

Why Very Low Leverage Varies Across ASEAN: A Dynamic Panel Perspective

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Abstract

This study investigates the determinants of very low leverage (VLL) among publicly listed non-financial firms in Malaysia, Indonesia and Singapore. The study evaluates whether family ownership and firm-level financial fundamentals shape firms' decisions to maintain extremely low debt levels. An unbalanced panel of 10,160 firm-year observations from 2015 to 2024 is analysed using the two-step System GMM estimator to address endogeneity, dynamic persistence and unobserved heterogeneity. Key explanatory variables include family ownership, profitability, liquidity and operating cash flow, with alternative leverage thresholds used for validation. Results show that capital structure persistence is the strongest predictor of VLL, with firms maintaining a 55 to 57% likelihood of staying in VLL positions across periods. Family ownership does not significantly influence VLL behaviour, challenging agency- and socioemotional wealth-based expectations. Financial fundamentals only matter in Malaysia; their effects disappear in Indonesia and Singapore once dynamic endogeneity is controlled. The findings reveal that several relationships identified in static models are artefacts of endogeneity bias. The strong persistence of VLL suggests that initial financing decisions have long-term effects, highlighting the need for continuous capital structure reassessment. Policymakers should consider institutional differences: Malaysia's relationship-based banking environment reinforces reliance on internal liquidity, while Indonesia requires stronger market infrastructure and creditor protections. Investors should interpret low leverage cautiously, as it may reflect historical path dependence rather than current firm performance. This study provides one of the first comparative dynamic-panel analyses of VLL behaviour in ASEAN markets using System GMM. It advances the capital structure literature by demonstrating that persistence dominates firm fundamentals and that family ownership does not determine extreme leverage choices. The study also clarifies methodological distortions found in static capital structure research

Keywords: very low leverage, family ownership, profitability, liquidity, operating cash flow, system GMM, ASEAN firms

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1. Introduction

Capital structure decisions represent one of the most fundamental yet persistently puzzling questions in corporate finance. Since Modigliani and Miller's (1958) seminal irrelevance proposition, researchers have sought to understand why firms choose particular combinations of debt and equity financing. While substantial progress has been made in identifying correlates of leverage with profitability, size, tangibility, growth opportunities, the causal mechanisms underlying capital structure choices remain contested, with competing theoretical frameworks offering divergent predictions and empirical evidence yielding mixed results (Bessler & Drobetz, Pensa, P., 2023; Graham, Leary, M. T., 2011; Myers, 1984). Recent methodological advances and empirical puzzles continue to challenge established theories, suggesting that fundamental questions about capital structure determinants remain unresolved (Dang, Phan, H. V., 2023; Korteweg, 2023).

This study examines very low leverage firms maintaining debt ratios below 5% despite presumed access to debt markets representing the extreme lower tail of the capital structure distribution. We extend beyond conventional low leverage research (typically examining below-median debt ratios or bottom-quartile positions) to focus specifically on firms with near-zero debt. This conceptual refinement is theoretically important because the determinants of very low

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leverage may differ fundamentally from those explaining variation along the broader leverage spectrum. While low-to-moderate leverage likely reflects marginal optimization balancing tax benefits against financial distress costs, very low leverage represents a more categorical financing strategy where firms essentially operate as unlevered equity entities. These extreme positions may be driven by categorical managerial preferences for financial independence, absolute financial constraints that prevent meaningful debt issuance, or deeply entrenched path-dependent historical choices, which are mechanisms qualitatively distinct from the marginal trade-offs determining moderate leverage variation (Bessler et al., 2022; Davydov & Filat, Moraru, A., 2021; Strebulaev, Yang, B., 2013). Understanding very low leverage determinants thus offers insights into capital structure extremes distinct from the extensive literature on average or typical leverage patterns. Recent evidence documents that very low leverage prevalence has actually increased over the past two decades despite declining interest rates and improved market conditions, challenging simple trade-off or pecking order explanations and suggesting that behavioral rigidities and dynamic path dependence may dominate static optimization at leverage extremes (Anton, Afloarei, A. E., 2023; Guizani, Ajmi, A. N., 2023).

We focus specifically on three Association of Southeast Asian Nations (ASEAN) markets: Malaysia, Indonesia, and Singapore, which together represent approximately 11% of global emerging market capitalisation yet remain underexplored in capital structure research relative to their economic importance. These three markets offer particularly valuable institutional variation: Singapore maintains world-class financial development with sophisticated governance frameworks (Lim, Yen, S. H., 2023; Teo, Wong, S. H., 2024), Indonesia faces emerging market challenges including underdeveloped bond markets and weak creditor protection (Setyawan et al., 2023; Trinugroho et al., 2022), while Malaysia occupies an intermediate position with unique features including sophisticated Islamic finance infrastructure (Abdul Rahman, Mohd Nor, F., 2023; Ramli & Latan, Solovida, G. T., 2022). This heterogeneity within a relatively integrated economic region enables examination of how institutional context fundamentally shapes capital structure determinants.

Our empirical strategy confronts a fundamental methodological challenge that has compromised much prior capital structure research: severe endogeneity bias in static specifications. Conventional approaches regressing leverage on profitability, liquidity, and other firm characteristics suffer from reverse causality (leverage choices influencing the financial characteristics hypothesised to determine leverage), omitted variable bias (failure to account for dynamic adjustment processes), and measurement error (F. Jiang & Jiang, Kim, K. A., 2023; Roberts, Whited, T. M., 2013). These issues can produce entirely spurious correlations and misleading institutional comparisons, as we demonstrate through dramatic divergences between static random effects (RE) and dynamic generalised method of moments (GMM) estimates. Recent methodological advances emphasise that addressing endogeneity requires not merely robustness checks but fundamental reconsideration of empirical specifications, with dynamic panel methods and credible identification strategies essential for reliable causal inference (Bucci & La Torre, Liberatore, G., 2022; Javeed et al., 2024; Karolyi, Liao, R. C., 2024).

