DLSU Business & Economics Review 35(1) 2025 p. 77-93

RESEARCH ARTICLE

Leveraging Capital Structures of Philippine Publicly Listed Companies

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In this study, I revisit the determinants of corporate capital structures of publicly listed businesses in the Philippines, emphasizing major characteristics previously identified in academic literature, including tangibility, profitability, company size, non-debt tax shields, and growth. I investigate how companies' financial actions correspond with or deviate from traditional capital structure theories within the context of the Philippine economy's reliance on short-term, high-cost lending and its evolving capital market. Using a descriptive-exploratory approach to analyze 210 observations from 21 businesses listed on the Philippine Stock Exchange from 2014 to 2023, I performed a quantitative analysis of construct relationship using cross-sectional generalized least squares for static relationships and Arellano-Bond dynamic panel estimation for time-lagged effects. The data indicate a multifaceted impact of factors, including profitability and asset growth, which demonstrate a preference for domestic financing, thus corroborating the pecking order theory. Tangibility and company size demonstrate inconsistent compliance with the trade-off theory. These findings augment the literature on corporate capital structure by highlighting emerging economies such as the Philippines and provide strategic insights for managerial decision-making. Additionally, I support quantitative findings with a qualitative examination of the monetary policies of the Central Bank of the Philippines for strategic management implications.

Keywords: pecking order, trade-off, capital structure, emerging economies

JEL Classifications: G32, G3, G34

Background of the Study

The corporate capital structure is a well-examined area in financial economics, featuring prominent ideas such as Modigliani and Miller's irrelevance theorem, the pecking order theory, and the trade-off theory, which elucidate firm financing behavior (Kraus & Litzenberger, 1973). Research suggests that a company's choice between stock and debt funding may be influenced by factors like profitability, tax benefits, bankruptcy costs, and information asymmetry. Capital structure decisions are vital because they directly influence the firm's financial performance, risk profile, and adaptability under varying economic conditions (Frank & Goyal, 2009). The specific challenges encountered by emerging markets such as the Philippines, including the expensive cost of capital and restricted access to long-term financing, suggest that the determinants of capital

structure may significantly diverge from those in developed economies, particularly in light of ongoing initiatives aimed at enhancing financial inclusion and advancing capital markets, as detailed in the Bangko Sentral ng Pilipinas' (BSP) National Strategy for Financial Inclusion 2022-2028 (BSP, 2022).

Significance of the Study

This study holds special significance for the Philippines, where publicly traded companies frequently encounter financial difficulties due to economic hardships and natural disasters. Comprehending the factors influencing capital structure is crucial for effective financial decision-making, as companies in the Philippines typically rely on short-term bank loans and foreign direct investment (FDI), notwithstanding the increasing cost of domestic capital. Furthermore, in light of the integration of international capital flows and recent changes in the global financial landscape, Philippine enterprises must modify their capital structures to align with market expectations (Montes & Cruz, 2019). This study aims to explore the determinants of capital structure decisions and offers insights for policymakers and business leaders seeking to enhance financial stability and competitiveness.

Scientific Contribution and Research Positioning

Although the available literature has thoroughly analyzed capital structure in developed countries, research pertaining to the Philippines is limited. Limited assessments exist about the evolution of business capital structures in relation to temporal periods and macroeconomic variables (Yu & Aquino, 2009). This study builds upon international findings and examines the intricacies of the determinants of capital structures, notably at the country level, as previously developed by Cortez and Susanto (2012), which also encompasses the measurement criteria of tangibility, profitability, firm size, non-debt tax shields, and growth. This study enhances the literature by employing dynamic panel model estimates to account for potential time-lagged effects, thus providing a more robust analysis and thorough understanding of the construct relationships (Cortez, 2025). In this research, I focus on index movers of the Philippine Stock Exchange, providing critical insights for academia and industry, consistent with global findings, while tackling distinct regional difficulties.

Problem Statement

Despite the recent expansion of the Philippine economy driven by increasing foreign direct investment, a discernible gap remains in comprehending the precise causes that affect capital structure decisions within the nation. Due to dependence on expensive and short-term funding sources, along with the restricted maturity of the Philippine capital market, companies may deviate from conventional financing theories or modify these frameworks (Rajan & Zingales, 1995). The primary issue is to identify and assess the critical aspects influencing the capital structures of publicly listed firms in the Philippines, especially concerning industry dynamics and changing economic situations. This research aims to investigate the following questions:

1. How do tangibility, profitability, firm size, non-debt tax shields, and growth impact the capital structure of Philippine listed companies?
2. What are the time-lagged effects of these determinants on capital structures, as explored through dynamic panel estimation?
3. How do these determinants influence critical investment decisions, and what are the strategic implications of capital structure choices?

