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ASEAN Energy Firms' Financial Fortitude: Past Geopolitical Insights For Iran-Israel Challenges

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Abstract

Geopolitical crises, including the Gulf tensions (2019–2020) and the Russia-Ukraine conflict (2022), have profoundly disrupted the financial performance of ASEAN energy firms, offering critical insights for navigating the ongoing Iran-Israel conflict. This study investigates the influence of financial ratios—Debt to Equity Ratio (DER), Total Asset Turnover Ratio (TATO), and Liquidity Coverage Ratio (LCR)—on financial performance, measured through Current Ratio (CR) for liquidity and Net Income (NI) for profitability, across 101 energy firms in Indonesia, Malaysia, the Philippines, Thailand, and Singapore from 2019 to 2023. Utilizing panel data regression with data sourced from the Wall Street Journal, the findings demonstrate that LCR significantly enhances both liquidity and profitability, ensuring resilience amid market volatility. Conversely, TATO negatively impacts liquidity, reflecting trade-offs in asset efficiency, while DER shows no significant effect, suggesting prudent debt management. Firm Size increases profitability but reduces liquidity due to operational complexity. These results advance theoretical understanding of financial resilience in emerging markets and provide actionable liquidity-focused strategies for managers and policymakers to address current geopolitical uncertainties, fostering robust financial stability.

Keywords: Geopolitical Crises; Financial Ratios; Liquidity; Profitability; ASEAN Energy Firms

1. Introduction

Geopolitical crises have profoundly shaped the global energy sector, creating significant challenges for firms in emerging markets, particularly within the Association of Southeast Asian Nations (ASEAN). Events such as the Gulf tensions (2019–2020) and the Russia-Ukraine conflict (2022) triggered oil price volatility, supply chain disruptions, and financial uncertainties, severely impacting the liquidity and profitability of energy firms (Khatrri, 2023; Syafii et al., 2024). These historical crises offer critical lessons for navigating the ongoing Iran-Israel conflict, which continues to destabilize energy markets with similar patterns of uncertainty, including fluctuating commodity prices and supply constraints (A. Quimba & A. Barral, 2024; Chen et al., 2024). ASEAN, a region characterized by rapid economic growth, diverse regulatory frameworks, and strategic importance in global energy markets, is particularly vulnerable to such disruptions due to its reliance on energy exports and exposure to geopolitical risks (Ab Aziz et al., 2024; Kononova & Abuzov, 2023). Understanding how financial strategies can enhance resilience in these volatile conditions is essential for ensuring the sustainability of energy firms and informing strategies to address current and future crises (Irianto et al., 2025; Rattanapong & Na Ayuthaya, 2025).

Financial ratios serve as critical indicators of a firm's financial health, directly influencing its ability to withstand external shocks. The Debt to Equity Ratio (DER) measures leverage, with higher ratios indicating elevated financial risk, particularly in unstable markets where cash flow uncertainty is pronounced (Burki et al., 2024; Chukwuma-Eke et al., 2023). The Total Asset Turnover Ratio (TATO) reflects asset efficiency in generating revenue, which can bolster liquidity and profitability during downturns by ensuring sufficient cash flows (Irianto et al., 2025; Oktarina, 2019). The Liquidity Coverage Ratio (LCR), which gauges a firm's capacity to meet short-term obligations with liquid assets, is pivotal for sustaining operations amid geopolitical tensions (Dat et al., 2022;

Syahputri, 2025). These ratios, combined with Firm Size as a control variable, provide a robust framework for assessing financial performance, measured through Current Ratio (CR) for liquidity and Net Income (NI) for profitability (Rahma & Rokhim, 2022; Syafii et al., 2024). Firm Size, proxied by the natural logarithm of total assets, captures the influence of operational scale, which can moderate the effects of financial ratios on performance outcomes (Kesuma et al., 2025).

Despite extensive research on financial performance, studies focusing on ASEAN energy firms during geopolitical crises remain limited. Most literature emphasizes developed markets or macroeconomic impacts, overlooking the unique challenges faced by emerging markets like ASEAN (Esty Rahayu et al., 2025; Piter Silitonga et al., 2024). For instance, high DER can exacerbate financial risk during volatile periods, as fixed costs from debt obligations strain cash flows when revenues decline due to geopolitical disruptions ((Chukwuma-Eke et al., 2023; Irianto et al., 2025). Conversely, efficient asset utilization, as measured by TATO, can generate sufficient cash flows to support liquidity, even in downturns, though trade-offs may arise when firms prioritize long-term investments over short-term liquidity (Burki et al., 2024; Olalere et al., 2020). LCR is particularly critical, enabling firms to navigate liquidity crunches and maintain operational continuity during crises, with studies showing that firms with high LCR demonstrate superior resilience and post-crisis recovery (Dat et al., 2022; Syafii et al., 2024; Syahputri, 2025). These findings underscore the importance of proactive liquidity management in mitigating the adverse effects of geopolitical uncertainties (Rahma & Rokhim, 2022).

