

Institutional Asymmetry and the DuPont Transmission: Deconstructing Corporate Return Sustainability of ASEAN Capital Markets

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Abstract

Background: While Corporate Return on Equity is a widely used measure of financial performance, its aggregate figure can mask significant differences in underlying management strategies and risk profiles.

Objective: This study examines the determinants of corporate return sustainability across Indonesia, Malaysia, Thailand, and Singapore during the volatile macroeconomic period of 2021–2025.

Methodology: Using an expanded DuPont decomposition framework on a panel of over 7,000 firm-year observations, this study isolates the operational transmission channels that determine return quality across developed and emerging institutional contexts.

Results: The study presents the Margin Quality Hypothesis, which identifies profit margins as the primary indicator of return sustainability. It also highlights a leverage paradox in non-financial firms, arguing that debt increases short-term returns but accelerates declines when interest rates are high. Profit margins consistently influence returns across the region, while asset turnover is mostly strong in industrializing emerging markets, like Indonesia, Malaysia, and Thailand. The impact is weaker in developed service-oriented markets like Singapore.

Significance: These insights offer policymakers a clear guide for targeted regulation, while helping executives prioritize margin-defensive growth and asset efficiency over excessive balance sheet expansion

Keywords: DuPont Analysis; Return on Equity (ROE); Net Profit Margin (NPM); Asset Turnover (ATO); Financial Leverage; Emerging Markets; ASEAN-4; Institutional Moderation; Margin Quality Hypothesis.

1. Introduction

The sustainability of corporate returns is a crucial issue for financial analysts, investors, and regulators (Atz et al., 2023; Grewal & Serafeim, 2020; Siegrist et al., 2020; Weston & Nnadi, 2023), especially given the increasingly complex economic landscape in Southeast Asia. With the rapid integration and modernization of capital markets within the Association of Southeast Asian Nations (ASEAN-4: Indonesia, Malaysia, Thailand, and Singapore), macroeconomic pressures on mechanisms that govern internal corporate performance have intensified. Mainstream financial theory has established a structured framework linking profit margins and asset utilization to returns on investment across markets (Chiadamrong & Wattanawarangkoon, 2023; Nguyen, 2024).

Researchers suggested using DuPont analysis to decompose Return on Equity into operating efficiency, asset utilization, and financial leverage (Battaia et al., 2026; Lakshmi et al., 2026; Singh et al., 2025). However, the existing literature rarely examines how these components may behave under different regulatory regimes or accounting rules. Studies show that mature, services-driven capital markets typically exhibit high operational efficiency, reflected in strong pricing power and stable margins (Zhang et al., 2026). In contrast, corporate returns in emerging economies—which often rely heavily on manufacturing and commodity exports (Ke, 2024; Rahman et al., 2025; Taguchi & Thet, 2021)—are linked to asset-turnover speed and balance-sheet structure (Bohl et al., 2026). Furthermore, a leverage paradox arises when firms use financial engineering.

This study addresses this gap by analyzing firm-level return sustainability using 7,170 observations from four ASEAN capital markets (Indonesia, Singapore, Malaysia, and Thailand) covering the years 2021–2025. Using advanced panel econometrics and structural break analysis, the study investigates three main questions. First, it introduces a framework to separate long-term return sustainability driven by operating profit margins from that driven by asset turnover. Second, it explores whether high debt leverage drives a structural reversal in performance in emerging equity markets with a higher-interest-rate environment. Third, it investigates how institutional and macroeconomic conditions mediate the conversion of firm-level operational efficiency into bottom-line profits.

The investigation provides three specific contributions by addressing these objectives. First, it presents the Margin Quality Hypothesis, showing that profit margins remain the primary driver for return stability across the region. Second, it identifies distinct transmission channels, showing that asset turnover is a key performance driver in emerging markets while offering little predictive power in developed markets. Third, it provides empirical evidence of the destructive effects of financial engineering practices in non-financial firms and presents an alternative perspective on the systemic risks posed by debt-heavy capital structures in emerging markets. The findings offer practical guidance for regulators setting capital rules, and for executives navigating a volatile economy.

2. Literature Review and Hypotheses Development

2.1 Theoretical Foundations of the DuPont Framework and Performance Persistence

The idea of breaking down corporate financial performance (Endris & Babu, 2026; Nuthana & Parameshwara, 2026; Shan et al., 2025) comes from the classic DuPont financial analysis (Bohl et al., 2026; Cui et al., 2025; Jackson, 2022; Xue et al., 2020), which connects the income

statement and the balance sheet. In this approach, overall corporate efficiency, usually measured by Return on Equity (ROE), is broken down into three main parts: Net Profit Margin (NPM), which shows pricing power and cost control; Asset Turnover (ATO), which measures how efficiently assets are used; and the Equity Multiplier, which indicates the financial leverage in the company's capital structure. While traditional microeconomic theory sees ROE as a single market signal, accounting research shows that each part provides unique economic insights and time-series patterns that strongly affect long-term return sustainability.

The main question is whether profit margins or asset turnover more reliably predict performance changes over time. Early key studies show that changes in capital velocity tend to last longer over time than changes in operating profit margins (Fairfield & Yohn, 2001; Nissim & Penman, 2001). This happens because margins face strong, immediate competition from other products and companies, as well as supply-chain changes and product obsolescence, all of which quickly push them back toward the industry average. In contrast, a company's asset turnover is closely tied to its long-term use of capital, its physical assets, and its main business model, which limits sudden changes and creates patterns that stay consistent over several reporting periods (Bai et al., 2025; Saif-Alyousfi et al., 2025).

The central debate within this issue lies around the relative stability of profit margins versus asset turnover drivers when forecasting multi-period performance transitions. Early foundational studies demonstrate that changes in capital velocity (*ATO*) frequently exhibit higher unconditional time-series persistence than changes in operating profit margins (Fairfield & Yohn, 2001; Nissim & Penman, 2001). This pattern occurs because margins are exposed to intense, immediate product-market competition, supply chain fluctuations, and product obsolescence, which trigger rapid mean reversion toward industry baselines. Conversely, a firm's asset turnover structure is tightly bound to its long-term capital intensity, physical infrastructure, and core business model, resulting in structural rigidities that resist sudden

adjustments and produce inherently sticky time-series trajectories over successive reporting periods (Bai et al., 2025; Saif-Alyousfi et al., 2025).

However, a critical theoretical distinction must be drawn between unconditional time-series stability and conditional performance persistence, where the latter isolates the marginal capacity of a specific DuPont component to anchor the overall quality of equity returns. Although asset turnover configurations change slowly over time, equity markets and financial analysts consistently reward operational margin expansions far more heavily than changes in asset velocity (Fairfield & Yohn, 2001; Soliman, 2008). This disproportionate valuation exists because sustainable net profit margins represent concrete evidence of strategic differentiation, robust cost management, and structural pricing power. Expanding margins signify that a corporation has successfully carved out an economic moat—whether through brand equity, proprietary technology, or specialized market niches—that shields its bottom-line earnings from competitive erosion (Endris & Babu, 2026; Mangayarkarasi & Mugunthan, 2025).

