-merger financial data, which is required to construct a balanced pre–post observation window.

LITERATURE REVIEW

MERGERS & ACQUISITIONS

Mergers and acquisitions (M&A) constitute a major instrument of corporate transformation, allowing firms to accelerate growth, strengthen market positioning, and access capabilities that are costly or time-consuming to develop internally. Classical finance literature emphasizes M&A as a route for obtaining operational and financial synergies, diversifying cash-flow exposure, or reconfiguring strategic portfolios in response to competitive pressures (Ross et al., 2025). These motivations are especially pronounced in upstream oil and gas (O&G), where high entry barriers, capital intensity, regulatory complexity, and geological uncertainty make organic growth both risky and slow to realize. Acquiring producing fields or proven reserves enables firms to bypass lengthy exploration phases and secure immediate or near-term production, thereby supporting reserve replacement and portfolio renewal (Picton-Turbervill, 2009).

The structure and intent of M&A transactions vary considerably across industries and contexts. In the upstream O&G sector, the distinction between stock purchases and asset purchases has important implications for deal execution and risk allocation. Stock purchases facilitate rapid acquisition of control but may face shareholder resistance, whereas asset purchases allow acquirers to select specific assets while avoiding legacy liabilities such as decommissioning obligations, which can materially affect deal economics. Strategic classifications further distinguish horizontal, vertical, and conglomerate transactions. Horizontal consolidation dominates upstream activity, as firms seek economies of scale, reduce competitive fragmentation, and optimize shared infrastructure (Kumar & Sharma, 2019). Vertical acquisitions, although less common, may secure access to transportation or processing capacity, while conglomerate deals are occasionally pursued to diversify cyclically sensitive revenue streams.

M&A IN THE UPSTREAM OIL AND GAS INDUSTRY

Within the upstream O&G domain, M&A transactions typically take the form of field acquisitions, license or farm-in agreements, company takeovers, or production contract reallocations (Rystad Energy, 2025). Field acquisitions, which involve purchasing interests in producing or near-producing assets, remain the predominant type due to their lower geological uncertainty and immediate cash-flow contribution. Farm-in agreements grant access to exploration acreage in exchange for funding seismic or drilling activities, providing long-term potential at higher risk. Full company acquisitions offer transformational access to integrated asset portfolios, technical expertise, and basin-specific organizational knowledge, although they require complex integration and expose buyers to all liabilities. In many jurisdictions operating under production-sharing or concession systems, contract expiries also function as de facto M&A events when asset operatorship is transferred to new firms or national oil companies, reshaping competitive dynamics without traditional sale processes.

THEORETICAL PERSPECTIVES ON M&A AND FINANCIAL PERFORMANCE

Theoretical perspectives provide deeper understanding of why firms engage in M&A and how such transactions are expected to influence financial performance. Neoclassical theory views

M&A as a mechanism through which firms respond to structural shocks such as technological changes, regulatory reforms, commodity-price cycles, or shifts in resource availability that disrupt equilibrium and prompt industry reorganization (Coase, 1937; Gort, 1969). The efficiency hypothesis complements this view by proposing that more efficient firms acquire less efficient ones to enhance productive efficiency, eliminate redundancies, and improve resource allocation (Ghosh, 2001; Seth et al., 2000). Financial market conditions also play a pivotal role: capital-liquidity theory argues that merger waves arise in periods of abundant liquidity, low interest rates, and strong credit markets, enabling firms to finance acquisitions more easily (Harford, 2005). Synergy theory integrates these strands by framing M&A as value-enhancing when combined cash flows exceed the sum of standalone firms. Gains may derive from revenue enhancement, cost reduction, capital expenditure rationalization, or improved investment allocation, although such benefits often materialize gradually in asset-intensive industries (Ross et al., 2025).

The resource-based view (RBV) provides an additional strategic explanation by arguing that firms pursue M&A to obtain valuable, rare, inimitable, and non-substitutable (VRIN) resources that underpin competitive advantage (Barney et al., 2001). In upstream O&G, such resources include reservoir quality, proprietary seismic data, basin-specific technical expertise, drilling and completion technologies, and organizational routines adapted to complex geological environments. Because these capabilities are often accumulated over long periods, M&A provides a mechanism for acquiring them more rapidly than through internal development.