Geopolitical crises, such as the Gulf tensions and the Russia-Ukraine conflict, have significantly altered the dynamics between asset efficiency and liquidity. These events caused fluctuating oil prices and reduced market demand, challenging firms with high TATO to maintain liquidity due to constrained cash flows (A. Quimba & A. Barral, 2024; Henrika et al., 2025; Khatri, 2023). Firms with diversified asset management, however, sustained liquidity by balancing operational efficiency with cash reserves, highlighting the importance of strategic flexibility (Irianto et al., 2025; Olalere et al., 2020). The insignificant impact of DER in certain contexts suggests that firms may prioritize operational cash flows over leverage strategies during crises, mitigating debt-related risks through prudent financial management, such as hedging or diversified financing (Beeson, 2022; Chukwuma-Eke et al., 2023). Larger firms benefit from economies of scale and diversified portfolios, enabling them to maintain competitiveness and profitability despite adverse conditions, though their complex operations may reduce liquidity, presenting a trade-off (Syafii et al., 2024; Rahma & Rokhim, 2022). The regulatory environment in ASEAN further complicates financial performance. Countries with developed regulatory systems provide better access to financial instruments, enabling firms to respond swiftly to market changes, while less effective regulations can hinder responsiveness, leading to poorer outcomes during crises (Aziz et al., 2024; Chen et al., 2024).

This study addresses a critical gap by examining the relationship between DER, TATO, and LCR and the financial performance (CR and NI) of ASEAN energy firms from 2019 to 2023. By drawing lessons from past geopolitical crises, it provides insights for navigating the Iran-Israel conflict, which poses similar risks of market volatility and supply disruptions (Konovalova & Abuzov, 2023; Rattanapong & Ayuthaya, 2025). The research poses three key questions: (1) How do financial ratios influence liquidity and profitability during geopolitical crises? (2) What role does Firm Size play in these relationships? (3) What are the theoretical and practical implications for emerging markets? Using panel data regression, the study provides empirical evidence on financial resilience, contributing to both academic discourse and practical applications in the ASEAN energy sector.

The significance of this research lies in its focus on ASEAN, a region with unique economic, regulatory, and geopolitical challenges. The findings advance theoretical frameworks by elucidating the interplay of financial ratios under crisis conditions, particularly the critical role of liquidity in sustaining performance (Dat et al., 2022; Syahputri, 2025). Practically, the study offers actionable strategies for managers to prioritize liquidity management, balance asset efficiency, and leverage firm size to enhance resilience (Rattanapong & Ayuthaya, 2025). For policymakers, it underscores the need for regulatory harmonization and improved access to liquidity instruments to support energy firms during crises (Aziz et al., 2024; Chen et al., 2024). Methodologically, the use of longitudinal panel data overcomes limitations of cross-sectional analyses, providing a nuanced understanding of temporal dynamics in financial performance (Kesuma et al., 2025; Piter Silitonga et al., 2024).

Recent literature further emphasizes the importance of financial resilience in emerging markets, particularly in the context of energy firms facing geopolitical uncertainties. For example, proactive liquidity management has been shown to enhance post-crisis recovery, enabling firms to mitigate supply chain disruptions and maintain operational stability (Syafii et al., 2024). The trade-offs between asset efficiency and liquidity highlight the need for balanced financial strategies, especially in volatile markets where short-term liquidity is critical (Oktarina, 2019; Olalere et al., 2020). The insignificant impact of DER suggests that ASEAN firms may employ effective

debt management strategies, such as hedging, to minimize financial risks, a finding that aligns with broader trends in emerging markets (Beeson, 2022; Chukwuma-Eke et al., 2023). By integrating these insights, the study contributes to a deeper understanding of how financial strategies can be tailored to address the unique challenges of geopolitical crises in the ASEAN energy sector.

2. Research Methods

This study employs a quantitative approach to investigate the relationship between financial ratios such as Debt to Equity Ratio (DER), Total Asset Turnover Ratio (TATO), and Liquidity Coverage Ratio (LCR), and financial performance, measured through Current Ratio (CR) for liquidity and Net Income (NI) for profitability, in 101 ASEAN energy firms from 2019 to 2023. Firm Size, proxied by the natural logarithm of total assets, is included as a control variable to account for differences in operational scale. The analysis utilizes panel data regression, a method well-suited for capturing both cross-sectional and temporal variations in financial performance during geopolitical crises, such as the Gulf tensions (2019–2020), the Russia-Ukraine conflict (2022), and the ongoing Iran-Israel conflict (Kesuma et al., 2025; Khatri, 2023; Syafii et al., 2024). The period 2019–2023 was selected to encompass these significant events, which triggered oil price volatility, supply chain disruptions, and financial uncertainties, enabling a robust examination of financial resilience in the ASEAN energy sector (A. Quimba & A. Barral, 2024; Konovalova & Abuzov, 2023).

The data were sourced from the Wall Street Journal (WSJ), a reputable platform known for its comprehensive and reliable financial information, ensuring consistency and accuracy in the dataset (Dat et al., 2022). The sample consists of 101 publicly listed energy firms operating in oil, gas, or renewable energy sectors across Indonesia, Malaysia, the Philippines, Thailand, and Singapore. These firms were selected based on the availability of complete annual financial reports for the study period, a criterion that ensures data integrity and facilitates longitudinal analysis (Syahputri, 2025). To validate the data, WSJ records were cross-referenced with official company financial statements and regulatory filings submitted to national stock exchanges, minimizing measurement errors and aligning with best practices in financial research (Rahma & Rokhim, 2022; Irianto et al., 2025). The resulting dataset is balanced, comprising 505 observations (101 firms × 5 years), which provides sufficient statistical power for panel data regression and enhances the reliability of the findings (Hanasa & Lubis, 2023).