2. Literature Review and Hypothesis Development

2.1. Very Low Leverage: Theoretical Foundations and Empirical Evidence

Corporate tendencies toward very low leverage defined as maintaining debt ratios below 5% constitute a fundamental puzzle challenging classical capital structure theories, contradicting Modigliani-Miller propositions regarding optimal capital structure (Bessler et al., 2022; Davydov & Filat, Moraru, A., 2021; DeAngelo, Stulz, R. M., 2022). We conceptualise very low leverage as representing the extreme lower tail of the capital structure distribution, extending beyond conventional low leverage research that typically examines below-median debt ratios. Three competing theoretical frameworks offer divergent predictions: trade-off theory predicts positive profitability-leverage associations as profitable firms possess greater debt capacity (Damodaran, 2022; Graham, Leary, M. T., 2019), while pecking order theory predicts negative associations as information asymmetries induce internal financing preferences (Belkhir & Maghyreh, Awartani, B., 2021; Frank, Goyal, V. K., 2019; Haas, Peeters, M., 2023). Meanwhile, signalling theory suggests capital structure communicates firm quality, though mechanisms operate differently across institutional contexts (Duong & Hoang, Lee, E., 2022; Miglo, Lee, D. D., 2020). These divergent theoretical predictions necessitate empirical resolution rather than theoretical presumption.

Alternative explanations emphasise that very low leverage may reflect either deliberate financial flexibility strategies (DeAngelo, DeAngelo, L., 2019; Denis, McKeon, S. B., 2021) or binding market frictions that elevate debt costs, particularly in emerging markets with underdeveloped bond markets (Gopalan & Kalda, Manela, A., 2023; Morais & Serrasqueiro, Ramalho, J. J., 2020). Recent evidence reveals heterogeneous motivations: some very low leverage

firms face financial constraints preventing debt access, while others intentionally maintain near-zero debt despite possessing substantial borrowing capacity (Bessler & Drobetz, Pensa, P., 2023; Cespedes & Gonzalez, Molina, C. A., 2022; Halling & Yu, Zechner, J., 2020; Mensah & Duodu, Agyei, S. K., 2024). Empirical evidence presents conflicting patterns contingent on institutional settings, with pecking order theory finding support in emerging markets characterised by high information asymmetries (Chen et al., 2023; Sardo, Serrasqueiro, Z., 2021; Sheikh, Qureshi, M. A., 2019) while developed market evidence shows profitable firms often increasing leverage to exploit tax shields (Eckbo, Masulis, R. W., 2021). Firm-specific fixed effects explain substantial leverage variation (Y. K. Chang & Chou, Huang, T. H., 2019; Morellec & Nikolov, Schurhoff, N., 2022), suggesting persistent heterogeneity in financing preferences that simple theories cannot adequately capture.

Within ASEAN markets, pure zero-leverage remains uncommon given bank-dominated financial systems, with very low leverage policies typically defined as debt ratios of 5% or below representing functionally equivalent conservatism characterising a substantial minority of listed firms (Dang & Kim, Shin, Y., 2020; Nguyen & Nguyen, Hoang, N. T., 2022; Pham & Phan, Nguyen, D. D., 2023). Recent evidence documents that very low leverage prevalence has actually increased across ASEAN markets over the past decade despite declining interest rates and improved market conditions (Anton, Afloarei, A. E., 2023; Guizani, Ajmi, A. N., 2023). This pattern challenges simple trade-off or pecking order explanations, suggesting that behavioral rigidities and dynamic path dependence may dominate static optimisation at these extremes. Institutional heterogeneity across ASEAN from Singapore's efficient markets to Indonesia's fragmented systems strongly shapes financing patterns and may cause similar statistical patterns to mask fundamentally different mechanisms.

2.2. Family Ownership and Conservative Financing Strategies

Family ownership constitutes a critical determinant of capital structure decisions in emerging markets characterised by concentrated ownership. Two theoretical perspectives offer competing predictions regarding family firm leverage preferences. The socioemotional wealth (SEW) framework posits that family owners prioritise non-economic objectives, control preservation, reputation protection, and dynasty perpetuation over financial optimisation (Cruz et al., 2023; Gomez-Mejia & Patel, Zellweger, T. M., 2019). This preference hierarchy induces conservative financing strategies that protect family interests from external scrutiny and maintain decision-making autonomy. SEW considerations particularly intensify when leverage threatens control dilution or exposes the family to bankruptcy risks that would damage reputation and legacy (Fardnia & Giudici, Paleari, S., 2023; Moussa, 2024).

Agency theory provides nuanced, context-dependent predictions. On one hand, concentrated family ownership may reduce Type I agency costs (manager-shareholder conflicts) by aligning ownership with control, potentially enabling higher leverage as families credibly commit to debt servicing (Pindado, Requejo, I., 2022; Vieira, 2021). On the other hand, concentrated control exacerbates Type II agency conflicts (controlling-minority shareholder tensions), potentially motivating debt avoidance to minimise external monitoring and preserve private benefit extraction (Claessens & Djankov, Nenova, T., 2019; La Porta & Lopez-de-Silanes, Shleifer, A., 1999). Which effect dominates depends critically on institutional quality: stronger investor protection tends to moderate expropriation incentives while weaker governance amplifies them (Gottardo, Moisello, A. M., 2019; Martin-Garcia, Herrero, B., 2020).

Empirical evidence from emerging markets predominantly supports conservative financing hypotheses. Multiple studies document negative associations between family ownership and leverage across diverse contexts: Malaysian family firms maintain lower debt ratios to preserve independence (Haron, 2019; Rahman et al., 2020), while cross-country ASEAN evidence corroborates systematic debt avoidance patterns (Nguyen & Nguyen, Hoang, N. T., 2022; Vo, Ellis, C., 2021). Meta-analytic evidence confirms this tendency is particularly pronounced in environments with weak investor protection, where families face greater incentives to avoid external oversight (Fardnia & Giudici, Paleari, S., 2023). Ownership concentration intensifies these effects as higher family stakes correlate with progressively lower leverage as control considerations become more salient (Cruz et al., 2023; Vieira, 2021).

However, institutional contexts produce important exceptions to general conservatism patterns. Some family firms strategically deploy debt to prevent equity dilution when growth opportunities require external financing (K. L. Jansen & Smedema, Khaw, K. L. H., 2022; Pindado, Requejo, I., 2022). This strategic leverage usage appears most common in moderate institutional quality environments where debt provides governance benefits without excessive monitoring costs. Furthermore, generational transitions and professionalisation moderate family influence, as successor generations and professional managers tend toward less conservative financing as SEW considerations diminish (Domenichelli, 2019; Gottardo, Moisello, A. M., 2019).

In ASEAN's institutional context characterised by concentrated family ownership and variable investor protection, SEW and Type II agency considerations jointly predict conservative financing. Family firms face heightened external financing costs due to information opacity and expropriation concerns, while simultaneously valuing control preservation highly. These forces converge to predict negative associations between family ownership and leverage.

H1: Family ownership is negatively associated with very low leverage propensity in ASEAN markets.