Objectives

The primary objective of this research is to examine the key factors of capital structures in the context of the Philippines publicly listed companies. The specific objectives include:

1. To determine the impact of tangibility, profitability, firm size, non-debt tax shields, and growth on the capital structures of Philippine listed companies;
2. To explore the time-lagged effects of these determinants on capital structures using a dynamic panel estimation approach;
3. To analyze critical investment decisions in light of these determinants, enabling a better understanding of the strategic implications of capital structure choices.

Scope and Limitations

This study focuses on the index movers of the Philippine stock exchange within the last 10 years and does not include privately held corporations, banks, and

financial institutions. Although contextualized within the Philippine economy and business environment, applicability to other regions is inadequate but could warrant potential cross-comparative research. Hence, this study may potentially lead to a broader conclusion.

Literature Review

Theoretical Foundations of Capital Structures

The foundational theories on capital structure began with Modigliani and Miller (1958), who argued that a firm's value is independent of its capital structure under perfect market conditions. This irrelevance theorem is rarely met in real market conditions, assuming there are no taxes, bankruptcy costs, or agency costs (Modigliani & Miller, 1963). The theoretical foundation was later enhanced to include tax shields, suggesting how they add value to debt financing.

Myers and Majluf's (1984) pecking order theory posits that companies initially prefer internal financing, followed by debt, and eventually issue equity only as a last resort due to asymmetric information and transaction costs. Furthermore, this theorizes that companies with higher profitability rely less on external financing, whereas those with fewer internal funds have the tendency to leverage debt more frequently.

On the other hand, the trade-off theory suggests that companies aim to balance the tax benefits of debt against bankruptcy costs to attain an optimal capital structure (Kraus & Litzenberger, 1973). This theory suggests that each firm has a target debt-to-equity ratio, which they actively manage by balancing tax shields from debt with potential financial distress costs (Myers, 1984).

Global academic literature has analyzed the determinants of capital structure among several economies. Frank and Goyal (2009) examined capital structure decisions in developed economies, whereas Booth et al. (2001) identified that capital structure choices in developing countries are affected by analogous variables but emphasized institutional factors as significant distinctions. Furthermore, Rajan and Zingales (1995) analyzed the factors among G7 nations and discovered that tangible assets and profitability greatly influence capital decisions.

Cortez and Susanto (2012) examined the determinants of capital structure among Japanese manufacturing firms with measurement variables of tangibility, profitability, firm size, growth potential, and non-debt tax shields. The study found that tangibility positively affect leverage because firms with plenty of fixed assets can use such assets as collaterals to secure debt financing, whereas profitability has a negative link with leverage. This supports the pecking order theory, which states that firms would always like to use internal financing rather than external debt. Larger firms with more stable cash flows and perceived lower risk show a greater predisposition to debt financing, whereas high-growth firms avoid the now-higher costs of external capital by relying on equity or internal financing. Non-debt tax shields do not affect leverage, so profitability and firm size remain important in determining Japanese manufacturing companies' decisions on optimal capital structure.

Cortez (2025) extended the literature on capital structure by including intangible assets and innovations in Japanese corporations. Traditional determinants remain significant, whereas intangibles and innovations emerge as important factors using GLS and dynamic panel data estimation. Manufacturing companies have lower leverage than non-manufacturing firms. Tangibility positively influences debt-to-equity ratios, supporting the trade-off theory. Profitability, firm size, and non-debt tax shields negatively affect the ratios, aligning with the pecking order theory. Intangible assets positively affect capital structure, which goes against some previous research. R&D expenditure negatively impacts debt-to-equity ratios, which suggests that innovative companies rely more on equity financing.

In this study, I focus on traditional determinants in emerging economies by excluding intangibles and innovation measures due to limited availability and insufficient data for strongly balanced and robust panel analyses. This approach provides a baseline while highlighting the need for improved data collection and reporting standards for the emergence of intangibles and innovation in developing economies as future determinants of capital structures.

Capital Structure of Philippine Publicly Listed Corporations

The capital structure of Philippine publicly listed corporations is significantly shaped by foreign direct investment (FDI) and international capital flows. These bring long-term capital with technology transfer as international debt offers a fixed-term financing alternative. Recent statistics reveal fluctuations in FDI inflows, with 2023 net inflows at US$8.9 billion, a 6.6% decrease from 2022 (BSP, 2024a). In spite of challenges such as

investor uncertainty and high interest rates, FDI remains a crucial source of economic development, especially in manufacturing and services (Montes & Cruz, 2019).

Philippine firms usually rely on bank loans and internal funding as compared to developed nations with diverse capital markets (Yu & Aquino, 2009; Meneses & Palo, 2023). The industry median leverage significantly affects a firm's capital structure decisions (Frank & Goyal, 2009), and this leads to more conservative leverage strategies for the Philippines. The BSP projects FDI net inflows of $10 billion for 2024, highlighting its importance in shaping corporate capital structures and the Philippine economy.