FINANCIAL PERFORMANCE MEASURES IN M&A STUDIES

Financial performance evaluation in M&A research typically relies on ratio analysis capturing profitability, liquidity, solvency, and market valuation. Profitability measures such as return on assets (ROA), return on equity (ROE), return on capital employed (ROCE), gross profit margin (GPM), and net profit margin (NPM) assess whether operational synergies translate into improved earnings efficiency. Liquidity indicators, including the current ratio and quick ratio, reflect the firm's ability to manage short-term obligations amid acquisition-related cash outflows and integration costs. Solvency metrics such as debt-to-equity ratio (DER), debt-to-capital ratio (DCR), equity-to-assets (E/TA), interest coverage ratio (ICR), and operating cash-flow-to-debt capture capital-structure adjustments and long-term financial resilience. Market-based measures earnings per share (EPS), dividends per share (DPS), market-to-book ratio (MBR), and price-to-earnings ratio (PER) signal investor expectations regarding synergy realization and long-term value creation. Together, these indicators offer a multidimensional view of post-merger performance.

RESEARCH GAP AND HYPOTHESIS DEVELOPMENTS

In the upstream oil and gas sector, the empirical literature analyses of domestic U.S. upstream transactions reinforce this heterogeneity, showing that performance shifts depend heavily on asset type, geological profiles, and firm-specific capabilities, which makes generalizing short-term post-merger financial effects difficult (Speitmann, 2023). Empirical research across multiple countries consistently shows that solvency and leverage ratios often do not exhibit significant short-term improvements following M&A. (Adhikari et al., 2023) find that although sector-level liquidity and leverage improved in Nepal's banking industry, most individual banks displayed insignificant or inconsistent leverage adjustments. Similar results are reported by (Patel, 2018) in Indian banks, and (Abbas et al., 2014) in Pakistan, all concluding that M&A does not automatically restructure long-term financial positions within early post-merger windows. Other studies highlight substantial firm-level heterogeneity, with solvency outcomes depending heavily on each bank's pre-merger balance sheet, as shown by (Maani & Rajkumar, 2024). Collectively, these findings suggest that the upstream O&G sector does not exhibit a consistent pattern of post-merger financial improvement and that outcomes are more context-dependent than deterministic.

Based on the theoretical perspectives and empirical evidence discussed above, this study formulates the following hypotheses to examine post-merger financial performance of acquiring firms in the upstream oil and gas sector:

1. Profitability: From a theoretical perspective, mergers and acquisitions are expected to enhance profitability through synergy realization, improved asset utilization, and efficiency gains

(Weston et al., 2000). In the upstream oil and gas industry, acquisitions of producing assets or proven reserves may strengthen revenue generation and stabilize production, thereby improving profitability indicators such as return on assets and profit margins. However, empirical studies in emerging markets indicate that profitability improvements often do not materialize immediately due to integration costs and long project life cycles (Adhikari et al., 2023). Based on this reasoning, the following hypothesis is proposed:

H1: M&A have a significant impact on profitability in the post-M&A period of the acquiring company.

2. Liquidity: M&A transactions may also influence firms' liquidity positions through acquisition-related cash outflows, integration expenses, and working-capital adjustments. While successful integration and improved cash-flow management may strengthen liquidity over time, capital-intensive industries such as upstream oil and gas often experience stable or mixed liquidity outcomes in the short term. Previous empirical studies report inconsistent liquidity effects following M&A, particularly within early post-merger periods (Abbas et al., 2014). Therefore, this study formulates the following hypothesis:

H2: M&A has a significant impact on liquidity in the post-M&A period of the acquiring company.

3. Solvency: Capital-structure theory suggests that mergers and acquisitions may alter firms' solvency by affecting leverage levels, debt composition, and debt-servicing capacity (Harford, 2005). In the upstream oil and gas sector, acquisitions are frequently financed through debt and involve substantial long-term capital commitments. As a result, solvency indicators may exhibit heterogeneous or delayed responses following M&A transactions. Empirical evidence from emerging markets supports this view, showing that solvency ratios often remain unchanged in the short term (Maani & Rajkumar, 2024). Accordingly, the following hypothesis is proposed:

H3: M&A has a significant impact on solvency in the post-M&A period of the acquiring company.

4. Market and Shareholder Value: From a market perspective, M&A activities are expected to influence shareholder value through anticipated synergy realization, improved growth prospects, and enhanced competitive positioning. Market-based indicators such as earnings per share, dividend policy, and valuation multiples reflect investor expectations regarding post-merger performance. However, prior studies document mixed short-term market responses to M&A, particularly in capital-intensive sectors where benefits may take time to materialize (Speitmann, 2023). Based on this discussion, the final hypothesis is formulated as follows:

H4: M&A has a significant impact on shareholder value in the post-M&A period of the acquiring company.