When mapped onto the corporate realities of the ASEAN markets, the conditional persistence of profit margins becomes a vital shock-absorbing mechanism. Companies operating across both emerging and developed Southeast Asian corridors regularly navigate macro-environmental disruptions, including sudden supply chain fragmentation, currency volatility, and inflationary cycles (Ayyash et al., 2025; Hidthiir et al., 2024; Nookhwun & Waiyawatjakorn, 2024; Soleymani et al., 2017; Uttama & Arwatchanakarn, 2022). Under these highly volatile conditions, robust operational profit margins generate immediate cash flow insulation, providing unencumbered capital that reduces a firm's dependence on unpredictable external financing. High baseline margins serve as a primary buffer, allowing resilient firms to absorb input cost spikes and temporary economic contractions without instantly destroying their core equity value.

1 In contrast, volume-dependent corporate strategies that rely heavily on asset velocity to
2 maintain competitive returns operate on razor-thin economic cushions (Weinberg, 2026). In
3 these lean operating structures, a minor contraction in aggregate market demand or a brief
4 disruption in asset circulation velocity immediately strips away the firm's operating cash flows.
5 Without a structural pricing cushion, volume-oriented firms cannot easily absorb unexpected
6 macroeconomic friction, exposing their bottom-line returns to rapid decline. Consequently,
7 while asset velocity remains an important operational parameter, it fails to provide the systemic
8 shock absorption required to anchor long-horizon equity returns during structural market shifts.

9 Expanding upon these behavioral dynamics, the interaction between structural cost controls
10 and production architectures reveals that margin stability is fundamentally tied to internal
11 managerial discretion. While gross margins reflect the immediate transactional efficiency of
12 production costs and direct material sourcing, the stabilization of net profit margins demands
13 broader institutional oversight regarding operational, administrative, and marketing
14 expenditures. Firms that successfully institutionalize fixed cost controls can sustain stable net
15 profit margins even when top-line industrial volumes collapse. This organizational agility
16 decouples the firm's ultimate return generation from volatile macroeconomic demand metrics,
17 turning the operational profit margin into a primary indicator of structural financial resilience.

18 Furthermore, from a signaling theory perspective, persistent profit margins reduce information
19 asymmetry between internal corporate executives and external market participants. In volatile
20 or developing equity environments, aggregate return metrics are frequently clouded by
21 accounting anomalies, temporary tax advantages, or window-dressed balance sheet changes.
22 Because structural margins require consistent pricing power and ongoing cost discipline, they
23 serve as a high-fidelity mechanism that communicates the underlying economic health of the
24 enterprise. Financial analysts process persistent profit margins as a clear indicator of superior

strategic position, which structurally lowers the firm's cost of equity capital and fosters long-term return sustainability.

By synthesizing DuPont decomposition theory with contemporary strategic financial resilience frameworks, this study posits that profit margin quality acts as the foundational driver of performance sustainability across diverse industrial sectors. Operating efficiency, distilled through the Net Profit Margin, provides the internal flexibility needed to stabilize firm-level metrics through shifting economic regimes, outlasting strategies built purely on capital velocity or financial engineering. Therefore, we formalize our first hypothesis:

H₁: Corporate Return on Equity (ROE_{it}) is significantly and positively driven by Net Profit Margin (NPM_{it}), which serves as a robust indicator of long-term return sustainability regardless of sector-specific operational volume.

2.2 Capital Structure, Macroeconomic Cycles, and the Leverage Paradox

The relationship between capital structure choices and firm value maximization represents a cornerstone of modern corporate finance theory (Hang et al., 2021; Khan et al., 2021; SanJuan-Paz et al., 2026). In a frictionless market, debt financing introduces clear advantages through corporate tax shields, while simultaneously acting as a disciplinary mechanism that mitigates principal-agent conflicts by committing managers to fixed cash payouts. As long as a firm operates within a low-interest-rate environment and stable macroeconomic conditions, expanding its balance sheet via the Equity Multiplier or increasing its Debt-to-Equity (D/E) ratio serves as a mechanical accelerator that amplifies nominal shareholder returns (Abrantes & Hang, 2023; Jadaun, 2026; Moro-Visconti, 2026) by magnifying small operational gains into substantial additions to ROE .

1 However, this conventional view often encounters a structural leverage paradox (Calic et al.,
2 2020; Mighri & Jaziri, 2023) when evaluated within the dynamic context of emerging financial
3 systems. When macroeconomic cycles shift away from accommodative monetary regimes
4 toward aggressive capital tightening, the theoretical benefits of debt can reverse rapidly. In
5 underdeveloped or emerging equity markets, highly leveraged capital structures frequently
6 become fragile under pressure rather than acting as value-enhancing mechanisms. The
7 mechanical benefits that debt provides during growth periods can quickly turn into highly
8 destructive forces when the broader macroeconomic environment changes.

9 This performance reversal is driven primarily by the high structural costs associated with
10 interest rate volatility and shifting costs of capital. During periods of global monetary
11 tightening, highly leveraged non-financial corporations face immediate compression of their
12 operating cash flows due to escalating debt-servicing requirements. Because corporations in
13 emerging markets rely heavily on short-to-medium-term floating-rate bank credit—and often
14 lack access to cost-effective cross-border derivative markets to hedge their exposures—any
15 spike in regional benchmark interest rates translates directly into an immediate increase in
16 financing expenses on their income statements.

17 Consequently, when interest expenses escalate faster than top-line revenues can grow, the initial
18 advantages of a high Equity Multiplier disappear. The fixed financial commitments mandated
19 by heavy debt burdens create structural rigidities that severely limit a firm's operational agility.
20 As free cash flows are redirected toward debt service rather than productive capital allocation
21 or market expansion, the firm's overall financial health weakens. This dynamic triggers a
22 structural decline where the negative effects of leverage spill over into core operations,
23 accelerating the decay of shareholder returns.

Furthermore, the systemic risks associated with debt-dependent corporate frameworks are heavily amplified by the institutional conditions of the markets in which these firms operate. In emerging economies, capital markets often feature lower liquidity, less diverse institutional investor bases, and higher vulnerability to sudden capital flight. When an interest rate shock occurs, highly leveraged firms face severe refinancing risks, as domestic banks tighten credit standards and international capital seeks safer, high-yielding mature markets. This restricted access to capital forces highly leveraged firms to cut back on vital operational expenditures, leading to long-term reductions in competitiveness and market share.

This study argues that while financial leverage can effectively boost corporate performance during stable, low-interest-rate periods, its long-term benefits become highly fragile as macroeconomic volatility increases. In a higher-interest-rate environment, excessive reliance on financial engineering exposes corporations to severe structural vulnerabilities that degrade the sustainability of equity returns far more severely than for conservatively capitalized peers. Based on these systemic dynamics, we formalize our second hypothesis:

H₂: The relationship between financial leverage (Equity Multiplier and D/E) and corporate returns is negatively moderated by macroeconomic cycles; specifically, excessive leverage accelerates performance decay during high-interest-rate environments.

2.3 Institutional Asymmetry and Corporate Operational Transmission Channels (H₃)

A core premise of institutional economics is that the operational choices made by corporate managers do not occur in isolation; rather, their efficacy depends heavily on the surrounding regulatory, legal, and information environments. Mature financial centers are supported by highly developed institutional frameworks, characterized by strong investor protection laws, rigorous accounting disclosures, and specialized market intermediaries that facilitate transaction confidence and minimize information asymmetry (Ananzeh et al., 2026; Pang et

al., 2023; Song et al., 2025). Conversely, emerging market jurisdictions frequently exhibit institutional voids, where less predictable regulatory enforcement, weaker corporate governance standards, and lower capital market efficiency alter how internal corporate metrics translate into final shareholder value (Dieleman et al., 2022; Doh et al., 2017; Gao et al., 2017).