2.3. *Financial Fundamentals and Leverage Determination*

Beyond ownership structure, fundamental financial characteristics critically shape leverage decisions by determining internal financing capacity and external financing costs. We examine three key dimensions, namely profitability, liquidity, and operating cash flow, that jointly influence debt avoidance behaviour through distinct but interconnected mechanisms.

2.3.1. *Profitability and the Internal Financing Hypothesis*

The profitability-leverage relationship remains among the most extensively studied yet theoretically contentious in capital structure research. Competing theoretical predictions yield opposite associations. Trade-off theory predicts positive profitability-leverage relationships: profitable firms face lower financial distress probabilities, possess greater debt capacity, and derive larger tax shield benefits, making debt financing more attractive (Damodaran, 2022; Graham, Leary, M. T., 2019). This prediction aligns with market-based signalling where profitable firms credibly signal quality through debt commitments (Miglo, Lee, D. D., 2020).

Conversely, pecking order theory predicts negative associations: information asymmetries induce strong preferences for internal financing, causing profitable firms generating abundant retained earnings to systematically rely less on external debt (Belkhir & Maghyreh, Awartani, B., 2021; Frank, Goyal, V. K., 2019). This internal financing preference intensifies where external financing costs are high, precisely the conditions characterising emerging markets with underdeveloped financial systems and severe information problems (Sheikh, Qureshi, M. A., 2019).

Empirical evidence reveals stark cross-country patterns. Developed market studies frequently identify positive profitability-leverage associations consistent with trade-off theory (Y. K. Chang & Chou, Huang, T. H., 2019; Eckbo, Masulis, R. W., 2021), though results remain mixed. Emerging market evidence overwhelmingly supports negative associations (Arosa & Richie, Schuhmann, P. W., 2021; Guizani, Ajmi, A. N., 2021; Sardo, Serrasqueiro, Z., 2021), suggesting pecking order mechanisms dominate where financing frictions are severe. Meta-analytic evidence confirms these geographic divergences reflect systematic differences in financial development and institutional quality rather than methodological artifacts (Dang et al., 2021).

ASEAN-specific evidence consistently documents negative profitability-leverage relationships. (Nguyen & Nguyen, Hoang, N. T., 2022) demonstrate that Malaysian, Indonesian, and Singaporean firms with superior profitability systematically maintain lower leverage, attributing this pattern to internal financing preferences amid high external financing costs. (Rahman et al., 2020) corroborate these findings for Malaysian firms specifically, while (Vo, Ellis, C., 2021) extend similar results to Vietnamese context.

H2: Profitability is positively associated with very low leverage propensity in ASEAN markets.

2.3.2. *Liquidity, Cash Holdings, and Financial Flexibility*

Liquidity and cash holdings represent critical dimensions of financial flexibility with direct implications for leverage decisions. Trade-off theory suggests that liquid assets reduce financial distress costs, enabling firms to maintain higher leverage (Damodaran, 2022; Miglo, Lee, D. D., 2020). However, agency theory and precautionary motives predict opposite patterns. From an agency perspective, excess liquidity may substitute for debt discipline, particularly where corporate governance is weak, inducing firms with substantial liquid resources to eschew debt (La Porta & Lopez-de-Silanes, Shleifer, A., 1999). Precautionary theories emphasise that firms accumulate liquid assets as buffers against uncertainty, with cash hoarding and debt avoidance representing complementary risk management strategies (Phan, Yoshikawa, T., 2021).

The financial flexibility hypothesis provides an integrated explanation: firms value financial slack to exploit future opportunities and withstand shocks (DeAngelo, DeAngelo, L., 2019; Halling & Yu, Zechner, J., 2020). This flexibility has particular value under uncertainty, suggesting that high-liquidity firms deliberately maintain low leverage to preserve strategic options (Bessler & Drobetz, Pensa, P., 2023). Empirical evidence broadly supports substitution between liquidity and leverage. Multiple studies document that firms with substantial cash holdings

systematically maintain lower debt ratios across diverse institutional contexts (Aggarwal & Schloetzer, Williamson, R., 2019; Li, Qiu, J., 2020; Sardo, Serrasqueiro, Z., 2021), though relationships exhibit heterogeneity based on financing constraints and growth opportunities.

In ASEAN markets characterised by institutional voids and heightened uncertainty, precautionary and flexibility motives likely dominate. Firms accumulate liquid assets as insurance against shocks while simultaneously avoiding debt to preserve financial flexibility.

H3: Liquidity is positively associated with very low leverage propensity in ASEAN markets.

2.3.3. *Operating Cash Flow and Financing Substitution*

Operating cash flow directly determines internal financing availability and predictability, critically influencing debt dependency. Pecking order theory provides clear predictions: firms generating robust operating cash flows require less external financing, naturally reducing debt reliance (Frank, Goyal, V. K., 2019; Sheikh, Qureshi, M. A., 2019). Strong internal cash generation allows firms to fund operations and investments without incurring costs associated with external financing, particularly relevant in emerging markets where external financing costs substantially exceed internal funding costs due to information asymmetries, underdeveloped capital markets, and weak creditor rights (Morais & Serrasqueiro, Ramalho, J. J., 2020; Sardo, Serrasqueiro, Z., 2021).

The cash flow substitution hypothesis posits that operating cash flow acts as a direct substitute for debt financing. Empirical evidence from emerging markets strongly supports this mechanism. Multiple studies document that firms with strong operating cash flows maintain significantly lower leverage ratios, preferring to finance activities through internally generated funds (Arosa & Richie, Schuhmann, P. W., 2021; Guizani, Ajmi, A. N., 2021; Vieira, 2021). This pattern appears particularly pronounced in bank-dominated financial systems where debt costs are high and access is constrained, precisely characterising ASEAN markets.

For ASEAN firms operating in institutional environments with high external financing costs, underdeveloped capital markets, and significant information asymmetries, pecking order mechanisms should dominate.

H4: Operating cash flow is positively associated with very low leverage propensity in ASEAN markets.

2.3.4. *Firm Size and Age: Essential Control Variables*

Firm size and age represent fundamental structural characteristics requiring careful control to avoid confounding effects in leverage determinant analyses. Size influences capital structure through multiple channels. Larger firms enjoy economies of scale in debt issuance, face lower bankruptcy probabilities through diversification, and possess superior debt market access, predicting positive size-leverage relationships (Damodaran, 2022; Graham, Leary, M. T., 2019). However, larger firms also generate greater internal funds potentially reducing external financing dependence, suggesting negative associations (Frank, Goyal, V. K., 2019).