METHOD

This study employs a quantitative, comparative, and pre-post research design to evaluate whether mergers and acquisitions (M&A) in Southeast Asia's upstream oil and gas sector lead to measurable changes in acquiring firms' financial performance. The approach follows event-study logic commonly applied in ratio-based M&A performance research (Adhikari et al., 2023), using panel data spanning the pre- and post-acquisition periods as illustrated in Figure 3-1. By focusing on completed upstream transactions in Indonesia, Malaysia, and Thailand, the methodology enables a systematic assessment of short- to medium-term financial effects within a capital-intensive and state-influenced industry.

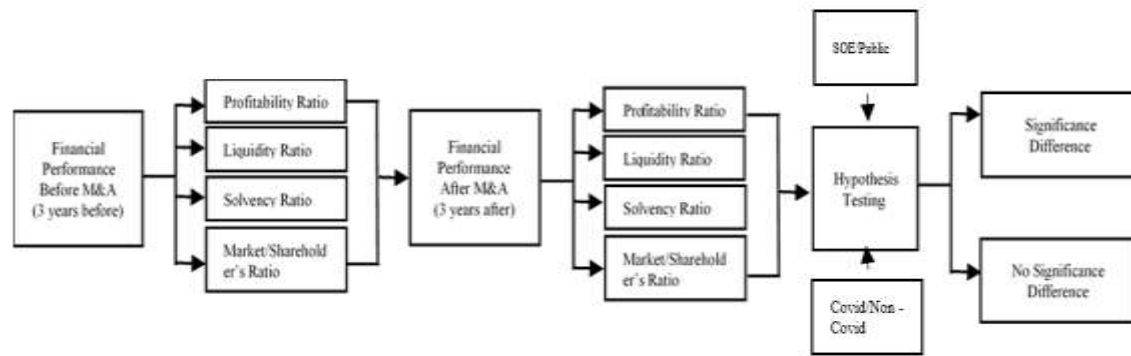


Figure 1. Conceptual Research Framework of the Study

Source: Framework by Author

From the data gather, the M&A transaction retrieved from (Rystad Energy, 2025) provided detailed transaction-level information, including deal year, asset classification, operatorship, acquirer identity, and transaction notes. S&P Capital IQ (2025) provided the standardized financial data used to compute the study’s key performance indicators, covering profitability ratios, liquidity ratios, solvency metrics, and market- or shareholder-value measures. Financial performance metrics unavailable in S&P Capital IQ were retrieved directly from company annual reports accessed through official corporate portals. These reports served as supplementary sources to ensure completeness, cross-validation, and consistency across all profitability, liquidity, solvency, and market/shareholder-value ratios.

From the retrieving data, the final sample consists of 34 unique acquirer-level M&A events, identified through a multi-stage screening protocol. First, all upstream M&A transactions within the study period were extracted from Rystad Energy. Second, transactions with incomplete financial reporting or unclear acquirer target identities were removed. Third, firms executing multiple acquisitions within the same fiscal year were consolidated to prevent overlapping observation windows. A six-year observation window was used to construct financial indicators before and after the acquisition. The study evaluates four categories of financial ratios; Profitability in ROA, ROCE, GPM, NPM; Liquidity for Current Ratio, Quick Ratio; Solvency/Leverage in DER, DCR, ICR, E/TA, OCF/Debt; Market-Based Indicators EPS, DPS, MBR, PER. These ratios collectively reflect operational efficiency, cash position, leverage posture, and shareholder-oriented outcomes. To quantify the change in financial performance attributable to the acquisition, a difference variable (Δ) was calculated for each financial ratio. Δ values measure both magnitude and direction of financial shifts and serve as dependent variables in regression analysis. Two control variables were incorporated into the regression specification to address structural heterogeneity among acquiring firms. Ownership Type (SOE = 1, Private = 0) controls for institutional differences in governance, managerial autonomy, financing access, and operational efficiency, all of which may influence post-merger performance independent of the M&A event. COVID-19 Period (1 = post-M&A window includes 2020–2022) accounts for the unprecedented market disruptions caused by the pandemic such as collapsing oil prices, CAPEX reductions, liquidity pressures, and operational delays that could distort financial outcomes and obscure true merger effects. Controlling for these factors enables the regression model to more accurately isolate the impact of M&A on financial performance.