The dependent variables are CR and NI. CR, defined as the ratio of current assets to current liabilities, measures a firm's liquidity, reflecting its ability to meet short-term obligations (Rahma & Rokhim, 2022). NI, calculated as net income after taxes, serves as a proxy for profitability, capturing the firm's overall financial success (Syafii et al., 2024). The independent variables include DER, TATO, and LCR. DER, computed as total debt divided by total equity, indicates the firm's leverage and associated financial risk (Chukwuma-Eke et al., 2023). TATO, calculated as revenue divided by total assets, measures asset efficiency in generating revenue, a critical factor in maintaining liquidity and profitability during crises (Burki et al., 2024; Irianto et al., 2025). LCR, defined as liquid assets divided by short term liabilities, assesses the firm's capacity to withstand liquidity shocks, particularly relevant in volatile geopolitical contexts (Bossu et al., 2020). Firm Size, as a control variable, accounts for variations in operational scale that may influence financial performance (Syafii et al., 2024; Kesuma et al., 2025).

Table 1. Variable Measurement

Variable	Measurement	Reference
Current Ratio (CR)	Current assets divided by current liabilities	Rahma & Rokhim (2022)
Net Income (NI)	Net income after taxes	Syafii et al. (2024)
Debt to Equity Ratio (DER)	Total debt divided by total equity	Chukwuma-Eke et al. (2023)
Total Asset Turnover Ratio (TATO)	Revenue divided by total assets	Burki et al. (2024)
Liquidity Coverage Ratio (LCR)	Liquid Assets divided by Shortterm Liabilities	Bossu et al. (2020)
Firm Size	Natural logarithm of total assets	Kesuma et al. (2025)

The analytical framework is based on panel data regression, expressed as:

$$Y_{it} = \beta_0 + \beta_1 DER_{it} + \beta_2 TATO_{it} + \beta_3 LCR_{it} + \beta_4 FirmSize_{it} + \epsilon_{it}$$

Where Y_{it} represents CR (Current Ratio) or NI (Net Income) for firm i at time t , β_0 is the intercept, β_1 to β_4 are the regression coefficients, and ϵ_{it} is the error term. This model accounts for unobserved heterogeneity across firms and temporal dynamics, making it suitable for analyzing financial performance in the context of geopolitical crises (Meirawati et al., 2024).

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The data analysis followed a rigorous, multi-step process to ensure robust and reliable results. First, the dataset was structured to integrate cross-sectional data from 101 firms with time-series data spanning 2019–2023, creating a balanced panel suitable for regression analysis (Kesuma et al., 2025). Second, diagnostic tests were conducted to assess data quality. Third, the Breusch-Pagan test evaluated heteroskedasticity, while the Wooldridge test checked for autocorrelation, both of which are common in panel data studies and can bias estimates if unaddressed (Olalere et al., 2020; Syahputri, 2025). Fourth, regression was performed as a baseline to provide initial insights into the relationships between variables, though it does not account for firm-specific or time-specific effects (Hanasa & Lubis, 2023). Fifth, fixed effects (FE) and random effects (RE) models were estimated to capture firm-specific and temporal variations. The FE model controls for unobserved time-invariant characteristics, such as firm culture or management practices, while the RE model assumes that unobserved effects are uncorrelated with the independent variables, potentially yielding more efficient estimates (Meirawati et al., 2024). The Hausman test was applied to determine the appropriate model, comparing the consistency of FE versus the efficiency of RE (Kesuma et al., 2025). Sixth, robust standard errors were employed to address detected heteroskedasticity and autocorrelation, ensuring reliable inference and minimizing bias in the regression coefficients (Olalere et al., 2020; Syahputri, 2025).

The analysis was performed using Stata, a statistical software package widely recognized for its precision in handling large panel datasets and its ability to implement advanced econometric techniques. The choice of panel data regression was justified by its ability to address heterogeneity across firms and capture dynamic changes in financial performance during geopolitical crises, aligning with the study's objective to provide longitudinal insights (Kesuma et al., 2025). Additionally, the use of robust standard errors and diagnostic tests enhances the credibility of the results, addressing methodological challenges highlighted in prior research.

The selection of publicly listed firms ensured access to standardized financial reports, reducing the risk of reporting biases. The focus on the 2019–2023 period aligns with the study's aim to capture the impact of major geopolitical crises, providing a relevant context for drawing lessons applicable to the Iran-Israel conflict. By adhering to these rigorous methodological steps, the study ensures that the results are both statistically sound and practically relevant, contributing to the understanding of financial resilience in the ASEAN energy sector.

3. Results and Discussions

This study investigates the impact of financial ratios, such as Debt to Equity Ratio (DER), Total Asset Turnover Ratio (TATO), and Liquidity Coverage Ratio (LCR) on the financial performance of 101 ASEAN energy firms from 2019 to 2023, with Firm Size as a control variable. Financial performance is measured through Current Ratio (CR) for liquidity and Net Income (NI) for profitability. Employing panel data regression, the analysis captures the effects of geopolitical crises, including the Gulf tensions (2019–2020) and the Russia-Ukraine conflict (2022), while offering insights applicable to the ongoing Iran-Israel conflict, which continues to disrupt energy markets through oil price volatility, supply chain uncertainties, and financial pressures. The findings contribute to understanding financial resilience in emerging markets, addressing significant gaps in the literature by focusing on ASEAN energy firms and providing actionable strategies for navigating current and future geopolitical challenges. The results are presented in two tables, followed by a comprehensive discussion of their implications, theoretical contributions, practical applications, comparisons with prior studies, methodological considerations, and limitations, ensuring a thorough analysis of financial performance dynamics in the ASEAN energy sector.