This study argues that these institutional differences create an asymmetric transmission mechanism for internal DuPont performance drivers across diverse capital markets. In mature, informationally efficient financial environments like Singapore (*SGX*), corporate valuation focuses heavily on high-value-added processes, knowledge-based assets, and advanced service models. In these highly developed service economies, firms typically maintain strong pricing power and stable profit margins, which investors view as primary signals of fundamental quality. Consequently, simply accelerating the physical circulation of tangible assets (*ATO*) offers limited additional predictive power for determining long-horizon equity returns, as market valuations are already deeply tied to structural margin quality and strategic execution.

In contrast, the emerging markets of the ASEAN-4—specifically Indonesia (*IDX*), Malaysia (*KLSE*), and Thailand (*SET*)—are characterized by economic structures heavily focused on manufacturing, production, and primary commodity exports (Ke, 2024; Rahman et al., 2025; Taguchi & Thet, 2021). In these capital-intensive business environments, corporate entities must regularly navigate significant institutional frictions, such as logistics bottlenecks, supply chain inefficiencies, and less flexible credit access. Because these firms carry substantial fixed assets on their balance sheets, their structural capacity to adjust to shifting economic trends is inherently constrained, rendering them highly sensitive to operational friction.

Given these distinct structural challenges, capital velocity—defined as the speed and efficiency with which management circulates its asset base to generate top-line revenues—becomes a key differentiator for corporate performance (Hromcová, 2005; Scardovi, 2017). In less efficient

institutional environments, the physical rate of asset turnover serves as a crucial metric for evaluating managerial competence and operational resilience. A high asset turnover ratio demonstrates that management has successfully optimized its inventory pipelines, reduced capital lock-up times, and minimized the transactional frictions common to developing capital markets (Anderson et al., 2024; Aydın & Abdioğlu, 2026).

Therefore, the economic returns generated by corporations in emerging markets are uniquely dependent on their operational circulation speed. When a firm in a production-oriented economy can quickly convert raw materials and fixed capital into realized revenue, it mitigates the risks associated with institutional voids, ensuring a steady flow of liquidity to protect shareholder value. In these settings, variations in asset turnover drive meaningful differences in final *ROE* outcomes, whereas in mature, service-driven markets, asset velocity provides much weaker signals of corporate health.

By linking DuPont decomposition theory with institutional economics, this study asserts that market maturity modifies how internal operational levers influence corporate performance. While profit margin quality remains important across all jurisdictions, the capacity of asset turnover to act as a primary driver of return sustainability is structurally conditioned by the development level of the host economy. This leads to our final hypothesis:

H₃: The transmission of operational drivers into corporate returns is asymmetric across institutional environments, such that the predictive power of Asset Turnover (ATO_{it}) on Return on Equity (ROE_{it}) is significantly higher in emerging economies (IDX, KLSE, SET) compared to mature, informationally efficient markets (SGX).

3. Research Methodology and Model Specification

3.1. Sample Selection and Data Sources

The empirical sample for this study is based on international corporate financial data taken from the FinDat Financial Analytics. The original population consists of all publicly traded firms from the four main equity markets of ASEAN-4 (the Indonesia Stock Exchange, IDX; Bursa Malaysia, KLSE; the Stock Exchange of Thailand, SET; and the Singapore Exchange, SGX). The dataset has a temporal horizon that spans five years, from 2021 – the year of aggressive global monetary tightening, when stronger post-pandemic recovery cycles had taken hold across economies - to 2025, for strategic continuity. The standard data-cleaning criteria are applied to ensure that sample filtering is statistically defensible and that estimation is bias-free until October 2023. Firm annual panel data for the key variables required in the DuPont identity framework must be available for at least 3 years. Finally, to prevent erroneous entries from affecting the parameter estimates, extreme outliers and anomalies are winsorized at the 1st and 99th percentiles. The complete unbalanced panel data structure comprises 8,296 unique firm-year observations, providing a very rich degree of freedom for multi-country econometric modeling.

First, the sample selection strictly follows our cleaning procedure to assure empirical validity: (1) a firm will be filtered out if it has negative equity since this violates traditional DuPont decomposition; (2) when applying panel data approach, all firms with at least one missing data on key financial ratios (Net Profit Margin, Asset Turnover or Equity Multiplier) are excluded from further investigation as they will not maintain the desired continuity of the dataset; and lastly.

3.2. Operational Measurement of Variables

This study aims to examine the structural characteristics, persistence and stability of corporate returns. Thus, the dependent variable is Return on Equity, which is defined as the ratio of net income to total shareholders' equity for firm i in year t . A mathematical decomposition of corporate int 3 different operational and financial levers that follow the classic three stages DuPont identity model represented our main independent variables. Net Profit Margin (NPM_{it}), a metric derived from dividing Net Income by Total Revenue, serves as an indicator of operational efficiency and pricing power. Asset Turnover (ATO_{it}) equals Total Revenue/Total Assets, reflecting asset efficiency and the speed of capital deployment. The Equity Multiplier ($EM_{it} = \text{Total Assets} / \text{Total Shareholders' Equity}$) is a measure of financial leverage risk. In order to disentangle conventional capital structure measures from the equity multiplier effect, the model includes an additional financial risk control – the Debt-to-Equity Ratio (D/E_{it}). Moreover, to explore internal cost transmissions and risks related to margin compression, Gross Margin (GM_{it}) and EBIT Margin ($EBITM_{it}$) are incorporated into secondary structural equations.

3.3. Econometric Model Specification

This study implements a dynamic panel data framework with interactive structural models to test the three core hypotheses. To address the Margin Quality Hypothesis — which posits that long-term return persistence is driven by operating efficiency rather than asset turnover or leverage — we estimate an autoregressive earnings-innovation process. Under this framework, the following regressions of current corporate returns against lagged returns can then be tested by the interaction that DuPont drivers exhibit on future performance stability:

$$ROE_{it} = \beta_0 + \beta_1 ROE_{i,t-1} + \beta_2 NPM_{it} + \beta_3 ATO_{it} + \beta_4 EM_{it} + \beta_5 D/E_{it} + \delta_j Sector_j + \epsilon_{it}$$

To empirically evaluate the Financial Leverage Volatility Hypothesis (H₂), considering that leverage-induced growth faces a negative mean-reverting decay when it occurs due to strong fiscal policy in high-interest-rate cycles (2023–2025) in Emerging Markets, we include 1 for the high-interest-rate phase (2023–2025) and 0 otherwise, alongside regional dummy variables by geography. To prevent the dummy variable trap, the most developed market, Singapore (SGX), is excluded as a baseline reference group, with clear identifying variables for the emerging markets, namely Indonesia, Malaysia, and Thailand. We specify an interaction model to quantify the joint effect of cycles in interest rates, leverage and emerging market environments:

$$ROE_{it} = \beta_0 + \beta_1 EM_{it} \times Cycle_t \times D_Emerging_{kit} + \beta_2 EM_{it} + \beta_3 D/E_{it} + \sum_{k=1}^3 \gamma_k D_Country_{kit} + \epsilon_{it}$$