The analytical procedure consists of descriptive statistics, normality testing, non-parametric inferential tests, and multivariate regression with robust errors. Descriptive statistics summarize central tendencies and dispersion across financial ratios in pre- and post-M&A periods. Normality was assessed using the Shapiro–Wilk test, which the test shows that nearly all delta ratios deviate significantly from a normal distribution (p -value < 0.05), with the sole exception of OCF/DEBT. As normality assumptions were violated, non-parametric tests were adopted (Stoimenova, 2012). Given the presence of extreme outliers and skewed distributions typical of upstream datasets dominated by heterogeneous asset sizes median-based non-parametric tests provide more reliable inference than mean-based comparisons. The Wilcoxon Signed-Rank Test

evaluates whether the median difference between pre- and post-M&A financial performance differs significantly from zero, it is widely applied in M&A ratio-based research due to its robustness against outliers and small sample sizes. The Mann-Whitney U Test examines whether financial performance changes differ between independent groups. This study applies it to compare: SOEs vs. private firms, and firms whose post-M&A window overlaps with COVID-19 vs. those that do not. To assess the role of ownership, Country context, and COVID-19 conditions simultaneously, the study employs Ordinary Least Squares (OLS) regression with cross-sectional robust standard errors (White, 1980). The model is specified as:

$$\Delta Ratio_i = \beta_0 + \beta_1 SOE_i + \beta_2 Malaysia_i + \beta_3 Thailand_i + \beta_4 Covid_i + \epsilon_i$$

Where Indonesia, private ownership, and non-COVID periods serve as baseline categories. Robust standard errors account for heteroskedasticity arising from differences in firm size, asset portfolios, and Country-level operating environments. This multivariate framework isolates the influence of contextual factors on financial performance changes following M&A events.

RESULTS

The final dataset comprises 34 validated upstream M&A transactions undertaken by firms headquartered in Indonesia, Malaysia, and Thailand. These transactions were sourced from the Rystad Energy M&A database and cross-checked against public disclosures to ensure consistency in deal identification and reporting periods. Data were further standardised to align with the six-year observation window surrounding each transaction, consisting of three years before and three years after the acquisition.

Table 1. Sample Summary of M&A Transactions in the Upstream Oil and Gas Sector in Indonesia, Malaysia and Thailand

No	Country	Buyer	Deal Types	Total Deal Value (USD million)	Total Deals
1	Indonesia	MedcoEnergi	Field acquisition; Company acquisition	3,645	6
2	Indonesia	Pertamina Hulu Energi (PHE)	Field acquisition; License acquisition	2,714	8
3	Indonesia	Saka Energi	Field acquisition	650	1
Indonesia Total				7,009	15
4	Malaysia	Dialog Group	Company acquisition; Field acquisition	244	2
5	Malaysia	Hibiscus Petroleum	Field acquisition	237	2
6	Malaysia	Petronas	Field acquisition; License acquisition	295	8
Malaysia Total				776	12
7	Thailand	PTTEP	Company acquisition; Field acquisition	5,479	5
8	Thailand	Sea Oil Public Company	Field acquisition	43	1
9	Thailand	UAC Global Public Company Limited	Field acquisition	12	1
Thailand Total				5,534	7
Grand Total				13,319	34

Source: Rystad Energy (2025), prepared by Author

Indonesia recorded the largest number of acquisitions (15 deals) with a total transaction value of USD 7,009 million, driven primarily by MedcoEnergi and Pertamina Hulu Energi’s multi-asset expansions. Malaysia follows with 12 transactions amounting to USD 776 million, while Thailand accounts for seven deals totalling USD 5,534 million, most of which are attributable to PTTEP. Across all three markets, field acquisitions constitute the dominant deal type, while company-level acquisitions appear predominantly in larger transactions. License acquisitions occur less frequently and are concentrated among PHE and Petronas.

Table 2. Detail Variables

Company Type		Covid		Country		
Public	SOE	Covid	Non-Covid	Indonesia	Malaysia	Thailand
13	21	9	25	15	12	7

Source: Compile by Author

In terms of organisational characteristics, 21 of the 34 acquiring firms are state-owned enterprises (SOEs) and 13 are publicly listed firms. Nine acquisitions occurred during the COVID-19 period (2020–2022), providing a natural context for subgroup analysis. These distributions reflect varying institutional structures, strategic motives, and market conditions across the three countries and create a suitable empirical basis for comparative analysis.