The regression results for CR, the liquidity measure, are presented in Table 2. The Hausman test ($\chi^2(4) = 159.76$, $\text{Prob} > \chi^2 = 0.0000$) supports the fixed effects (FE) model over the random effects (RE) model, as it accounts for unobserved time-invariant firm-specific effects, such as corporate governance structures or managerial practices (Hanasa & Lubis, 2023). The R-squared within value of 0.3442 indicates that 34.42% of the variation in CR is explained by the independent variables, and the model is statistically significant overall ($F(4,400) = 52.48$, $\text{Prob} > F = 0.0000$). LCR exhibits a significant positive effect on CR (coefficient = 1.108791, $p = 0.000$), suggesting that a one-unit increase in LCR enhances CR by 1.108791 units. This finding underscores the pivotal role of liquidity in enabling firms to meet short-term obligations during geopolitical crises, aligning with literature that emphasizes the importance of liquid asset reserves in volatile markets (Dat et al., 2022; Syahputri, 2025; Irianto et al., 2025). TATO, however, shows a significant negative effect (coefficient = -0.1900421, $p = 0.000$), indicating that higher asset efficiency reduces liquidity, a result that highlights a critical trade-off between operational efficiency and short-term financial stability (Oktarina, 2019; Olalere et al., 2020). Firm Size also has a significant negative effect (coefficient = -0.41959, $p = 0.026$), suggesting that larger firms face liquidity challenges, potentially due to complex operational structures or higher allocations to non-current assets, such as

long-term energy infrastructure or renewable energy projects (Syafii et al., 2024; Kesuma et al., 2025). DER is insignificant (coefficient = -0.0067215, $p = 0.743$), indicating that leverage does not directly influence liquidity in this context, possibly due to effective debt management strategies (Chukwuma-Eke et al., 2023; Beeson, 2022). Diagnostic tests reveal heteroskedasticity (Modified Wald: $\chi^2(101) = 42588417.74$, $\text{Prob} > \chi^2 = 0.0000$) and autocorrelation (Wooldridge: $F(1,100) = 20.455$, $\text{Prob} > F = 0.0000$), which were addressed using robust standard errors. In the robust FE model, LCR remains significant ($p = 0.000$), but TATO becomes insignificant ($p = 0.267$), highlighting model sensitivity to heteroskedasticity and the need for cautious interpretation (Meirawati et al., 2024; Irianto et al., 2025).

Table 2. Panel Data Regression Results for Current Ratio (CR)

Variable	Coefficient	Std. Error	t-value	P-value	95% Confidence Interval
DER	-0.0067215	0.0205036	-0.33	0.743	-0.0470297, 0.0335867
TATO	-0.1900421	0.0257642	-7.38	0.000	-0.2406923, -0.1393919
LCR	1.108791	0.0854373	12.98	0.000	0.9408288, 1.276753
Firm Size	-0.41959	0.1883122	-2.23	0.026	-0.7897953, -0.0493847
Constant	6.572473	2.369936	2.77	0.006	1.913386, 11.23156
R-squared (within)	0.3442				
F-statistic	52.48			0.000	

The regression results for NI, the profitability measure, are presented in Table 3. The Hausman test ($\chi^2(4) = 7.99$, $\text{Prob} > \chi^2 = 0.0918$) supports the RE model as more efficient, accounting for variability across firms without assuming time-invariant effects (Hanasa & Lubis, 2023). The R-squared overall value of 0.1503 indicates that 15.03% of the variation in NI is explained by the model, which is statistically significant (Wald $\chi^2(4) = 42.73$, $\text{Prob} > \chi^2 = 0.0000$). LCR has a significant positive effect on NI (coefficient = 1.136136, $p = 0.003$), reinforcing its role in sustaining profitability by reducing financial distress during crises (Syafii et al., 2024; Syahputri, 2025). Firm Size also shows a significant positive effect (coefficient = 0.8894176, $p = 0.000$), indicating that larger firms benefit from economies of scale, diversified portfolios, and better access to resources, enabling them to maintain profitability despite geopolitical shocks (Rahma & Rokhim, 2022; Kesuma et al., 2025). DER and TATO are insignificant (coefficients = -0.0730399, $p = 0.494$; -0.1072755, $p = 0.179$, respectively), suggesting that leverage and asset efficiency do not significantly drive profitability in this context (Chukwuma-Eke et al., 2023; Burki et al., 2024). The Breusch-Pagan test ($\text{chibar}2(01) = 82.43$, $\text{Prob} > \text{chibar}2 = 0.0000$) confirms the appropriateness of the RE model over pooled OLS, ensuring robust estimation (Hanasa & Lubis, 2023; Irianto et al., 2025).

Table 3. Panel Data Regression Results for Net Income (NI)

Variable	Coefficient	Std. Error	z-value	P-value	95% Confidence Interval
DER	-0.0730399	0.1068918	-0.68	0.494	-0.282544, 0.1364643
TATO	-0.1072755	0.0797394	-1.35	0.179	-0.2635619, 0.0490109
LCR	1.136136	0.3865044	2.94	0.003	0.3786014, 1.893671
Firm Size	0.8894176	0.1596903	5.57	0.000	0.5764303, 1.202405
Constant	-7.21929	2.155389	-3.35	0.001	-11.44378, -2.994804
R-squared (overall)	0.1503				
Wald χ^2	42.73			0.000	