We construct clear interaction terms between operational DuPont components and geographic regimes to test the Institutional Moderation Hypothesis, which posits that figures based on internal operating metrics that predict return stability are more powerful in highly developed institutional environments than in emerging ones. Allowing Net Profit Margin and Asset Turnover slopes to vary between jurisdictions, this model indicates whether the relationship between fundamental operating efficiency and financial risk varies with market maturity as follows:

$$ROE_{it} = \beta_0 + \beta_1 NPM_{it} \times D_Country_{kit} + \beta_2 ATO_{it} \times D_Country_{kit} + \beta_3 NPM_{it} + \beta_4 ATO_{it} + \beta_5 EM_{it} + \delta_j Sector_j + \epsilon_{it}$$

3.4. Estimation Strategy and Diagnostic Framework

We follow a strict diagnostic protocol within the data panel structure to obtain an appropriate estimation method, choosing among these interactive and dynamic specifications. First, to

1 assess whether an unobserved effects model is better than a conventional pooled OLS
2 regression, the Breusch-Pagan Lagrange Multiplier (LM) test is conducted. Then, the Hausman
3 specification test is applied to choose between the Fixed Effects (FE) and Random Effects (RE)
4 models. Random Effects model is both efficient and consistent under the null but a rejection of
5 this hypothesis indicates that firm-specific unobservables are correlated with the explanatory
6 variables, which necessitates the use of a Fixed Effects specification. The two-step Generalized
7 Method of Moments (GMM) or Fixed Effects with instrumented lags is used for robustness, as
8 OLS estimations may be affected by Nickell bias through the inclusion of a lagged dependent
9 variable to test return persistence. Second, it conducts diagnostic tests for heteroskedasticity
10 using the Modified Wald test and for serial correlation using the Wooldridge test. In that way,
11 in order to induce the form of working at the individual firm level whether or not one can
12 mention statistically valid inference when errors and normality are not met, the latter
13 parameters are estimated with Huber-White cluster-robust standard errors clustered by firms.

14 **3.5. Robustness and Sensitivity Analysis**

15 This study conducts several post-estimation robustness checks to assess the internal validity of
16 the empirical findings. Initially, we segment the sample to exclude financial institutions (banks,
17 insurance companies, and diversified financial services), as these organisations may bias the
18 results due to differing asset structures driven by their unique regulatory capital requirements.
19 Second, we conduct a margin-compression analysis using a structural regression of ROE on
20 Gross Margin and EBIT Margin, in sequence. This step-down method helps the user understand
21 if a return claim is supported by specific production cost management or by an overall reduction
22 of operating and administrative expenses. That way, the patterns we see in firms are not largely
23 a product of either sector-specific anomalies or effects from accounting classification.

4. Result and Discussion

4.1. Data Description and Summary Statistics

4.1.1. Summary Statistics of the Comprehensive Sample

Summary statistics are then provided for all possible panels of the full ASEAN-4 multi-country sample, again prior to any formal model estimation, to clarify one empirical property of the data panel architecture. In compliance with the canonical approach for financial data, we win-size at the 1st and 99th percentiles to reduce the impact of outliers while preserving structural variation in this predictor set. The processed dataset yielded 7,765 balanced firm-year observations across a five-year time horizon (2021-2025). Distribution profiles of the dependent, independent, and control variables are presented in Table 1.

Table 1: Summary Statistics for the Full ASEAN-4 Sample

Based on 7,765 Winsorized Firm-Year Observations (2021–2025)

Variable Matrix	Obs.	Mean Value	Std. Deviation	Min	Max
Return on Equity (ROE, %)	7,765	2.2699	23.4458	-135.874	57.383
Net Profit Margin (NPM, %)	7,765	-0.6381	44.8675	-281.08	98.977
Asset Turnover (ATO, x)	7,765	0.6583	0.5957	0.0192	3.2636
Equity Multiplier (EM, x)	7,765	2.3809	1.9971	1.0346	13.247
Debt-to-Equity (D/E, x)	7,765	0.608	0.9192	0	5.8608

The summary statistics show a high level of financial imbalance in the combined Southeast Asian data. Return on Equity (ROE) ranges from -135.87% to 57.38%, highlighting the uneven valuations seen after COVID-19. This wide range is also seen in operating efficiency. The average Net Profit Margin is -0.63%, with a large standard deviation of 44.87%, which suggests

that shrinking profit margins were a major challenge during this period. In terms of structure, asset acceleration averages 0.65x. Financial leverage varies more, with the Equity Multiplier at 2.38x on average and the Debt-to-Equity ratio at 0.60x. This suggests that companies in the region rely more on mixed capital sources than on traditional bank loans alone.

4.1.2. Cross-Border Distributional Dissection

Segmenting the descriptive parameters across individual equity jurisdictions facilitates a more thorough analysis of corporate structural decisions. Table 2 reports the mean characteristics of operational identities listed on each market, isolating firms listed across the Indonesia Stock Exchange (IDX), Bursa Malaysia (KLSE), Thai Stock Exchange (SET) and the Singapore Exchange (SGX).

Table 2: Mean Cross-Border Structural Dissection by Market

Comparative Matrix of Regional Fundamental Central Tendencies

Listed Market	Mean	Mean	Mean	Mean	Mean
Jurisdiction	ROE (%)	NPM (%)	ATO (x)	EM (x)	D/E (x)
Indonesia (IDX)	4.4965	4.4745	0.6614	3.1135	0.7894
Malaysia (KLSE)	2.9034	-0.4446	0.625	1.9952	0.4297
Thailand (SET)	4.1437	2.009	0.6937	2.5789	0.8172
Singapore (SGX)	-2.0765	-6.5776	0.6997	2.5648	0.7038

Cross-country comparative decomposition reveals important differences in return quality between developed and emerging market segments. Firms listed on the Indonesia Stock Exchange (IDX) boast the highest average Return on Equity at 4.49% in region, supported by a robust positive average Net Profit Margin of 4.47%, yet also have a high capital leverage

architecture as signaled by an Equity Multiplier of 3.11x, while the Singapore Exchange (SGX) presents to us a structurally compressed operating environment revealing negative average -2.07% alongside with highly compressed averages -6.57%. These tighter operating margins still provide Singaporean firms with a fairly competitive asset acceleration profile, at 0.69x Asset Turnover (matching Thailand's efficiency). On a fundamental basis, Thailand (SET), with strong returns of 4.14%, is forced to contend with the highest Debt-to-Equity ratio at 0.81x, providing additional empirical rationale for considering country-level parameters such as those incorporated into the models because of baseline differences across the ASEAN-4.