Firm age affects capital structure through reputation formation and retained earnings accumulation. Reputation theories predict that older firms, having established track records, face lower information asymmetries enabling greater debt capacity (Pindado, Requejo, I., 2022). Conversely, older firms accumulate substantial retained earnings over time, potentially reducing external financing needs and lowering leverage through pecking order mechanisms (Morais & Serrasqueiro, Ramalho, J. J., 2020; Sardo, Serrasqueiro, Z., 2021). Given theoretical ambiguity and empirical heterogeneity, we include size and age as control variables rather than developing specific hypotheses.

2.4. *Institutional Heterogeneity in ASEAN Financial Systems*

Institutional environments critically shape capital structure determinants, with marked heterogeneity across ASEAN markets potentially moderating how family ownership and financial fundamentals influence leverage decisions. Malaysia operates a bank-dominated financial system with substantial government influence shaping corporate financing patterns (Rahman et al., 2020). Banking sector concentration creates high switching costs, reinforcing relationship banking and strengthening pecking order preferences. Malaysia's legal system provides moderate investor protection (La Porta & Lopez-de-Silanes, Shleifer, A., 1999), though Islamic finance adds complexity: Shariah-compliant firms face debt restrictions inducing particularly conservative leverage policies (Phan, Yoshikawa, T., 2021). Family ownership concentration in Malaysia is high, with founding families maintaining control through pyramid structures and cross-holdings despite minority economic ownership (Claessens & Djankov, Nenova, T., 2019).

Singapore represents the opposite extreme: an advanced financial centre with globally integrated markets and sophisticated regulatory frameworks (Phan, Yoshikawa, T., 2021). Market-based financing dominates over bank financing, providing diverse capital sources and competitive pricing. Strong legal institutions and investor protection facilitate strategic debt usage for signalling purposes rather than pure financing needs (Allen et al., 2019). Despite Singapore's development, family ownership remains prevalent, though professional management and transparent governance practices are more common than in regional neighbours.

Indonesia exhibits financial system fragmentation, weaker institutional quality, and heavy reliance on collateral-based lending (Sumani, 2020; Vo, Ellis, C., 2021). Banking relationships and political connections critically determine debt access, creating opaque financing processes and high transaction costs (Claessens & Djankov, Nenova, T., 2019). Weak creditor rights and governance standards elevate external financing costs while amplifying agency problems. Family ownership concentration reaches extreme levels, with founding families controlling major conglomerates through pyramidal structures enabling control far exceeding cash flow rights (Nguyen & Nguyen, Hoang, N. T., 2022).

3. Methods

3.1. Data and Sample Selection

This study examines publicly listed non-financial firms from three Southeast Asian markets, namely Malaysia, Indonesia, and Singapore, over the period 2015 to 2023. The choice of these countries is motivated by their distinct institutional frameworks, varying levels of financial market development, and significant presence of family-controlled enterprises, which collectively provide a robust comparative context for investigating capital structure determinants in emerging markets (Nguyen & Nguyen, Hoang, N. T., 2022; Tran, Nguyen, H. N., 2023).

Financial data were sourced from audited annual reports and official stock exchange filings obtained from Bursa Malaysia, Indonesia Stock Exchange (IDX), and Singapore Exchange (SGX). Ownership information was extracted from Thomson Reuters Eikon database, which provides comprehensive data on ultimate controlling shareholders and voting rights structures. Following established filtering procedures in capital structure research (Saona & Muro, Alvarado, M., 2023), we excluded financial institutions (banks, insurance companies, and other financial intermediaries) and utility firms due to their unique regulatory constraints and capital requirements that differ substantially from other industries.

To ensure data quality and mitigate the influence of outliers, we applied several screening criteria. First, we retained only firms with at least three consecutive years of available data to facilitate dynamic panel estimation. Second, we winsorised all continuous financial ratios at the 1st and 99th percentiles to minimise the impact of extreme values while preserving the distributional properties of the data (L. Jiang & Kim, Pang, L., 2024). Third, we excluded observations with missing or incomplete data on key variables.

The final unbalanced panel dataset comprises 10,160 firm-year observations across 1,081 unique firms, distributed as follows: Malaysia (4,300 observations from 430 firms), Indonesia (2,990 observations from 299 firms), and Singapore (2,870 observations from 352 firms). The unbalanced nature of the panel reflects the natural entry and exit of firms from public markets, as well as varying data availability across jurisdictions, which is consistent with empirical practices in international corporate finance research (Khurana & Moser, Raman, K. K., 2025).

3.2. Variable Measurement

3.2.1. Dependent Variable: Lower Leverage

Following recent empirical studies on extreme debt conservatism (Lee, 2024; Morais & Serrasqueiro, Ramalho, J. J., 2022), we operationalise lower leverage as a binary outcome using two alternative specifications. The primary dependent variable, *Low_Lev*, equals 1 if the firm's debt-to-equity ratio is less than or equal to 5%, and 0 otherwise. This threshold-based approach captures firms that maintain substantially low debt levels relative to their equity base, representing a deliberate capital structure policy rather than transitory fluctuations.

The phenomenon of zero-leverage and ultra-low leverage policies has gained increasing attention in recent literature. (Saona & Muro, Alvarado, M., 2023) provide a comprehensive review indicating that such policies can stem from either financial flexibility considerations or financial constraints. For robustness checks, we employ an alternative

specification using the debt-to-assets ratio (Dummy_DAR5%), which equals 1 if total debt scaled by total assets is less than or equal to 5%.

3.2.2. Independent Variables

Family Ownership (FAM). Following the methodology established in recent family firm literature (Block et al., 2024; S. Jansen & Siegel, Waldkirch, M., 2023; Stryckova, 2023), family ownership is measured as a binary variable that equals 1 if the ultimate controlling family holds at least 20% of voting rights, and 0 otherwise.

Profitability (ROA). Return on assets is calculated as net income divided by total assets, providing a scale-independent measure of firm profitability.

Liquidity (CR). The current ratio is computed as current assets divided by current liabilities, measuring the firm's short-term liquidity position.

Operating Cash Flow Ratio (CFOR). Operating cash flow is scaled by total assets to provide a normalised measure of cash generation capacity.

3.2.3. Control Variables

Two firm-level control variables are included to account for heterogeneity in firm characteristics. Firm Size (LnASSET) is measured as the natural logarithm of total assets (in millions), capturing economies of scale, diversification benefits, and differential access to capital markets. Firm Age (AGE) is calculated as the number of years since incorporation, proxying for organisational maturity, reputational capital, and life-cycle effects on financing decisions (Bergmann, 2024).