The findings partially support the hypothesis that financial ratios influence financial performance during geopolitical crises, offering nuanced insights into the dynamics of liquidity and profitability in ASEAN energy firms. The significant positive effect of LCR on both CR (coefficient = 1.108791, $p = 0.000$) and NI (coefficient = 1.136136, $p = 0.003$) underscores its critical role in financial resilience, enabling firms to navigate liquidity shortages and sustain profitability amid market volatility caused by events like the Russia-Ukraine conflict and the ongoing Iran-Israel tensions (Dat et al., 2022; Syafii et al., 2024; Quimba & Barral, 2024). A one-unit increase in LCR enhances CR by 1.108791 units, indicating that firms with higher liquid asset reserves can meet short-term

obligations without resorting to costly external financing, a crucial advantage during supply chain disruptions or oil price spikes (Rahma & Rokhim, 2022; Syahputri, 2025). Similarly, the positive effect on NI suggests that robust liquidity management supports profitability by reducing financial distress, enabling firms to maintain operational continuity and invest in strategic opportunities despite adverse market conditions (Irianto et al., 2025; Syafii et al., 2024). This finding is particularly relevant for ASEAN energy firms, which operate in a region characterized by diverse regulatory frameworks and exposure to global energy market fluctuations (Aziz et al., 2024; Konovalova & Abuzov, 2023).

The positive effect of LCR can be attributed to its role as a buffer against financial shocks. During the Gulf tensions (2019–2020), firms with high LCR were better equipped to manage sudden drops in oil demand and supply chain interruptions, ensuring they could cover operational costs without liquidating long-term assets (Khatri, 2023). Similarly, during the Russia-Ukraine conflict, LCR enabled firms to absorb the impact of soaring energy prices and disrupted trade routes, maintaining liquidity and profitability (Quimba & Barral, 2024). In the context of the Iran-Israel conflict, which threatens similar disruptions, LCR remains a critical tool for firms to mitigate risks associated with market volatility and geopolitical uncertainties (Konovalova & Abuzov, 2023). The strong statistical significance of LCR across both models highlights its robustness as a predictor of financial performance, reinforcing prior studies that advocate for proactive liquidity management in crisis contexts (Dat et al., 2022; Syahputri, 2025; Irianto et al., 2025). This finding also suggests that ASEAN energy firms with robust liquidity reserves are better positioned to seize market opportunities, such as acquiring distressed assets or investing in renewable energy, during periods of instability (Rattanapong & Ayuthaya, 2025).

The negative effect of TATO on CR (coefficient = -0.1900421, $p = 0.000$) is an unexpected finding, as asset efficiency is typically associated with improved financial performance (Burki et al., 2024). This result indicates a trade-off between operational efficiency and short-term liquidity, where firms prioritizing asset utilization for long-term investments—such as energy infrastructure, technological upgrades, or renewable energy projects—may reduce current assets available for liquidity (Oktarina, 2019; Olalere et al., 2020). During geopolitical crises, such as the Gulf tensions or the Russia-Ukraine conflict, reduced market demand and volatile oil prices constrained cash flows, limiting the liquidity benefits of high TATO and exacerbating financial pressures (Khatri, 2023; Quimba & Barral, 2024). For instance, firms with high TATO may have invested heavily in production capacity or exploration activities, expecting stable demand, only to face liquidity shortages when markets contracted due to geopolitical shocks (Syafii et al., 2024). The insignificance of TATO in the robust FE model for CR ($p = 0.267$) and its lack of significance for NI ($p = 0.179$) further suggest that asset efficiency may not be a primary driver of financial performance in crisis contexts, where short-term liquidity is paramount (Burki et al., 2024; Irianto et al., 2025).

This trade-off between TATO and CR has profound implications for financial strategy formulation in ASEAN energy firms. High TATO reflects efficient use of assets to generate revenue, which can enhance profitability in stable markets by ensuring consistent cash flows (Oktarina, 2019). However, in volatile markets, such as those affected by the Iran-Israel conflict, prioritizing asset efficiency may deplete liquid reserves, as resources are allocated to non-current assets like drilling rigs, refineries, or solar farms (Khatri, 2023). This reduces a firm's ability to meet short-term obligations, increasing vulnerability to financial distress during crises (Olalere et al., 2020). The negative effect of TATO suggests that firms must adopt a balanced approach, aligning asset utilization with liquidity needs to ensure resilience against geopolitical shocks (Rahayu et al., 2025). For example, firms could implement phased investment strategies, deferring non-essential capital expenditures during crises to preserve liquidity, while maintaining operational efficiency through targeted asset management (Irianto et al., 2025). This finding challenges conventional assumptions that high TATO universally enhances financial performance, highlighting the need for context-specific strategies in emerging markets (Burki et al., 2024; Oktarina, 2019).

The insignificance of DER for both CR ($p = 0.743$) and NI ($p = 0.494$) suggests that leverage does not directly influence financial performance during geopolitical crises. This result aligns with literature indicating that firms may prioritize operational cash flows over leverage strategies in volatile markets, mitigating debt-related risks through prudent financial management (Chukwuma-Eke et al., 2023; Beeson, 2022). In the ASEAN context, firms may have optimized debt structures to minimize financial vulnerabilities, possibly through hedging strategies, diversified financing, or adherence to regulatory constraints that limit excessive borrowing (Aziz et al., 2024; Rahma & Rokhim, 2022). During the Russia-Ukraine conflict, for instance, ASEAN energy firms likely relied on internal cash flows or government-backed financing to avoid the risks associated with high debt levels in unstable markets (Quimba & Barral, 2024). The insignificance of DER contrasts with studies that highlight increased financial risk from high leverage in crisis contexts, suggesting that ASEAN energy firms may employ context-specific debt management practices that enhance resilience (Burki et al., 2024; Chukwuma-Eke et al., 2023). This

finding also indicates that regulatory frameworks in ASEAN countries, which often impose strict capital requirements, may support firms in maintaining stable DER levels, reducing the impact of leverage on financial performance (Irianto et al., 2025; Chen et al., 2024).