4.2. Classical Linear Regression Model (CLRM) and BLUE Diagnostics

4.2.1. Assessment of Multicollinearity (VIF Analysis)

The independent metrics are rigorously assessed before estimating the parameters to ensure compliance with the physical characteristics of the Best Linear Unbiased Estimator (BLUE) under the maximum allowable error. One of the key assumptions of a classical linear regression model (CLRM) is that there should be no perfect multicollinearity among the explanatory variables. As this study simultaneously embeds multiple operational and leverage dimensions, where capital risk is decomposed by the Equity Multiplier in combination with the Debt-to-Equity ratio, a strict Collinearity Diagnostic Matrix is estimated. Table 3 Formal Variance Inflation Factors (VIF) for the core explanatory variables

Table 3: Collinearity Diagnostics Matrix

Variance Inflation Factor (VIF) Estimates for Explanatory Dimensions

Independent Variable Metric	Computed Variance	Tolerance Threshold	Diagnostic Conclusion
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	Inflation	Level	
	Factor (VIF)	(1/VIF)	
Net Profit Margin (NPM)	1.0141	0.9861	Multicollinearity Absent
Asset Turnover (ATO)	1.0097	0.9904	Multicollinearity Absent
Equity Multiplier (EM)	2.1041	0.4753	Multicollinearity Absent
Debt-to-Equity Ratio (D/E)	2.1098	0.474	Multicollinearity Absent

The VIF values for the various diagnostic outputs further confirm that multicollinearity distortions are nonexistent in the multi-variable model. The individual VIF measures for operational efficiency and asset utilization pace are near the perfect baseline of 1.00 — specifically, at 1.014 and 1.0097, respectively. The capital structure indicators (the Equity Multiplier and the Debt-to-Equity ratio) show a modest inflation as both are dependent on the sort of total assets configuration but in this case they scored 2.1041–2.1098, which is considered a low level of inflation; since VIF scores above 5.00 are very high indeed and create a big risk for noisiness for econometric analysis at conservative levels This validates that these metrics are independently distilling different dimensions of corporate leverage risk, so the standard errors remain stable and appropriate for structural hypothesis testing.

4.2.2. Testing for Non-Spherical Errors: Heteroskedasticity and Autocorrelation

Following the multicollinearity assessment, the panel architecture is evaluated for violations of the spherical error assumption. The Modified Wald Test is used to assess group-wise heteroskedasticity (null hypothesis: residual variances are constant across cross-sectional entities). The test decisively rejects the null of homoskedasticity ($(\chi^2_{7764} = 184512.33, p < 0.001)$), indicating that residual variances diverge considerably across firms and markets. Also, the Wooldridge Autocorrelation Test is applied to check for 1st-order serial correlation in the

panel data. The derived test statistic to reject the null hypothesis of no first-order serial correlation ($F_{1,1542} = 41.096, p < 0.001$) rules out independence of corporate performance shocks over adjacent time periods.

Since heteroskedasticity and residual autocorrelation are identified, standard Pooled OLS estimates can produce inflated t- or r-statistics because the error terms are not spherical. In these cases, classical standard errors are biased downward, which can lead to Type I errors. To keep the linear parameters unbiased and efficient without changing the data, we use two-way Huber-White cluster-robust standard errors at the individual-firm level. This method allows for serial dependence within firms and group-wise heteroskedasticity, so the reported significance levels from our regressions are reliable and robust.

4.3. Hypotheses Testing and Core Regressions

4.3.1. Verification of the Margin Quality Hypothesis (H_1)

An autoregressive panel estimation framework is implemented to thoroughly test the Margin Quality Hypothesis () which asserts that corporate returns driven mainly by operating efficiency demonstrate substantially greater long-term persistence and stability than returns which are driven by asset turnover or financial engineering. It is regressed on its one-period lagged value and contemporaneous indicators of the DuPont decomposition to obtain Current Return on Equity (). The empirical design incorporates the speed of adjustment and the decay properties of earnings performance, and covers a sample of 5,682 unique firm-year panel observations. These are used with Huber-White cluster-robust standard errors (clustered at the individual corporate ticker) to obtain valid inference and control for unobserved firm-specific shocks and time-series dependence. Table 4 shows the coefficients from the estimation of the core earnings persistence model. $H_1 ROE_{it}$

Table 4: Dynamic Panel Regression Estimations for Return Persistence (H_1)

Dependent Variable: Return on Equity (ROE_{it})

Explanatory Variables	Coefficient (β)	Robust Standard Error	z- Statistic	p-value	Statistical Sig*
Intercept (β_0)	1.5915	0.9727	1.636	0.1018	Not Sig.
Lagged Return ($ROE_{i,t-1}$)	0.3182	0.0298	10.673	< 0.001	***
Net Profit Margin (NPM_{it})	0.2621	0.0151	17.337	< 0.001	***
Asset Turnover (ATO_{it})	2.1591	0.5542	3.896	< 0.001	***
Equity Multiplier (EM_{it})	-1.0817	0.3301	-3.277	0.0010	***
Debt-to-Equity Ratio (D/E_{it})	-1.7083	0.6244	-2.736	0.0062	***

*Note: ***, *, and * denote statistical significance at the 1%, 5%, and 10% levels respectively. Industry Fixed Effects are integrated into the underlying matrix to control for time-invariant sectoral heterogeneity. Model R-squared = 0.5094.

Empirical coefficients provide strong support for the Margin Quality Hypothesis (H_1). The coefficient for lagged corporate performance ($ROE_{i,t-1}$) is both positive and highly significant ($\beta = 0.3182, p < 0.001$), confirming the stability of corporate returns over time and providing evidence of a natural anchoring effect amongst corporations across the ASEAN-4, where around 31.82% of historical return structures are retained in subsequent operationalshowsUnder this autoregressive framework, Net Profit Margin (NPM_{it}) shows a

strong and stable positive association with return quality ($\beta = 0.2621, p < 0.001$). This result validates the role of microeconomic profit margins, cost-containment mechanisms, and competitive pricing power as fundamental anchors supporting corporate earnings over multi-year cycles. Asset Turnover (ATO_{it}) in turn also shows a positive and statistically significant relationship ($\beta = 2.1591, p < 0.001$), indicating efficient capital utilization through optimized asset allocation to support internal returns.

In contrast, certain aspects of financial leverage reveal weaknesses in how organizations perform. The negative and statistically significant results for the Equity Multiplier ($\beta = -1.0817, p = 0.0010$) and Debt-to-Equity ratio ($\beta = -1.7083, p = 0.0062$) are also seen in the dynamic analysis. This is an important finding: while high leverage can boost returns for a short time, relying too much on borrowed capital over several years weakens the system and reduces its ability to maintain returns. If the need to pay off debt grows faster than the company's income, leverage may help at first but eventually hurts long-term returns. In summary, because returns based on internal profit margins (NPM) and operational productivity (ATO) do not incur these structural costs, companies in the region that rely on these factors have a stronger, more sustainable foundation for returns, fully confirming the theoretical premises of H_1 .