Table 1. Variable Definitions and Measurements

Variable	Definition	Measurement
Low_Lev	Lower leverage indicator based on debt-to-equity ratio	1 if debt-to-equity ratio \leq 5%; 0 otherwise
FAM	Family ownership control	1 if family voting rights \geq 20%; 0 otherwise
ROA	Return on assets	Net income / Total assets
CR	Current ratio	Current assets / Current liabilities
CFOR	Cash flow from operations ratio	Operating cash flow / Total assets
LnASSET	Firm size	Natural logarithm of total assets
AGE	Firm age	Years since incorporation

3.3. Econometric Methodology

This study employs a two-stage analytical approach to address the inherent endogeneity concerns in capital structure research and to capture the dynamic nature of leverage decisions. The empirical strategy progresses from static panel models to dynamic panel estimation using the Generalised Method of Moments (GMM), which is particularly well-suited for addressing simultaneity, omitted variable bias, and persistence in capital structure (Ho et al., 2024; Wintoki & Linck, Netter, J. M., 2012).

3.3.1. Static Panel Models

As a baseline specification, we estimate pooled OLS and random effects (RE) models to establish preliminary relationships between family ownership, financial fundamentals, and very low leverage. The baseline specification takes the following form:

$$\text{Very Low_Lev}_{it} = \beta_0 + \beta_1 \text{FAM}_{it} + \beta_2 \text{ROA}_{it} + \beta_3 \text{CR}_{it} + \beta_4 \text{CFOR}_{it} + \gamma_1 \text{LnASSET}_{it} + \gamma_2 \text{AGE}_{it} + \alpha_i + \lambda_t + \varepsilon_{it} \quad (1)$$

where i indexes firms, t indexes time periods, α_i represents unobserved firm-specific fixed effects, λ_t captures time fixed effects, and ε_{it} is the idiosyncratic error term. While these static models provide useful preliminary insights, they are susceptible to endogeneity bias arising from simultaneity, omitted variables, and measurement error.

3.3.2. Two-Step System GMM Estimation

System GMM estimator validity requires satisfying two critical assumptions: absence of second-order serial correlation in first-differenced residuals and instrument exogeneity (Arellano, Bond, S., 1991; Blundell, Bond, S.,

1998). We implement Arellano-Bond specification tests where AR(1) is expected to reject the null hypothesis due to mechanical first-order correlation induced by differencing, while AR(2) must fail to reject to confirm valid moment conditions. The Hansen J-statistic evaluates overidentifying restrictions with acceptable p-values ranging between 0.10 and 0.90 (Roodman, 2009).

The dynamic panel specification is formally expressed as:

$$\text{Very Low_Lev}_{it} = \alpha + \beta_1 \text{VLL}_{i,t-1} + \beta_2 \text{FAM}_{it} + \beta_3 \text{ROA}_{it} + \beta_4 \text{CR}_{it} + \beta_5 \text{CFOR}_{it} + \gamma_1 \text{LnASSET}_{it} + \gamma_2 \text{AGE}_{it} + \mu_i + \varepsilon_{it} \quad (2)$$

where $\text{VLL}_{i,t-1}$ is the one-period lagged dependent variable, μ_i represents time-invariant firm-specific effects, and ε_{it} is the idiosyncratic error term assumed to be serially uncorrelated. The coefficient β_1 on the lagged dependent variable captures the dynamic persistence in leverage decisions, with values closer to unity indicating slower adjustment toward target capital structure ratios. The estimation is implemented using (Roodman, 2009) `xtabond2` command in Stata 18, with specific attention to avoiding instrument proliferation (Aslam et al., 2024).

4. Results

4.1. Descriptive Statistics and Initial Evidence

Table 1 Panel A presents descriptive statistics for Malaysian firms ($N = 3,870$). Very low leverage prevalence is highest among the three markets, with 23.0% of firms maintaining DER below 5% and 16.9% maintaining DAR below 5%, suggesting substantial debt conservatism in Malaysia's bank-dominated financial system. Family ownership accounts for 30.5% of the sample, lower than expected for an emerging market, potentially reflecting the significant presence of government-linked companies in Malaysia's capital markets. Financial performance indicators show mean ROA of 4.404% (median: 3.779%), current ratio of 2.589 (median: 1.872), and operating cash flow ratio of 5.041% (median: 4.285%), with all variables exhibiting right-skewed distributions indicating substantial heterogeneity across firms.

Indonesian firms ($N = 2,691$) demonstrate moderate very low leverage prevalence, with 13.3 to 13.7% of firms maintaining debt ratios below 5%, substantially lower than Malaysia despite facing less developed capital markets. Family ownership is most concentrated at 69.6%, with the median firm being family-controlled, consistent with Indonesia's highly concentrated ownership structures and weak minority shareholder protection. Singaporean firms ($N = 2,583$) show the lowest very low leverage prevalence at 9.6 to 12.9%, suggesting more active leverage usage facilitated by efficient capital markets and strong creditor protection.

4.2. Correlation Analysis and Data Quality Validation

Bivariate correlation analysis (Table 2) offers preliminary insights into the hypothesised relationships while simultaneously validating data quality for multivariate analysis. Across all three countries, correlation coefficients remain below the critical 0.8 threshold, with the highest correlation (0.5823*** between profitability and operating cash flow in Indonesia) well within acceptable bounds (Frank, Goyal, V. K., 2022), ensuring reliable regression estimates uncontaminated by multicollinearity concerns.

Malaysia exhibits theoretically consistent patterns with low leverage positively correlating with profitability (0.1251***), liquidity (0.4347***), and cash flow (0.1109***), while family ownership displays a weak negative correlation (-0.0309**). Singapore presents positive correlations between low leverage and both profitability (0.0533***) and liquidity (0.3001***), with modest family ownership effects (0.0777***). Indonesia demonstrates the strongest family ownership correlation (0.2243***) but reveals a troubling negative association between family firms and profitability (-0.0662***), suggesting potential agency costs or strategic underperformance in family-controlled enterprises.

4.3. Hypothesis Testing Results and Cross-Country Evidence

This section presents the empirical findings in two stages. We begin with random effects (RE) estimation to establish baseline cross-sectional patterns, then proceed to the main analysis using two-step system GMM to address endogeneity concerns and capture dynamic adjustment processes.