The insignificance of DER warrants further exploration, as it may reflect unique characteristics of the ASEAN energy sector. For example, firms in Indonesia and Malaysia, which dominate the sample, benefit from state-backed financing or subsidies, reducing reliance on commercial debt and mitigating leverage risks (Aziz et al., 2024). Similarly, Singaporean firms, with access to developed capital markets, may employ sophisticated financial instruments, such as derivatives, to hedge against debt-related risks (Rahma & Rokhim, 2022). In contrast, firms in less developed markets like the Philippines or Thailand may face higher borrowing costs, incentivizing conservative debt strategies (Kesuma et al., 2025). The insignificance of DER suggests that ASEAN energy firms have adapted to geopolitical uncertainties by prioritizing financial stability over aggressive leverage, a strategy that enhances resilience but may limit growth opportunities in stable markets (Beeson, 2022). This finding contributes to debates on capital structure, highlighting the importance of contextual factors in shaping leverage decisions (Chukwuma-Eke et al., 2023; Irianto et al., 2025).

Firm Size presents a dual effect, negatively impacting CR (coefficient = -0.41959, $p = 0.026$) but positively affecting NI (coefficient = 0.8894176, $p = 0.000$). The negative effect on liquidity suggests that larger firms face challenges in maintaining high CR due to complex operational structures, higher fixed costs, and greater allocations to non-current assets, such as exploration, refining, or renewable energy projects (Syafii et al., 2024; Kesuma et al., 2025). Larger firms often prioritize long-term growth over short-term liquidity, which can strain current assets during crises like the Gulf tensions or the Iran-Israel conflict (Konovalova & Abuzov, 2023). For example, multinational energy firms in Singapore or Malaysia may invest heavily in offshore drilling or solar energy, reducing liquid reserves and increasing vulnerability to market shocks (Rahma & Rokhim, 2022). Conversely, the positive effect on profitability reflects the advantages of economies of scale, diversified portfolios, and better access to capital markets, enabling larger firms to sustain financial performance despite geopolitical disruptions (Aziz et al., 2024; Kesuma et al., 2025). This duality is critical in ASEAN, where firm size varies significantly, and larger firms often dominate the energy sector due to their ability to diversify risks and leverage resources (Syafii et al., 2024).

The dual effect of Firm Size highlights the complex interplay between scale and financial performance. Larger firms benefit from operational efficiencies, such as lower per-unit production costs, and strategic advantages, such as negotiating power with suppliers or access to international financing (Rahma & Rokhim, 2022). These advantages translate into higher NI, as larger firms can absorb market shocks and maintain revenue streams through diversified operations, such as combining oil, gas, and renewable energy activities (Kesuma et al., 2025). However, their complex operations, including global supply chains and large-scale projects, increase liquidity demands, reducing CR and exposing firms to short-term financial risks (Syafii et al., 2024). This trade-off is particularly pronounced in ASEAN, where regulatory heterogeneity and varying market maturities exacerbate liquidity challenges for larger firms (Aziz et al., 2024). The findings suggest that while scale provides competitive advantages, it also introduces liquidity constraints that require strategic management, such as dynamic financial forecasting or diversified asset allocation (Konovalova & Abuzov, 2023; Irianto et al., 2025).

The study's novelty lies in its longitudinal analysis of ASEAN energy firms during a period marked by multiple geopolitical crises, addressing a significant gap in the literature, which has predominantly focused on developed markets or macroeconomic impacts (Kesuma et al., 2025). By employing panel data regression, the study captures firm-specific and temporal dynamics, overcoming the limitations of cross-sectional analyses that fail to account for evolving geopolitical risks (Rahayu et al., 2025). The significant role of LCR in enhancing both liquidity and profitability strengthens theoretical frameworks on financial resilience, emphasizing the importance of liquidity buffers in emerging markets facing external shocks (Dat et al., 2022; Syahputri, 2025). The negative effect of TATO on CR highlights a critical trade-off between asset efficiency and liquidity, challenging conventional theories and providing new insights into financial strategy formulation during crises (Oktarina, 2019; Irianto et al., 2025). The insignificance of DER contributes to ongoing debates on capital structure, suggesting that effective debt management can neutralize leverage-related risks in volatile contexts (Chukwuma-Eke et al., 2023; Beeson, 2022). The dual effect of Firm Size enriches understanding of scale-related dynamics, emphasizing the need to balance operational complexity with resource advantages (Syafii et al., 2024; Rahma & Rokhim, 2022).

Theoretically, the findings advance understanding of financial resilience in several ways. First, the significant impact of LCR reinforces frameworks that emphasize liquidity as a primary buffer against geopolitical shocks, particularly in emerging markets where access to external financing may be limited (Dat et al., 2022; Rahayu et al., 2025). This finding extends liquidity theory by demonstrating that LCR not only supports short-term

obligations but also enhances long-term profitability by reducing financial distress and enabling strategic investments (Syahputri, 2025). Second, the negative effect of TATO on CR challenges assumptions that asset efficiency universally enhances financial performance, suggesting that crisis contexts alter these dynamics by prioritizing short-term liquidity over long-term efficiency (Burki et al., 2024; Olalere et al., 2020). This finding contributes to resource-based theory, highlighting the need for firms to align asset utilization with market conditions to optimize financial outcomes (Oktarina, 2019; Irianto et al., 2025). Third, the insignificance of DER contributes to capital structure theory, indicating that prudent debt management can mitigate financial risks during crises, particularly in regions with robust regulatory frameworks (Chukwuma-Eke et al., 2023; Aziz et al., 2024). This finding suggests that firms in emerging markets may adopt conservative leverage strategies to enhance resilience, a hypothesis that warrants further exploration (Beeson, 2022). Fourth, the dual effect of Firm Size enriches organizational theory, emphasizing the need to balance scale-related advantages with operational complexity to optimize financial performance (Syafii et al., 2024; Rahma & Rokhim, 2022).