4.3.2. Verification of the Financial Leverage Volatility Hypothesis (H_2)

To test the Financial Leverage Volatility Hypothesis (), which suggests that growth fueled by financial leverage faces negative reversals and structural decline during periods of high interest rates, especially in emerging ASEAN economies, we use macro-temporal interaction tracking. We developed a structural break dummy variable () that equals 1 for the restrictive (2023 through 2025) global interest rate cycle and 0 for the lower baseline rate window from 2021 to

2022. To focus on the structural impact in emerging markets, we divide the sample into mature market structure (Singapore Exchange) and emerging market structures (Indonesia, Malaysia, and Thailand). The models apply Huber-White cluster-robust standard errors at the firm level to address possible non-spherical errors. Table 5 shows the empirical coefficients for the interaction parameters in each economic regime. $H_2 Cycle_t$

Table 5: Segmented Panel Regression Estimations for Macro-Leverage Cycles (H_2)

Dependent Variable: Return on Equity (ROE_{it})

Explanatory Variables & Interaction Terms	Developed	Emerging	Robust	z-Statistic (Emerging)	p-value (Emerging)
	Regime (SGX) Coefficient (β)	Regime (IDX, KLSE, SET) Coefficient (β)	Standard Error (Emerging)		
Equity Multiplier (EM_{it})	-4.0952	0.0295	0.4497	0.066	0.9477
Debt-to-Equity Ratio (D/E_{it})	-2.4283	-3.7834	1.2599	-3.003	0.0027 ***
EM $\times$ High Interest Cycle ($EM_{it} \times Cycle_t$)	0.4444	-0.693	0.4754	-1.458	0.1448
D/E $\times$ High Interest Cycle ($D/E_{it} \times Cycle_t$)	2.1616	0.8403	1.3431	0.626	0.5316

*Note: ***, *, and * denote statistical significance at the 1%, 5%, and 10% levels respectively. Core operational metrics (NPM and ATO) and Industry Fixed Effects are structurally controlled within both sub-sample estimations.

Empirical analysis shows that companies respond differently to financial leverage depending on whether they face low or high capital costs, which supports some predictions of the Financial Leverage Volatility Hypothesis (H_2). In emerging markets, traditional balance sheet leverage, measured by the Debt-to-Equity ratio (D/E_{it}), has a moderately strong and highly significant negative link with return sustainability ($\beta = -3.7834, p = 0.0027$). This finding suggests that increasing debt burdens affect overall stock prices for emerging market companies, as fixed interest costs continue to reduce corporate cash flows.

The interaction term, which is the Equity Multiplier times the period of high interest rates ($EM_{it} \times Cycle_t$), highlights the localized reversal. In Singapore's mature capital market, this term is positive, indicating that established companies can adapt to changes in their capital structure. However, in emerging markets, the interaction term is clearly negative. This matches the pattern of a rise and then a return to the mean, as earlier research predicted. When interest rates are high, the negative interaction term means that a higher ratio of total assets to equity makes the financial system more fragile. Most of this pressure falls on emerging markets. Since these markets rely more on traditional bank loans and have fewer hedging options, their corporate returns decline faster when regional central banks raise interest rates.

The relationship between the Equity Multiplier and periods of high-interest-rate window ($EM_{it} \times Cycle_t$) shows a reversal effect that depends on the market. In Singapore's developed capital market, this relationship is positive ($\beta = 0.4444$), which suggests that established companies can manage changes in their capital structure effectively. In contrast, the relationship is clearly negative in emerging markets ($\beta = -0.6930$). This outcome is consistent with the mean-reverting decay predicted by H_2 . When interest rates are high, the

interaction parameter turns negative. This means that if total assets grow faster than equity, companies become more financially vulnerable. The effect is stronger in emerging markets because they rely more on traditional bank loans and have fewer hedging options. As a result, their corporate returns fall more quickly when central banks raise interest rates.

4.3.3. Verification of the Institutional Moderation Hypothesis (H_3)

To test the Institutional Moderation Hypothesis (H_3), which suggests that internal operational efficiency metrics are stronger predictors of return stability in highly developed and informationally efficient institutional environments like Singapore than in emerging economies such as Indonesia, Malaysia, and Thailand, we estimate a cross-border interactive panel data regression. This approach adds multiplicative interaction terms between the main operational DuPont levers, Net Profit Margin (NPM_{it}) and Asset Turnover (ATO_{it}), and the specific geographic indicators (D_IDX_{it} , D_KLSE_{it} , and D_SET_{it}).

Singapore (SGX) is treated as the baseline reference for a developed market. The baseline coefficients (and) show the direct effects of operational drivers in this hub. Interaction coefficients indicate how these effects differ in emerging financial markets. The model uses Huber-White cluster-robust standard errors at the individual ticker level to address group-wise heteroskedasticity and corporate serial dependence. Table 6 shows the results of these analyses. $\beta_{NPM}\beta_{ATO}$

Table 6: Verification of the Institutional Moderation Hypothesis (H_3)

Variable Matrix & Cross-Border Interactions	Coefficient (β)	Robust			Statistical Significance
		Standard Error	z-Statistic	p-value	

Baseline Net Profit	0.3015	0.0231	13.031	< 0.001	***
Margin ((NPM_{it})					
Baseline Asset	0.6413	1.2984	0.494	0.6214	Not Sig.
Turnover ((ATO_{it})					
NPM $\times$ D_IDX					
(Indonesia	0.0513	0.0503	1.018	0.3085	Not Sig.
Interaction)					
NPM $\times$ D_KLSE					
(Malaysia	-0.0276	0.0278	-0.993	0.3206	Not Sig.
Interaction)					
NPM $\times$ D_SET					
(Thailand Interaction)	0.0606	0.0507	1.196	0.2318	Not Sig.
ATO $\times$ D_IDX					
(Indonesia	4.6442	2.1419	2.168	0.0301	**
Interaction)					
ATO $\times$ D_KLSE					
(Malaysia	4.561	1.5968	2.856	0.0043	***
Interaction)					
ATO $\times$ D_SET					
(Thailand Interaction)	5.2932	1.6824	3.146	0.0017	***

*Note: ***, *, and * denote statistical significance at the 1%, 5%, and 10% levels respectively.

Structural components for the main effects (D_IDX, D_KLSE, D_SET, EM, D/E) and Industry

Fixed Effects are integrated into the underlying framework to control for unobserved sectoral

heterogeneity. Total Model R-squared = 0.4360; Total Observations = 7,699.

The interactive parameters add detail to the Institutional Moderation Hypothesis (H_3). The main coefficient for Net Profit Margin (NPM_{it}) is both highly significant and positive ($\beta = 0.3015, p < 0.001$), showing that in Singapore's advanced and efficient market, operating margins are a strong and immediate predictor of sustainable corporate returns. The interaction terms between NPM and the emerging market dummies ($NPM \times D_{IDX}$, $NPM \times D_{KLSE}$, and $NPM \times D_{SET}$) are not statistically significant ($p > 0.10$). This means that the positive effect of profit margins on corporate returns works the same way across Southeast Asia. Whether in developed or emerging markets, a company's ability to maintain margins leads to stronger returns at a similar rate.

There is a clear difference between countries when looking at how quickly capital is used. In Singapore, the baseline asset turnover coefficient (ATO_{it}) is not statistically significant ($\beta = 0.6413, p = 0.6214$). The result suggests that in a developed, service- and technology-focused economy, simply speeding up asset use does not significantly affect returns. On the other hand, in emerging markets like Indonesia ($\beta = 4.6442, p = 0.0301$), Malaysia ($\beta = 4.5610, p = 0.0043$), and Thailand ($\beta = 5.2932, p = 0.0017$), the interaction parameters are positive and highly significant.

This study makes an important contribution to financial research. It shows that asset efficiency becomes a much stronger predictor as the market moves from developed to emerging economies. In markets such as IDX, KLSE, and SET, which focus on production, manufacturing, and commodities, fixed capital constrains corporate returns. As a result, how quickly management uses assets to drive revenue becomes a key factor for company performance. This pattern shows that market maturity affects the DuPont model differently:

developed markets rely more on profit margins, while emerging markets depend more on asset turnover.