Descriptive Statistics

Table 3. Descriptive Statistics

Category	Ratio	Δ Mean	Δ Median	SD	Direction
Profitability	ROA	-0.0866	0.0160	0.3800	Decreased
	ROE	0.4722	0.0020	4.7814	Increased
	ROCE	0.2321	0.0103	2.0119	Increased
	NPM	0.0412	-0.0040	0.2654	Increased
	GPM	0.0211	0.0227	0.1705	Increased
Liquidity	CR	-0.2370	0.0667	1.6489	Decreased
	QR	-0.3577	0.0000	1.5003	Decreased
Solvability & Debt	DER	3.0812	0.0390	20.5625	Increased
	DCR	-0.5854	0.0290	5.7110	Decreased
	E/TA	-0.3718	-0.0207	3.3450	Decreased
	ICR	2.2465	0.0000	23.0048	Increased
	OCF/DEBT	0.0123	0.0167	0.2379	Increased
Market & Shareholder Value	DPS	-0.0023	0.0000	0.0298	Decreased
	EPS	2.8299	0.0000	15.0219	Increased
	MBR	-0.0935	0.0000	0.4207	Decreased
	PER	-0.9333	0.0000	3.9770	Decreased

Source: Data processed by using R

Descriptive statistics of the post-pre (Δ) ratios show modest and uneven financial changes following M&A. Profitability indicators exhibit limited improvement: ROA (median = 0.018), ROE (0.007), ROCE (0.015), and NPM (0.004) display small, non-systematic shifts, while only GPM shows a meaningful gain (median = 0.024). Liquidity remains broadly stable, with CR (0.140) and QR (0.000) medians indicating minimal variation across firms. Solvency measures show the greatest dispersion: DER (median = 0.055), DCR (0.032), E/TA (-0.020), ICR (0.000), and OCF/DEBT (0.033) reveal firm-specific rather than sector-wide adjustments. Market-based indicators including DPS, MBR, PER, and EPS all record zero median changes, reflecting neutral investor response. Overall, descriptive patterns indicate that early post-merger outcomes are highly heterogeneous with no consistent improvements across the sample, supporting prior evidence that synergy realization and capital-structure effects typically emerge gradually in capital-intensive industries.

Wilcoxon Signed-Rank Test

Table 4. Wilcoxon Signed-Rank Test

Hypothesis	Ratios	Median (Post - Pre)	p-value	Significance
H ₁	Profitability			
	ROA	0,018	0,353	Not Significant
	ROE	0,007	0,972	Not Significant
	ROCE	0,015	0,469	Not Significant

	NPM	0,004	0,549	Not Significant
	GPM	0,024	0,023	Significant
H ₂	Liquidity			
	CR	0,140	0,652	Not Significant
	QR	0,000	0,524	Not Significant
H ₃	Solvability & Debt			
	DER	0,055	0,133	Not Significant
	DCR	0,032	0,258	Not Significant
	E/TA	-0,020	0,458	Not Significant
	ICR	0,000	0,717	Not Significant
	OCF/DEBT	0,033	0,462	Not Significant
H ₄	Market-Book Ratio			
	DPS	0,000	1,000	Not Significant
	MBR	0,000	0,776	Not Significant
	PER	0,000	0,887	Not Significant
	EPS	0,000	0,297	Not Significant

Source: Data Processed by using R

The Wilcoxon Signed-Rank tests evaluate whether post-merger financial performance differs significantly from the pre-merger period. Across all four hypothesis domains for profitability, liquidity, solvency, and market-based indicators. The results show that only one ratio (GPM) exhibits a statistically significant median change, while all others remain statistically insignificant at the 5% level.

For profitability (H1), the results show no statistically meaningful changes: ROA (median = 0.018; $p = 0.353$), ROE (0.007; $p = 0.972$), ROCE (0.015; $p = 0.469$), and NPM (0.004; $p = 0.549$) all remain insignificant. This means that the assets acquired through M&A were not yet generating additional income, the existing equity base did not yield higher returns for shareholders, and post-merger integration had not enhanced cost control or operational efficiency. Based on these findings, H1 is not supported. The insignificant changes across financial ratios indicate that synergy benefits had not yet taken effect within the three years following the merger.

For liquidity (H2), the Wilcoxon Signed-Rank results indicate no statistically significant differences between pre- and post-merger liquidity positions. The Current Ratio (median = 0.140; $p = 0.652$) and Quick Ratio (0.000; $p = 0.524$) both show insignificant changes. This means that post-merger integration did not improve firms' short-term cash buffers or ability to meet immediate obligations, nor did it impose widespread liquidity pressures across the sample. Most acquirers maintained similar working-capital conditions before and after the transaction, suggesting that the cash outflows associated with acquisitions were either modest or offset by internal liquidity management. Based on these findings, H2 is not supported.