Table 2. Descriptive Statistics

Variable	N	Mean	SD	Max	Min	p50	p99
<i>Panel A: Malaysia</i>							
Dummy_DER_5%	3,870	0.230	0.421	1.000	0.000	0.000	1.000
Dummy_DAR_5%	3,870	0.169	0.375	1.000	0.000	0.000	1.000
Dummy_EAM	3,870	0.305	0.460	1.000	0.000	0.000	1.000
ROA (%)	3,868	4.404	8.752	108.513	-67.989	3.779	30.534
CR (%)	3,869	2.589	2.727	66.282	0.015	1.872	12.767
CFOR (%)	3,869	5.041	8.520	80.640	-61.561	4.285	30.763
Ln_ASSET	3,869	19.063	1.527	23.940	15.204	18.905	23.264
AGE	3,870	35.940	19.044	141.000	1.000	33.000	108.000
<i>Panel B: Indonesia</i>							
Dummy_DER_5%	2,691	0.133	0.340	1.000	0.000	0.000	1.000
Dummy_DAR_5%	2,691	0.137	0.344	1.000	0.000	0.000	1.000
Dummy_EAM	2,691	0.696	0.460	1.000	0.000	1.000	1.000
ROA (%)	2,691	5.279	11.062	92.341	-83.629	3.935	46.545
CR	2,691	3.009	19.33	577.69	0.109	1.523	40.325
CFOR (%)	2,691	6.391	9.980	78.177	-84.180	4.906	40.475
Ln_ASSET	2,691	19.451	1.616	23.691	13.630	19.476	22.864
AGE	2,691	36.120	17.497	206.000	1.000	35.000	99.000
<i>Panel C: Singapore</i>							
Dummy_DER_5%	2,583	0.096	0.295	1.000	0.000	0.000	1.000
Dummy_DAR_5%	2,583	0.129	0.336	1.000	0.000	0.000	1.000
Dummy_EAM	2,583	0.878	0.327	1.000	0.000	1.000	1.000
ROA (%)	2,583	1.571	10.780	81.733	-159.268	2.309	29.204
CR	2,536	2.148	1.914	23.324	0.045	1.585	9.770
CFOR (%)	2,583	3.556	9.017	51.051	-85.844	3.279	29.121
Ln_ASSET	2,583	19.535	2.118	27.052	14.633	19.115	26.182
AGE	2,583	31.021	21.040	195.000	1.000	27.000	111.000

Notes: Dummy_DER is the Debt to Equity Ratio dummy; Dummy_DAR is the Debt to Asset Ratio dummy; Dummy_EAM is the earnings-based leverage dummy; ROA denotes Return on Assets; CR is the Current Ratio; CFOR is the Operating Cash Flow Ratio; Ln_ASSET is the natural logarithm of total assets (firm size); AGE is firm age in years. ***, **, and * indicate significance at the 0.001, 0.005, and 0.01 levels, respectively.

4.3.1. Preliminary Analysis: Random Effects Estimation

Table 3 presents random effects estimation results for both DER 5% and DAR 5% thresholds across Malaysia, Indonesia, and Singapore. Contrary to H1, which predicted negative associations between family ownership and very low leverage propensity, family ownership demonstrates no significant relationship across all three markets. Coefficient estimates for dummy_FAM consistently fail to achieve statistical significance ($p > 0.05$) in both leverage measures across all countries.

The RE results present a seemingly clear but ultimately misleading pattern for financial fundamentals. Singapore and Indonesia demonstrate uniformly positive and significant coefficients for profitability (ROA), liquidity (CR), and operating cash flow (CFOR). However, Malaysia presents a striking anomaly in the DER 5% model, where profitability, liquidity, and cash flow all demonstrate strongly negative and significant coefficients: ROA ($\beta = -0.763$, $p < 0.001$), CR ($\beta = -0.025$, $p < 0.001$), and CFOR ($\beta = -0.181$, $p < 0.001$). This contradicts the hypothesised relationships and suggests that profitable, liquid Malaysian firms with strong cash flows are significantly less likely to avoid debt.

Table 3. Correlation Analysis

Variable	DER_5%	FAM	ROA	CR	CFOR	Ln_Asset	AGE
<i>Panel A: Malaysia</i>							
Dummy_DER_5%	1.000						
Dummy_FAM	-0.031**	1.000					
ROA	0.125***	0.020	1.000				
CR	0.435***	0.004	0.087***	1.000			
CFOR	0.111***	-0.008	0.538***	0.001	1.000		
Ln_Asset	-0.225***	-0.063***	0.082***	-0.208***	0.069***	1.000	
AGE	-0.051***	-0.109***	0.018	-0.071***	0.009	0.201***	1.000
<i>Panel B: Indonesia</i>							
Dummy_DER_5%	1.000						
Dummy_FAM	0.224***	1.000					
ROA	-0.029	-0.068***	1.000				
CR	-0.015	0.005	-0.027	1.000			
CFOR	-0.033*	-0.037*	0.529***	0.001	1.000		
Ln_Asset	0.142***	0.196***	-0.079***	-0.062***	-0.089***	1.000	
AGE	0.013	0.030	0.014	-0.019	0.004	0.174***	1.000
<i>Panel C: Singapore</i>							
Dummy_DER_5%	1.000						
Dummy_FAM	0.167***	1.000					
ROA	-0.067***	-0.061***	1.000				
CR	-0.023	-0.010	-0.031	1.000			
CFOR	-0.098***	-0.051***	0.556***	0.001	1.000		
Ln_Asset	0.223***	0.185***	-0.066***	-0.077***	-0.078***	1.000	
AGE	0.024	0.057***	0.001	-0.022	0.003	0.181***	1.000

Notes: Correlation coefficients are presented with significance levels. ***, **, and * indicate significance at the 0.01, 0.05, and 0.10 levels, respectively. DER/DAR = Debt to Equity/Asset Ratio dummy; FAM = family ownership; ROA = Return on Assets; CR = Current Ratio; CFOR = Operating Cash Flow Ratio; Ln_Asset = natural logarithm of total assets.