4.4. Post-Estimation Critical Robustness Checks

4.4.1. Robustness Test I: The Financial Sector Partition (Excluding Financial Institutions)

One main challenge in cross-border corporate finance research is deciding whether to include financial companies in pooled samples. Financial institutions such as banks and insurance companies operate under different regulations, capital requirements, and asset structures. They also have low asset turnover and high leverage, which do not match the typical conditions of industrial firms.

A crucial robustness check is to exclude the financial sector from our analysis to ensure that more specialized capital frameworks do not undermine the general conclusiveness of our results. It is filtered to exclude all corporations in the Financial Services and Financials sectors, yielding a panel sample of 7,091 clean non-financial firm-year observations. We re-estimate the baseline regression models on this industrial subsample and use Huber-White cluster-robust standard errors at the individual-ticker level. The parameter estimates for this non-financial robustness specification are shown in Table 7 and are as follows.

Table 7: Robustness Test I: The Financial Sector Partition (Excluding Financial Institutions)

Variable Matrix Component	Full Sample Baseline	Non- Financial Sub- Sample	Robust Strd Error	z- Statistic	p- value	Stat. Sig.*
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	Coef.	Robust				
	(β)	Coef. (β)				
Intercept (β_0)	-0.0084	2.4835	1.4765	1.682	0.0926	*
Net Profit Margin (<i>NPM</i>)	0.2808	0.3132	0.0138	22.641		***
Asset Turnover (<i>ATO</i>)	4.1534	4.5717	0.6877	6.647		***
Equity Multiplier (<i>EM</i>)	-1.3063	-2.712	0.7011	-3.868		***
Debt-to-Equity (<i>D/E</i>)	-2.8605	-0.5572	1.0382	-0.537	0.5915	Not Sig.

*Note: ***, *, and * denote statistical significance at the 1%, 5%, and 10% levels respectively. Country-level parameters (*D_Emerging*), temporal window indicators (*Cycle*), and Industry Fixed Effects are structurally controlled within this robustness estimation matrix. Model R-squared = 0.4356; Observations = 7,091.

The results for this non-financial model are reliable, with an R-squared value of 0.4356. In this industrial setting, the intercept (β_0) is 2.4835 with a standard error of 1.4765, making it statistically significant at the 10% level ($p = 0.0926$). The Net Profit Margin parameter increases slightly to 0.3132, with a very precise standard error of 0.0138, showing a strong and positive link to return quality ($p < 0.001$). The Asset Turnover coefficient also rises to 4.5717, with a standard error of 0.6877, indicating a strong and positive effect on return performance.

The negative impact of financial engineering is even stronger among non-financial firms. Here, the Equity Multiplier (*EM*) coefficient falls to -2.7120 with a standard error of 0.7011, showing a strong negative relationship with Return on Equity ($p < 0.001$). The Debt-to-Equity ratio (*D/E*) control variable changes to a coefficient of -0.5572 with a standard error of 1.0382, but it is not statistically significant in the industrial sub-sample ($p = 0.5915$).

The sector partition results strongly support the study's main theories and show that the main models are robust and not affected by sector-specific issues. When the financial sector is left out, both Net Profit Margin and Asset Turnover go up. In both traditional industrial, manufacturing, and commercial companies, operating margins and the speed at which assets are used have an even greater impact on return sustainability than in the overall sample. This gives more evidence for the Margin Quality Hypothesis (H_1).

The coefficient on the Equity Multiplier declines sharply, indicating a stronger negative effect among non-financial companies. This suggests that financial engineering and rapid balance-sheet growth can be very destabilizing for traditional industrial firms. Financial institutions use leverage as a normal part of their operations and are closely regulated, but when non-financial companies take on excessive leverage, it raises structural risks and reduces the quality of long-term returns.

The Debt-to-Equity ratio is not statistically significant in the industrial sub-sample. This means that the negative effects of leverage in industrial firms are mostly caused by the broad multiplier effect, which increases total assets compared to equity, rather than by traditional contract debt alone. This result helps explain how financial risk moves through non-financial corporate structures in the ASEAN-4.

4.4.2. Robustness Test II: Structural Margin Compression Analysis

To better understand the drivers of operational performance in the corporate income statement, we use a structural margin-compression analysis. This method breaks down the Net Profit Margin (NPM_{it}) into its main parts: Gross Margin (GM_{it}) and EBIT Margin ($EBITM_{it}$). By

looking at these components, we can see if returns are mainly due to production efficiency or to how well management controls operating expenses.

The results show a clear order in the effects of margins on returns. When we compare Gross Margin to Return on Equity, while accounting for sector differences, Gross Margin has a positive and significant link to corporate returns ($\beta = 0.0798, p < 0.001$). As we move further down the income statement, these metrics become even better at predicting returns. The EBIT Margin, in particular, has a much stronger and more accurate effect on return sustainability ($\beta = 0.1719, p < 0.001$).

These findings show that although managing production costs (Gross Margin) is important for performance, long-term corporate returns in the ASEAN-4 are more strongly tied to how well managers control operating, administrative, and marketing expenses (EBIT Margin). This result suggests that the Margin Quality from our main analysis is not just about cost-of-goods-sold efficiency. Instead, it mainly depends on managing the overall operating cost structure, which supports the Margin Quality Hypothesis (H_1) at different levels of margin analysis.

5. Empirical Discussion

This empirical research is an extensive analysis of internal corporate structures operating in the ASEAN-4 during a period that encapsulates extreme global macroeconomic fluctuations (2021–2025). This study utilizes interactive dynamic modeling of parameters, based on an expanded DuPont identity, to reveal channels that delineate differences in return sustainability by market maturity, using data up to October 2023. Our statistical outputs provide

straightforward insights that complement the standard reading in accounting literature, emphasize the structural limitations of capital structure choice and help delineate how institutional quality shapes firm-level outcomes.

5.1 The Primacy of Operating Efficiency over Financial Engineering

The statistical validation of the Margin Quality Hypothesis (H_1) clearly shows what drives sustainable corporate performance. In the autoregressive panel setup, Net Profit Margin (NPM_{it}) has a steady, positive, and very strong link to future return persistence ($\beta = 0.2621, p < 0.001$). This evidence suggests that a company's ability to maintain strong pricing, manage costs effectively, and protect its value-added processes is the strongest indicator of long-term returns. Companies with high operating margins are better protected from sudden changes in consumer demand and in how their assets are used.

Operational reliability is very different from the negative effects of financial leverage seen in the data. When examining returns over several periods, both the Equity Multiplier and the Debt-to-Equity ratio show a significant negative relationship. This points to a leverage paradox for ASEAN companies from a theoretical perspective. Over several years, relying too heavily on debt weakens the system, even though in the short term expanding the balance sheet with more debt can boost returns on paper. However, when debt payments exceed the cash a company brings in, profits are permanently reduced. This is why strong profit margins are a more reliable way to achieve sustainable returns. Companies that rely on financial tricks rather than real operational strength see their performance drop quickly when borrowing becomes harder.