For solvency (H3), the results likewise show no meaningful structural adjustments to leverage or debt sustainability in the early post-merger period. DER (median = 0.055; $p = 0.133$), DCR (0.032; $p = 0.258$), E/TA (-0.020; $p = 0.458$), ICR (0.000; $p = 0.717$), and OCF/DEBT (0.033; $p = 0.462$) are all statistically insignificant. This means that firms did not substantially increase or reduce leverage after acquisition, nor did their capacity to service debt materially improve or deteriorate. Solvency outcomes remained largely stable, indicating that capital-structure realignments if any had not yet taken effect within the three-year window. This pattern is typical in capital-intensive industries, where debt restructuring occurs gradually. Accordingly, H3 is not supported.

For market-based indicators (H4), the Wilcoxon tests show no significant changes following acquisition. DPS (median = 0.000; $p = 1.000$), MBR (0.000; $p = 0.776$), PER (0.000; $p = 0.887$), and EPS (0.000; $p = 0.297$) all exhibit statistically insignificant differences. This means that investors did not revise their valuation of acquirers in a consistent direction, dividend policies remained unchanged, and per-share earnings effects were too small or too uneven to influence the median outcome. Market expectations therefore appear unaffected by the transactions, implying that capital markets did not perceive immediate synergy gains or risks. Based on these results, H4 is not supported.

Mann-Whitney U Test Covid-19 vs. Non Covid-19 Comparison

The Mann–Whitney U tests show that most financial ratios do not differ significantly between firms whose post-M&A windows overlapped with COVID-19 and those that did not. Only ROCE ($p = 0.029$) shows a significant difference, with COVID-period firms recording a higher median improvement (0.025 vs. -0.045), suggesting stronger capital-use adjustments among acquirers exposed to pandemic conditions. For solvency ratios, DER ($p = 0.015$) and DCR ($p = 0.001$) also differ significantly: COVID firms show higher leverage expansion (median = 0.120) and stronger debt-coverage improvements (median = 0.102) compared to non-COVID firms. All profitability, liquidity, and market-based ratios remain insignificant, indicating that COVID-19 did not systematically alter short-term post-M&A financial outcomes for most indicators.

Table 5. Mann-Whitney U Test for COVID-19 vs Non-COVID-19 Period

Ratio	Median Covid19	Median Non Covid19	p-value	Significance
Profitability				
ROA	0,019	0,003	0,642	Not Significant
ROE	-0,050	0,258	0,102	Not Significant
ROCE	0,025	-0,045	0,029	Significant
NPM	-0,016	0,073	0,131	Not Significant
GPM	0,025	0,024	0,706	Not Significant
Liquidity				
CR	0,163	0,000	0,793	Not Significant
QR	-0,033	0,000	0,701	Not Significant
Solvability & Debt				
DER	0,120	-0,054	0,015	Significant
DCR	0,102	-0,273	0,001	Significant
E/TA	-0,022	0,004	1,000	Not Significant
ICR	0,100	-0,967	0,455	Not Significant
OCF/DEBT	0,017	0,067	0,856	Not Significant
Market-Book Ratio				
DPS	0,000	0,000	0,980	Not Significant
MBR	0,000	0,000	0,683	Not Significant
PER	0,000	0,000	1,000	Not Significant
EPS	0,000	0,000	0,860	Not Significant

Source: Data processed by using R

Mann-Whitney U Test Ownership Type: SOE vs. Public

Most ratios show no significant differences between SOEs and publicly listed firms. The only significant results are DCR ($p = 0.047$) with SOEs showing larger improvements (median = 2.033 vs. 0.013) and MBR ($p = 0.045$), where public firms exhibit relatively stable valuation multiples compared to modest declines among SOEs. No profitability or liquidity ratios differ across ownership types, suggesting that governance structure did not materially shape short-term financial adjustments following M&A.

Table 6. Mann-Whitney U Test: SOE vs. Public Firms

Ratios	SOE	Public	p-value	Significance
Profitability				
ROA	0,026	0,013	0,519	Not Significant
ROE	0,002	0,009	0,676	Not Significant
ROCE	0,041	-0,004	0,068	Not Significant
NPM	0,026	-0,001	0,478	Not Significant
GPM	0,052	0,022	0,649	Not Significant
Liquidity				
CR	0,233	0,103	0,970	Not Significant

QR	-0,133	0,000	0,685	Not Significant
Solvability & Debt				
DER	1,167	0,033	0,080	Not Significant
DCR	2,033	0,013	0,047	Significant
E/TA	-0,023	-0,015	0,841	Not Significant
ICR	0,200	-1,483	0,568	Not Significant
OCF/DEBT	0,000	0,050	0,782	Not Significant
Market-Book Ratio				
DPS	0,000	0,000	0,181	Not Significant
MBR	-0,023	0,000	0,045	Significant
PER	0,000	0,000	0,469	Not Significant
EPS	0,006	0,000	0,583	Not Significant