The theoretical contributions are particularly significant in the context of emerging markets, where financial resilience is shaped by unique economic, regulatory, and geopolitical factors. The emphasis on LCR aligns with contingency theory, which posits that firms must adapt financial strategies to environmental uncertainties to achieve optimal performance (Dat et al., 2022). The negative effect of TATO highlights the limitations of efficiency-driven strategies in crisis contexts, supporting dynamic capabilities theory, which emphasizes the need for firms to reconfigure resources in response to external shocks (Oktarina, 2019; Irianto et al., 2025). The insignificance of DER supports agency theory, suggesting that effective governance and regulatory oversight can align managerial decisions with shareholder interests, reducing the risks associated with high leverage (Chukwuma-Eke et al., 2023). The dual effect of Firm Size aligns with resource dependence theory, which posits that larger firms leverage resource advantages to mitigate risks but face increased dependencies that constrain liquidity (Rahma & Rokhim, 2022). These theoretical insights provide a foundation for future research to explore the interplay of financial ratios in diverse crisis contexts across emerging markets (Kesuma et al., 2025).

Practically, the findings offer actionable strategies for ASEAN energy firms to enhance resilience against geopolitical crises. Managers should prioritize maintaining high LCR through adequate cash reserves, access to emergency credit facilities, and dynamic liquidity forecasting to mitigate the impact of disruptions, such as those arising from the Iran-Israel conflict (Rattanapong & Ayuthaya, 2025; Dat et al., 2022). For example, firms can establish contingency funds, secure short-term financing agreements, or diversify liquid assets to ensure liquidity during supply chain disruptions or oil price spikes (Syahputri, 2025; Irianto et al., 2025). These strategies enable firms to cover operational costs, meet debt obligations, and seize market opportunities, such as acquiring distressed assets or investing in renewable energy, during periods of instability (Konovalova & Abuzov, 2023). Firms should also implement liquidity stress testing to assess vulnerabilities under various crisis scenarios, ensuring they can withstand prolonged market disruptions (Rahma & Rokhim, 2022).

While asset efficiency is important, firms must balance TATO with liquidity needs, ensuring that long-term investments in infrastructure, technology, or renewable energy do not compromise short-term financial stability (Oktarina, 2019; Khatri, 2023). This balance can be achieved through phased investment strategies, where non-essential capital expenditures are deferred during crises to preserve liquidity, while operational efficiency is maintained through targeted asset management (Olalere et al., 2020). For instance, firms could prioritize maintenance of existing assets over new investments during periods of geopolitical uncertainty, ensuring cash flows are preserved for liquidity needs (Rahayu et al., 2025). Additionally, firms should adopt flexible budgeting practices that adjust asset utilization based on market conditions, reducing the risk of liquidity shortages while maintaining long-term growth objectives (Irianto et al., 2025). This approach is particularly relevant for ASEAN energy firms, which face diverse market conditions across Indonesia, Malaysia, the Philippines, Thailand, and Singapore (Aziz et al., 2024).

Larger firms should leverage their scale to diversify revenue streams, access capital markets, and negotiate favorable financing terms, while addressing liquidity constraints through strategic asset allocation and financial planning. For example, multinational firms in Singapore or Malaysia can diversify into renewable energy or gas markets to reduce reliance on volatile oil prices, while maintaining liquidity through short-term financing or cash reserves (Konovalova & Abuzov, 2023). Smaller firms, particularly in less developed markets like the Philippines or Thailand, should focus on building liquidity buffers and forming strategic partnerships with larger firms or government entities to access resources during crises. These strategies enable firms of varying sizes to navigate geopolitical uncertainties, ensuring financial stability and long-term competitiveness.

For policymakers, the results underscore the need for regulatory harmonization across ASEAN to improve firms' access to liquidity and financial instruments, particularly in countries with less developed capital markets, such as

the Philippines or Thailand (Aziz et al., 2024; Chen et al., 2024). Policies could include incentives for energy diversification, such as subsidies for renewable energy projects or tax breaks for investments in energy-efficient technologies, to reduce reliance on volatile oil markets. Establishing regional emergency credit facilities or cross-border financing mechanisms could enhance the sector's resilience, ensuring that firms can access liquidity during crises like the Iran-Israel conflict. National governments should also strengthen regulatory frameworks to support prudent debt management, enabling firms to maintain stable DER levels without compromising financial performance. For example, Indonesia and Malaysia could expand state-backed financing programs to support energy firms during crises, while Singapore could facilitate access to international capital markets through regulatory reforms (Rahma & Rokhim, 2022). These policy measures would create a supportive environment for energy firms to navigate geopolitical uncertainties, fostering long-term sustainability in the ASEAN energy sector.

The low R-squared for NI (0.1503) suggests that additional factors, such as global oil prices, national energy policies, currency fluctuations, or technological innovation, may influence profitability, limiting the model's explanatory power (Rahayu et al., 2025; Konovalova & Abuzov, 2023). For instance, fluctuations in Brent crude prices or changes in renewable energy subsidies could significantly affect NI, but these factors were not included in the model due to data constraints (Khatri, 2023). The use of FE and RE models, supported by diagnostic tests like the Hausman and Breusch-Pagan tests, enhances the robustness of the analysis by accounting for firm-specific and temporal variations (Hanasa & Lubis, 2023; Irianto et al., 2025).