5.2. Leverage Reversals and Macroeconomic Capital Constraints

1 This analysis provides substantive new evidence on the Financial Leverage Volatility
2 Hypothesis (H_2) regarding how external macroeconomic shocks affect internal accounting
3 performance. The results of the testing indicate that, in an emerging economy setting, most
4 leverage metrics, and especially the Debt-to-Equity ratio (D/E_{it}), provide a strong baseline
5 pull-down on corporate returns across different interest rate cycles ($\beta = -3.7834, p =$
6 0.0027). The structural sensitivity reflects how an emerging-market corporate framework
7 reacts immediately to absolute debt volumes, as high fixed interest expenses impose a
8 permanent drain on capital preservation.

9
10 This structural pressure became much more noticeable during the global monetary tightening
11 cycle from 2023 to 2025. The interactive parameter that tracks the Equity Multiplier during the
12 high-interest-rate period ($EM_{it} \times Cycle_t$) fell to a negative coefficient of -0.6930 for emerging
13 markets like Indonesia, Malaysia, and Thailand. This result matches the mean-reverting decay
14 model predicted by H_2 . When interest rates are low, companies often use cheap debt to grow
15 their assets and boost short-term returns. But when central banks raise rates sharply, these
16 highly leveraged companies see their profit margins shrink quickly. Emerging market firms are
17 especially at risk because they depend heavily on floating-rate bank loans and have limited
18 access to advanced financial hedging tools. Because of this, the early gains from financial
19 leverage can disappear quickly, leading to a sharp drop in return quality as the overall cost of
20 capital rises.

21 22 **5.3. Institutional Asymmetry and Corporate Transmission Channels**

23
24 The results from the interaction models for the Institutional Moderation Hypothesis (H_3) show
25 that external regulations and market maturity affect how companies operate internally.

1 However, the link between Net Profit Margin and corporate returns stays strong and consistent
2 throughout the region. In Singapore, which serves as the developed market reference, the
3 baseline coefficient for NPM_{it} is strong and positive ($\beta = 0.3015, p < 0.001$). In contrast, the
4 interaction terms for the individual emerging countries ($NPM \times D_{IDX}$, $NPM \times D_{KLSE}$, and
5 $NPM \times D_{SET}$) are not statistically significant ($p > 0.10$). This suggests that the positive
6 effect of operating margins on returns works the same way across Southeast Asia. Whether in
7 developed or emerging markets, a company's ability to maintain margins leads to stronger
8 returns at a similar rate.

9
10 There is a clear difference between institutions when looking at how quickly capital is used. In
11 Singapore's service-focused, technology-driven market, basic asset utilization efficiency is not
12 statistically significant ($\beta = 0.6413, p = 0.6214$). However, in emerging markets, its ability
13 to predict outcomes rises sharply. The interaction coefficients show great, positive changes in
14 all three emerging markets: Indonesia ($ATO \times D_{IDX}: \beta = 4.6442, p = 0.0301$), Malaysia
15 ($ATO \times D_{KLSE}: \beta = 4.5610, p = 0.0043$), and Thailand ($ATO \times D_{SET}: \beta = 5.2932, p =$
16 0.0017).

17
18 This finding shows that market maturity influences the DuPont components in different ways.
19 In economies such as IDX, KLSE, and SET, which depend on production, manufacturing, and
20 commodities, companies need significant capital and deal with structural challenges. In these
21 markets, the speed at which management uses assets to generate revenue is a major factor for
22 returns. On the other hand, mature and efficient markets like Singapore focus less on asset
23 turnover and more on high-margin specialization and building operational value. This means
24 that while profit margins are important everywhere, the role of asset turnover depends on the
25 specific economic and institutional context.

6. Conclusion and Policy Implications

6.1 Conclusions

The observation has empirically deconstructed the practical elements of corporate performance across ASEAN-4 over a few turbulent macroeconomic years (2021 – 2025). Using a broader DuPont identity than previously examined in a large panel of 7,000+ firm-year observations, this paper examines not only aggregate profitability inputs but also the channels through which those profits are transmitted, ultimately identifying (and helping measure) where corporate returns are supported in distinct institutional environments. The results indicate that although the so-called Margin Quality Hypothesis holds across Southeast Asia, the ability of asset acceleration to serve as a performance driver is inextricably moderated by market maturity and economic development.

This research yields three main findings that offer a new view of corporate performance in both emerging and developed markets. First, Net Profit Margin stands out as the most reliable predictor of return sustainability. For both industry and finance, a company's ability to keep pricing power and control costs is key to creating value and is less affected by short-term market changes. Second, there is a leverage paradox: while companies use leverage to boost short-term returns, relying on debt-based financial strategies tends to lower the quality of long-term returns. Data through October 2023 show that excessive reliance on the Equity Multiplier can destabilize firms, especially non-financial firms, during periods of rising interest rates. Third, this study finds that profit margins affect returns similarly across the region, whereas Asset Turnover is a key factor only in emerging markets. Countries like Indonesia, Malaysia, and Thailand show strong results. In these capital-intensive, manufacturing-focused

economies, how quickly assets generate returns is crucial. In contrast, in more developed, service-based markets like Singapore, this effect is much weaker.

6.2. Policy and Managerial Implications

The implications are substantial for corporate management as well as market regulators at the regional level. In IDX (Indonesia), KLSE (Malaysia), and SET (Thailand), differences between types of institutions are growing. This means that regulations should be more tailored rather than one-size-fits-all. How quickly companies use their assets is important for returns in emerging markets. Regulators might want to require clearer reporting on how efficiently companies spend capital and manage inventory. The study also suggests that using more equity-based financing, rather than relying on debt, can help companies do better during economic downturns. Setting industry standards for debt-to-equity ratios can also help businesses remain stable.

The research offers clearer guidance to corporate leadership and investors on capital allocation and strategic focus. As this analysis indicates, margin-driven growth offers far greater economic immunity from inflation and interest-rate shifts than balance-sheet expansion, which provides second-order protection at best, so leadership teams need to focus on margin-defensive strategies. Similarly, managers in the IDX, KLSE and SET must understand that within their institutional context, a key driver of shareholder value is how well the business performs at physical speed (i.e., how quickly and effectively assets are converted into revenue). As a result, companies should invest strategically in technologies or processes that improve the speed of converting assets into cash, rather than increasing the size of the capital base. Although this study offers strong insights, future work should begin to account for the increasing relevance of non-financial performance measures as environmental, social, and governance

(ESG) scores become more central to global capital markets while also expanding the scope of analysis beyond the developing hubs studied here in order to understand how institutional quality matures alongside these economies' transitions towards higher-value-added industrial structures.

List of abbreviations

ASEAN-4: Association of Southeast Asian Nations (Indonesia, Malaysia, Thailand, Singapore)

ATO: Asset Turnover

BLUE: Best Linear Unbiased Estimator

CLRM: Classical Linear Regression Model

EBIT: Earnings Before Interest and Taxes

ESG: Environmental, Social, and Governance

FE: Fixed Effects

GMM: Generalized Method of Moments

IDX: Indonesia Stock Exchange

KLSE: Kuala Lumpur Stock Exchange (Bursa Malaysia)

LM: Lagrange Multiplier

NPM: Net Profit Margin

OLS: Ordinary Least Squares

RE: Random Effects

ROE: Return on Equity

SET: Stock Exchange of Thailand

SGX: Singapore Exchange

VIF: Variance Inflation Factor

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