Source: Data processed by using R

OLS Regression with Clustered Robust Standard Errors (CRSE)

The overall results, the OLS–CRSE models show that post-merger changes in financial ratios are small, statistically insignificant, and not systematically driven by institutional characteristics. The intercepts, representing baseline Indonesian non-SOE firms outside the COVID window, are themselves insignificant (e.g., ROA = 0.0857, $p = 0.439$; ROE = 0.476, $p = 0.704$), confirming that even the benchmark group did not experience meaningful profitability gains. Coefficients for SOE ownership, COVID exposure, and Country dummies (Malaysia, Thailand) are also predominantly insignificant, indicating no systematic differences across ownership types or jurisdictions. Only two significant deviations emerge: a negative effect for Thailand on GPM ($\beta = -0.109$, $p = 0.032$) and for SOEs and Thai firms on DCR ($\beta = -4.18$ and $\beta = -5.12$, respectively), suggesting slightly weaker cost and debt-coverage dynamics. Overall, these results reinforce the Wilcoxon and Mann–Whitney tests, showing that short-term post-merger financial outcomes showed no significant shifts and that synergy benefits had not yet taken effect within the three-year post-acquisition window. Although regression coefficients differ slightly across Indonesia, Malaysia, and Thailand, the absence of statistical significance suggests that institutional variation across these petroleum regimes does not materially influence short-term post-acquisition performance.

DISCUSSION

The findings across all four hypotheses show that mergers and acquisitions do not generate significant financial improvements for acquiring firms. Within the three years following the acquisition, none of the core financial ratios covering profitability, liquidity, solvency, or market valuation display meaningful increases. This indicates that the expected synergy gains, such as enhanced asset productivity, improved cost efficiency, or strengthened capital structures, have not yet begun to influence financial outcomes.

Descriptive statistics show only small and uneven shifts across firms, suggesting that early financial adjustments vary considerably and do not follow a consistent pattern. This is reflected in the Wilcoxon Signed-Rank test results, which indicate that median post-acquisition values remain statistically unchanged for nearly all ratios. Profitability indicators including ROA, ROE, ROCE, and NPM show no meaningful improvement, implying that the assets acquired through M&A have not yet contributed to stronger income generation or more efficient use of capital. Liquidity ratios also remain stable, indicating that firms neither strengthened nor weakened their short-term financial buffers during early integration. Solvency and leverage indicators exhibit high variability but no systematic post-deal change, suggesting that capital structures were not significantly adjusted in the early years. Market-based indicators similarly show no shifts in valuation, implying that investors did not revise their expectations regarding the acquiring firms' long-term prospects.

These findings are consistent with prior empirical studies documenting limited short-term financial effects of M&A, particularly in emerging markets and capital-intensive industries. (Adhikari et al., 2023) report that post-merger profitability and leverage ratios in Nepalese banks

remain largely unchanged within early post-merger windows, while (Maani & Rajkumar, 2024) document similarly insignificant short-term effects in Indian banking institutions. Although these studies focus on financial sectors, the convergence of results suggests a broader empirical regularity in which short-term post-merger financial improvements are not guaranteed. In the upstream oil and gas context, (Speitmann, 2023) demonstrates that post-merger performance depends heavily on asset type, geological characteristics, and firm-specific capabilities, making generalized short-term financial gains unlikely. The absence of systematic improvements observed in this study aligns with these sector-specific findings.

From a theoretical perspective, the results are more consistent with neoclassical and resource-based explanations of M&A than with strong short-term synergy or efficiency hypotheses. Neoclassical theory posits that mergers are strategic responses to structural shocks such as commodity price volatility, regulatory change, or reserve depletion, rather than mechanisms designed to deliver immediate financial gains. In the upstream oil and gas industry, acquisitions are frequently undertaken to secure reserves, rebalance portfolios, or reposition firms strategically. The financial benefits of these objectives may only become observable over extended time horizons. Similarly, the resource-based view emphasizes that value creation depends on the successful integration and reconfiguration of acquired resources and capabilities, processes that are inherently gradual in asset-intensive industries. Integration costs, learning curves, and post-acquisition capital commitments may therefore offset potential efficiency gains in the early years following acquisition.

The Mann–Whitney U tests confirms the absence of structural differences across groups. State-owned enterprises and public firms exhibit similar post-M&A financial patterns, indicating that ownership type does not meaningfully alter short-term performance outcomes. Likewise, Covid and non-Covid period deals show comparable median shifts, suggesting that the pandemic did not systematically influence early post-acquisition results. These patterns collectively indicate that early post-M&A developments are shaped more by firm-specific conditions such as integration capacity, asset characteristics, or deal structure than by institutional ownership or macroeconomic disruption.