Table 4. Panel Regression Results

Variable	Malaysia (1)	Malaysia (2)	Indonesia (1)	Indonesia (2)	Singapore (1)	Singapore (2)
Dummy_FAM	-0.763*** (0.000)	0.095*** (0.006)	0.220*** (0.000)	0.267*** (0.000)	0.561*** (0.000)	0.589*** (0.000)
ROA	-0.025*** (0.000)	0.003*** (0.007)	0.022*** (0.000)	0.020*** (0.000)	0.000*** (0.000)	0.000** (0.002)
CR	-0.181*** (0.000)	0.003* (0.049)	1.31×10^{-11} (0.443)	1.81×10^{-11} (0.351)	0.105*** (0.000)	0.097 (0.119)
Ln_Asset	0.151 (0.098)	-0.032*** (0.000)	-0.026*** (0.000)	-0.041*** (0.000)	-0.048*** (0.000)	-0.048*** (0.000)
AGE	-0.004** (0.003)	0.001** (0.022)	0.000 (0.637)	0.001** (0.048)	0.002*** (0.000)	0.002** (0.001)
Constant	-2.146*** (0.000)	1.526*** (0.000)	0.525*** (0.000)	0.815*** (0.000)	0.979*** (0.000)	0.969*** (0.000)
<i>Model Diagnostics</i>						
Observations	4,293	4,293	2,661	2,661	2,990	2,990
R-squared	0.051	0.018	0.041	0.041	0.053	0.054
No. of firms	430	430	267	267	299	299

Notes: P-values are reported in parentheses. Standard errors are clustered at the firm level. Model (1) uses the Debt-to-Equity Ratio (DER) as the dependent variable; Model (2) uses the Debt-to-Asset Ratio (DAR). ***, **, and * indicate significance at the 0.01, 0.05, and 0.10 levels, respectively.

4.4. System GMM Estimation

4.4.1. Model Specification and Diagnostic Tests

To address endogeneity concerns arising from reverse causality, omitted variable bias, and measurement error, we employ two-step system GMM estimation with cluster-robust standard errors. Our dynamic specification includes the lagged dependent variable (L1.dummy) to capture persistence in debt avoidance behaviour. We treat profitability (ROA), liquidity (CR), and operating cash flow (CFOR) as endogenous variables, using their second and deeper lags as instruments. Family ownership, firm size, and age are treated as predetermined variables.

All specifications pass standard diagnostic tests, validating the identification strategy. Hansen J-test for overidentifying restrictions: Indonesia ($p = 0.114$), Malaysia ($p = 0.692$), Singapore ($p = 0.306$). All Arellano-Bond AR(2) test p-values exceed 0.10, confirming no second-order serial correlation in differenced residuals. Instrument count is 26 instruments across all specifications, well below the number of groups, avoiding instrument proliferation problems. The Wald chi-square statistics (Indonesia: 176.87, Malaysia: 478.33, Singapore: 90.23) confirm strong overall model fit with $p = 0.000$ in all cases.

Table 5. System Two-Step GMM Estimation Results

Variable	Indonesia	Malaysia	Singapore
L.Dummy_DER_5%	0.5541** (0.000)	0.5655* (0.000)	0.5739* (0.000)
Dummy_FAM	0.3104 (0.555)	0.4751 (0.358)	0.5118 (0.656)
ROA	0.002 (0.120)	0.135 (0.139)	0.096 (0.283)
CR	2.18×10^{-6} (0.240)	0.024* (0.003)	0.009 (0.201)
CFOR	0.001 (0.415)	0.172** (0.019)	5.26×10^{-12} (0.505)
Ln_Asset	-0.049 (0.205)	-0.135** (0.016)	-0.000 (0.994)
AGE	0.004*** (0.076)	0.007* (0.001)	0.001 (0.688)
Constant	0.651 (0.892)	2.206** (0.042)	-0.456 (0.796)
Model Diagnostics			
Observations	2,691	3,867	2,395
Wald χ^2	176.87	478.33	90.23
Prob > χ^2	0.000	0.000	0.000
AR(1)	0.000	0.000	0.000
AR(2)	0.783	0.476	0.947
Hansen J test	0.114	0.692	0.306
Sargan test	0.000	0.064	0.059
No. of instruments	26	26	26

Notes: P-values are reported in parentheses. Standard errors are clustered at the firm level. L.Dummy_DER_5% denotes the one-period lagged dependent variable. The Arellano-Bond AR(1) and AR(2) tests examine first- and second-order autocorrelation in first-differenced residuals. The Hansen J test and Sargan test assess the validity of over-identifying restrictions. ***, **, and * indicate significance at the 0.01, 0.05, and 0.10 levels, respectively.

4.4.2. Capital Structure Persistence: The Dominant Determinant

The most striking finding from the GMM analysis is the strong and highly significant persistence in very low leverage across all three ASEAN markets. The lagged dependent variable (LI.dummy_DER_5%) demonstrates remarkably consistent coefficients ranging from 0.5541 in Indonesia to 0.5655 in Malaysia and 0.5739 in Singapore (all $p < 0.001$). These coefficients indicate that firms maintaining very low leverage in the previous period have approximately 55 to 57% probability of remaining in very low leverage positions in the current period, holding other factors constant. This persistence effect is by far the strongest predictor of very low leverage, substantially larger in magnitude and more statistically robust than any firm-level financial characteristic examined.

a. Family Ownership: Robust Non-Significance (H1)

Consistent with random effects results, family ownership demonstrates no significant association with debt avoidance behaviour across all three markets in GMM specifications. Coefficients remain statistically insignificant with relatively large p-values: Indonesia ($\beta = 0.3104$, $p = 0.555$), Malaysia ($\beta = 0.4751$, $p = 0.358$), Singapore ($\beta = 0.5118$, $p = 0.656$). H1 is decisively rejected.

b. Profitability: The Disappearing Effect (H2)

In stark contrast to random effects results, profitability demonstrates no significant association with very low leverage in any market once endogeneity is addressed through GMM specification. The coefficients become uniformly non-significant, with Indonesia exhibiting $\beta = 0.00199$ ($p = 0.120$), Malaysia showing $\beta = 0.1347$ ($p = 0.139$), and Singapore displaying $\beta = 0.0957$ ($p = 0.283$). Most critically, the Malaysia anomaly completely disappears: the strongly negative coefficient observed in RE estimation ($\beta = -0.763$, $p < 0.001$) transforms into a positive but non-significant coefficient ($\beta = 0.1347$, $p = 0.139$) under GMM specification.

c. Liquidity: Partial and Market-Specific Effects (H3)

Liquidity (CR) demonstrates highly heterogeneous effects across markets in GMM specifications. Malaysia exhibits a positive and statistically significant coefficient ($\beta = 0.0244$, $p = 0.003$), indicating that liquid Malaysian firms maintain higher probabilities of very low leverage even after controlling for dynamics and addressing endogeneity. Conversely, both Singapore and Indonesia demonstrate non-significant liquidity effects, with coefficients of $\beta = 0.0094$ ($p = 0.201$) and $\beta = 0.00000218$ ($p = 0.240$) respectively. H3 receives partial empirical support exclusively in Malaysia.

d. Operating Cash Flow: Significant Only in Malaysia (H4)

Operating cash flow (CFOR) demonstrates a positive and statistically significant relationship with very low leverage exclusively in Malaysia ($\beta = 0.1722$, $p = 0.019$), while both Singapore ($\beta = 5.26 \times 10^{-12}$, $p = 0.505$) and Indonesia ($\beta = 0.00088$, $p = 0.415$) yield null findings. H4 receives only weak empirical support confined to Malaysia.