Comparisons with prior studies provide further context for the findings. The significant role of LCR aligns with research by Dat et al. (2022) and Syafii et al. (2024), who found that liquidity buffers are critical for mitigating financial risks during crises, such as supply chain disruptions or oil price volatility. However, the negative effect of TATO on CR contrasts with Burki et al. (2024), who reported positive associations between asset efficiency and financial performance in stable markets, suggesting that geopolitical crises alter these dynamics by prioritizing liquidity over efficiency (Oktarina, 2019). The insignificance of DER is consistent with Chukwuma-Eke et al. (2023), who noted that firms in emerging markets often manage debt effectively to avoid financial distress, but differs from Burki et al. (2024), who highlighted leverage risks in volatile contexts. The dual effect of Firm Size corroborates Rahma & Rokhim (2022) and Syafii et al. (2024), who identified scale-related advantages and liquidity challenges in larger firms. These comparisons highlight the study's contribution to understanding context-specific financial dynamics in ASEAN energy firms, particularly in the face of geopolitical uncertainties.

The study's limitations provide directions for future research. First, the focus on publicly listed firms excludes smaller or non-public entities, which may exhibit different financial dynamics due to limited access to capital markets or regulatory support (Kesuma et al., 2025). For example, small-scale renewable energy firms in Thailand or the Philippines may rely on local financing, facing higher liquidity constraints than larger firms (Aziz et al., 2024). Second, the analysis period (2019–2023) captures the Gulf tensions and Russia-Ukraine conflict but does not fully account for the long-term impacts of the Iran-Israel conflict, which may evolve with prolonged geopolitical tensions or shifts in global energy policies (Quimba & Barral, 2024). Third, the low R-squared for NI suggests that unmodeled factors, such as global commodity prices, regulatory changes, currency fluctuations, or technological disruptions, may influence profitability, warranting further investigation (Rahayu et al., 2025; Konovalova & Abuzov, 2023). Fourth, the presence of heteroskedasticity and autocorrelation, while addressed, indicates potential model sensitivity, necessitating cautious interpretation of the results (Meirawati et al., 2024; Irianto et al., 2025).

The findings avoid speculative overreach by grounding interpretations in empirical evidence and existing literature. The significant role of LCR is supported by robust statistical results and aligns with studies emphasizing liquidity's importance in crisis. The negative effect of TATO is contextualized within the energy sector's dynamics, where long-term investments compete with short-term liquidity needs, a phenomenon well-documented in volatile markets (Oktarina, 2019; Khatri, 2023). The insignificance of DER is interpreted as evidence of effective debt management rather than a dismissal of leverage's relevance, consistent with prior research (Chukwuma-Eke et al., 2023; Beeson, 2022). The dual effect of Firm Size is framed within the ASEAN context, where scale-related advantages coexist with operational complexities. Recommendations for practitioners and policymakers are derived directly from the findings, focusing on liquidity management, balanced asset utilization, and regulatory support, ensuring practical relevance without overgeneralization.

The implications of the findings extend beyond ASEAN to other emerging markets facing geopolitical risks. The emphasis on LCR suggests that liquidity management is a universal strategy for mitigating financial risks, applicable to energy firms in regions like the Middle East, Latin America, or Sub-Saharan Africa, where geopolitical tensions and market volatility are prevalent (Konovalova & Abuzov, 2023). The trade-off between TATO and CR highlights the need for context-specific financial strategies, as asset efficiency may yield different

outcomes in stable versus volatile markets, a lesson relevant for firms in commodity-driven economies (Burki et al., 2024). The insignificance of DER underscores the importance of regulatory frameworks in supporting prudent debt management, offering insights for policymakers in emerging economies seeking to enhance sector resilience (Chen et al., 2024). The dual effect of Firm Size provides guidance for firms of varying scales, emphasizing the need to balance resource advantages with operational complexity to optimize financial performance.

4. Conclusion

This study investigates the impact of financial ratios (DER, TATO, LCR) on the financial performance (CR, NI) of 101 ASEAN energy firms from 2019 to 2023, drawing lessons from past geopolitical crises to address the Iran-Israel conflict. The findings confirm that LCR significantly enhances liquidity and profitability, serving as a critical buffer against market volatility. TATO negatively affects liquidity, revealing trade-offs between efficiency and short-term financial stability, while DER shows no significant impact, suggesting effective debt management. Firm Size boosts profitability but reduces liquidity, reflecting the advantages and challenges of scale. Theoretically, the study strengthens financial resilience frameworks by emphasizing liquidity's pivotal role and challenging assumptions about asset efficiency in crisis contexts. It fills a literature gap by focusing on ASEAN energy firms, offering longitudinal insights absent in cross-sectional studies. Practically, it guides managers to prioritize liquidity management, balance asset efficiency, and leverage scale, while policymakers are urged to enhance liquidity access and regulatory harmonization. Limitations include the focus on listed firms, excluding smaller or non-public entities, and the analysis period's inability to capture long-term Iran-Israel conflict impacts. The low explanatory power for NI indicates unmodeled factors, and model sensitivity to heteroskedasticity and autocorrelation warrants caution. Future research should incorporate non-public firms, additional variables (e.g., oil prices, regulatory policies), and extended timeframes. Practitioners should maintain robust LCR through cash reserves, while policymakers can foster resilience via emergency credit facilities and energy diversification incentives. This study provides a foundation for navigating geopolitical uncertainties in ASEAN's energy sector.

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