The OLS–CRSE regression findings reinforces these conclusions. Across profitability, liquidity, solvency, and market-value models, most coefficients for ownership, Country context, and Covid-period exposure are statistically insignificant. This means that short-term changes in financial performance cannot be attributed to institutional characteristics or macroeconomic timing. Only isolated effects such as slightly weaker margins or debt-coverage adjustments in specific Country comparisons achieve significance, but these are neither consistent nor large enough to suggest systematic post-merger impacts. Together, the regression results affirm that financial trajectories in the first three years remain broadly stable and shaped predominantly by firm-level dynamics, not by the merger event itself.

The findings carry important theoretical and practical implications. Theoretically, they reinforce arguments that short-term financial ratios provide an incomplete assessment of M&A success in capital-intensive industries. While synergy and efficiency theories predict performance improvements, the results highlight the importance of time horizons when evaluating M&A outcomes. In upstream oil and gas, financial stability in the early post-merger period may reflect a transitional phase rather than a failure of value creation. Practically, the results caution managers against expecting immediate financial improvements following upstream M&A transactions and emphasize the importance of long-term integration and operational alignment. For investors, short-term financial neutrality should not be interpreted as underperformance but as a characteristic of acquisitions in industries with long development cycles. For policymakers and regulators, particularly those overseeing state-owned enterprises, the findings suggest that M&A effectiveness should be evaluated based on long-term strategic and operational outcomes rather than short-term financial metrics.

CONCLUSION

The empirical findings show that mergers and acquisitions do not generate significant financial improvements for acquiring firms within the first three years after completion.

Profitability, liquidity, solvency, and market-valuation ratios remain broadly unchanged, indicating that expected gains from asset productivity, operational efficiency, and capital-structure optimization have not yet emerged. This suggests that early post-acquisition financial effects in the upstream oil and gas sector tend to be limited rather than transformative.

These results align with finance theory and prior empirical evidence. Synergy realization typically requires multi-year integration periods, especially in capital-intensive industries where production systems, reservoir management, and technical capabilities cannot be synchronized immediately. The absence of short-term financial improvements is therefore consistent with findings from (Adhikari et al., 2023), , and (Maani & Rajkumar, 2024), which similarly document slow or statistically insignificant financial responses following M&A. From a theoretical standpoint, neoclassical and strategic-synergy perspectives suggest that acquisitions are primarily instruments for long-term repositioning rather than mechanisms for immediate earnings enhancement. Resource-Based View and dynamic capability arguments further explain that newly acquired assets create value only after firms integrate and reconfigure knowledge, technologies, and organizational processes, which is inherently gradual in the upstream oil and gas industry.

Broader industry dynamics reinforces this interpretation. As emphasized by (Weston et al., 2000), M&A in the petroleum industry is part of a wider restructuring strategy aimed at reducing costs, improving operational capabilities, and building long-term investment opportunities. Given the geological, technological, and regulatory complexity of upstream operations, financial benefits are expected to emerge over extended horizons. Accordingly, the stability of financial ratios in this study should be viewed as characteristic of the sector rather than a reflection of underperformance.

Despite these contributions, this study is subject to several limitations. First, the analysis focuses exclusively on short-term post-acquisition performance using a three-year observation window, which may not fully capture long-term synergy realization in an industry characterized by long development cycles. Second, the study employs a pre-post comparative design without a matched control group of non-acquiring firms, which limits the ability to draw causal inferences regarding the direct impact of M&A. Third, the sample size is constrained to 34 upstream M&A events across Indonesia, Malaysia, and Thailand, reflecting data availability but potentially limiting generalizability to other regions or subsectors. Finally, the analysis relies primarily on financial ratio indicators and does not incorporate non-financial dimensions such as operational integration quality, reserve replacement outcomes, or managerial effectiveness, which may play a critical role in post-merger value creation.

Future research can address these limitations in several ways. First, extending the observation window beyond three years would allow researchers to examine whether financial benefits emerge over longer horizons as integration processes mature. Second, incorporating control groups or applying quasi-experimental methods such as difference-in-differences could strengthen causal interpretation of M&A effects. Third, future studies could expand the geographical scope to include additional upstream-producing regions or compare national oil companies with international oil companies to capture institutional variation more comprehensively. Finally, integrating non-financial performance indicators, such as reserve replacement ratios, production efficiency, or operational synergies, would provide a more holistic assessment of M&A success in the upstream oil and gas sector.

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