4.5. Control Variables

Control variables show mixed patterns across markets. Firm size (LnASSET) demonstrates significant negative effects only in Malaysia ($\beta = -0.1349$, $p = 0.016$), suggesting larger Malaysian firms are less likely to avoid debt, while showing no significant effects in Singapore or Indonesia. Firm age (AGE) shows weak positive significance only in Indonesia ($\beta = 0.00375$, $p = 0.076$), indicating older Indonesian firms are slightly more likely to maintain very low leverage.

4.6. Reconciling Random Effects and GMM Results

The comparison of RE and GMM coefficient estimates reveals fundamental differences between static and dynamic specifications across three critical patterns. First, the Malaysia anomaly proves entirely an endogeneity artifact: all three financial performance variables reverse signs under GMM estimation, with ROA transforming from $\beta = -0.763^{***}$ (RE) to $\beta = 0.1347$ (ns) in GMM, CR reversing from $\beta = -0.025^{***}$ to $\beta = 0.0244^*$, and CFOR changing from $\beta = -0.181^{***}$ to $\beta = 0.1722^{**}$. Second, Singapore and Indonesia exhibit substantial magnitude reductions and significance disappearance. Third, persistence emerges as the dominant force: lagged leverage coefficients (0.554 to 0.574) dwarf all other effects across markets, demonstrating strong capital structure hysteresis where historical financing choices create path dependence through adjustment costs, managerial preferences, and institutional frictions.

5. Discussion

The most fundamental finding is the overwhelming dominance of capital structure persistence across all three ASEAN markets, with lagged very low leverage explaining 55 to 57% of current positions (coefficients: 0.554 to 0.574, all $p < 0.001$), substantially exceeding any firm-level financial characteristic (X. Chang & Dasgupta, Hilary, G., 2024; Morellec & Nikolov, Schurhoff, N., 2022). This finding holds consistently across Malaysia, Indonesia, and Singapore despite substantial institutional differences, suggesting behavioural inertia operates universally. This extreme persistence aligns with recent evidence that lagged leverage alone provides better out-of-sample prediction than complex models incorporating dozens of firm characteristics (X. Chang & Dasgupta, Hilary, G., 2024).

Three theoretical mechanisms explain this persistence through dynamic adjustment frameworks (Fischer & Heinkel, Zechner, J., 1989; Leary, Roberts, M. R., 2005; Strebulaev, 2007). First, adjustment costs create barriers through transaction costs including investment banking fees and legal expenses (Faulkender et al., 2012). Second, managerial preferences and corporate culture exhibit stability, with CFOs perpetuating debt-averse policies through institutionalised routines (Bertrand, Schoar, A., 2003; Nelson, Winter, S. G., 1982). Third, market reputation creates path dependence where very low leverage firms develop safe investment reputations, making deviations costly through negative signalling (DeAngelo, DeAngelo, L., 2007; Myers, 1984).

The dramatic divergence between random effects and GMM results, particularly Malaysia's complete coefficient reversals, exposes fundamental econometric problems in capital structure research. Static models suffer from severe endogeneity bias through three primary sources (F. Jiang & Jiang, Kim, K. A., 2023; Roberts, Whited, T. M., 2013): reverse causality, omitted dynamics, and measurement error. Malaysia's particular susceptibility to endogeneity bias may reflect intermediate market development creating stronger reverse causality effects, higher corporate tax rates (24%) creating stronger tax shield feedback, or larger sample size (4,293 observations) providing more statistical power to detect spurious relationships.

One of the study's most striking contributions is demonstrating that Malaysia's apparent institutional anomaly proves entirely spurious once endogeneity is addressed. GMM reveals no anomaly exists: ROA reverses from -0.763^{***} to $+0.1347$ (ns), CR reverses from -0.025^{***} to $+0.0244^*$, and CFOR reverses from -0.181^{***} to $+0.1722^{**}$. The anomaly was purely an econometric artifact, a cautionary tale about interpreting static models as revealing genuine institutional differences.

Family ownership demonstrates uniformly non-significant relationships with very low leverage across all specifications, markets, and estimation methods. This robust null finding is theoretically surprising given agency theory predictions that family firms should exhibit distinctive financing preferences driven by control considerations (Jensen, 1976). Several factors may explain this: family firm heterogeneity masks variation in generational stage, professional management adoption, and ownership concentration levels; ASEAN family firms may have adapted to modern finance norms through institutional investor pressure; pyramidal ownership structures may decouple family control from firm-level leverage decisions; or debt may actually help preserve family control by avoiding equity dilution.

The findings challenge static theories, demonstrating that persistence ($\beta \approx 0.56$) dominates firm characteristics, requiring dynamic models (Fischer & Heinkel, Zechner, J., 1989; Korteweg, 2023). For policymakers, Indonesia requires bond market development and creditor protection strengthening (Gopalan & Kalda, Manela, A., 2023), while Singapore needs no intervention. Standard leverage ratios provide unreliable signals when historical patterns dominate current fundamentals.

6. Conclusion

This study makes three primary contributions to capital structure research. First, capital structure persistence dominates static firm characteristics, with lagged leverage explaining 55 to 57% of current very low leverage positions across ASEAN markets, substantially exceeding profitability, liquidity, or cash flow effects. Second, we expose severe endogeneity bias in static specifications: Malaysia's apparent institutional anomaly (profitability coefficient: $\beta = -0.763$, $p < 0.001$ in RE) proves entirely spurious under GMM estimation ($\beta = 0.135$, $p = 0.139$). Third, family ownership demonstrates no significant influence on very low leverage across all markets, challenging agency theory predictions in Asian contexts.

Our findings underscore the imperative of dynamic panel methods and credible identification strategies in capital structure research. Static correlations cannot support causal claims without addressing endogeneity. For practitioners,

capital structure inertia implies that initial financing choices have persistent consequences warranting periodic reassessment. For policymakers, similar statistical patterns, very low leverage in Singapore and Indonesia, mask fundamentally different mechanisms requiring differentiated interventions: Singapore's efficient markets need no intervention, while Indonesia's institutional voids necessitate bond market development and creditor protection strengthening.

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