Capital structure studies in the Philippines are relatively scarce and predominantly shaped by the pecking order theory (Yu & Aquino, 2009). They provide evidence of the negative relationship between leverage and profitability. Meanwhile, Meneses and Palo (2023) confirmed this relationship further and added that growth opportunity shows a positive relationship with leverage. They also noted that firm size has a positive relationship with leverage, as seen from the trade-off theory. These are characterized by several distinctive features, such as (a) foreign ownership limitations, which impact multinational companies' capital structures; (b) large publicly listed companies that are often old family conglomerates; and (c) capital structures typical of large Asian corporations, unique in the Southeast Asian context (Cortez & Susanto, 2012; Yu & Aquino, 2009).

Capital structure decisions, the balance between debt and equity, are crucial in determining the financial performance and stability of corporations. Modigliani and Miller's (1963) capital structure theory suggests that in a perfect market, the choice between debt and equity financing does not affect a firm's value. However, operational factors like taxes and bankruptcy costs shift the optimal capital structure towards leveraging tax shields on debt. Trade-off and pecking order theories have been significant in explaining financing behaviors among Philippine corporations. Trade-off theory suggests companies balance debt benefits against financial distress costs; on the other hand, the pecking order theory posits that companies prioritize internal financing due to adverse selection costs associated with equity (Myers & Majluf, 1984).

Factors influencing the increase in debt financing among Philippine enterprises encompass the economic landscape, firm size, particular industry, regulatory framework, and corporate governance. Elevated debt levels may enhance profitability through tax advantages, although they can also increase the chances of insolvency and financial distress. Cortez and Susanto (2012) demonstrated a negative association between elevated debt ratios and return on assets (ROA) over the long run, suggesting that excessive dependence on debt may threaten sustainability. The unique traits of Philippine enterprises, such as familial ownership and limitations on foreign investments, may influence their capital structure decisions. Established family-owned firms in the Philippines may demonstrate differing risk tolerances, while their access to internal capital markets and cross-ownership in critical industries affect their leverage decisions. Furthermore, limits on foreign ownership may constrain certain enterprises' access to international financial markets, thereby affecting their capital structure choices.

Research Gap

This study examines the factors influencing the capital structures of publicly traded companies in the Philippines, grounded in the frameworks developed by Cortez and Susanto (2012) and Cortez (2025). Conventional approaches have been analyzed in advanced economies. Nonetheless, their importance in emerging economies like the Philippines necessitates additional examination (Deesomsak et al., 2004; Yu & Aquino, 2009). The substantial capital expenditures and restricted financing alternatives in the Philippine market necessitate an examination of these concepts within the local context while the economy is performing well within a grander scope of global financial integration and development of capital markets (Montes & Cruz, 2019).

Methodology

Research Design

I adopted a mixed methods approach to explore the determinants of capital structure across 21 index movers publicly traded firms in the Philippines, spanning 210 observations over a decade (2014 to 2023). Quantitative analysis investigates the impact and the impacts of different variables on capital structure employing dynamic panel estimation. A qualitative method was employed for evaluating key investment decisions associated with these attributes. The dataset was sourced from the Bloomberg Terminal,

ensuring an accurate yet unbiased panel. Considering the continual nature of real-time updates, the annual dataset collection requires time for verification and standardization to preserve data integrity throughout the sampled firms. Therefore, a cut-off has to be made for a strongly balanced panel, considering the latest available information as of 2023.

Statistical Analyses

To attain the study's objectives, I used the statistical methods of GLS regression for panel data and Arellano-Bond regression for dynamic panel model estimation, which were previously used by Cortez in 2025. I performed GLS to find out how factors affect capital structures while addressing possible issues on heteroskedasticity and auto-correlations in the panel data (Frank & Goyal, 2009). This method gives robust estimates for determining what factors affect capital structure.

Through the use of Arellano-Bond, I analyze how time-lagged factors affect capital structures and their changes over time. This method works best with small panel datasets where time is less important than cross-sectional dimension (Arellano & Bond, 1991).

Model Specification

The first model examines the static relationship between the capital structure determinants and capital structures, including tangibility, profitability, firm size, non-debt tax shield, and growth as independent variables, with the firm's capital structure of debt-to-asset ratio as the dependent variable (Ozkan, 2001).

Regression model 1:

$$Capital\_Structure_{it} = \alpha + (\beta_1 * Tangibility_{it}) + (\beta_2 * Profitability_{it}) + (\beta_3 * Firm\_Size_{it}) + (\beta_4 * Non\text{-}Debt\_Tax\_Shield_{it}) + (\beta_5 * Growth_{it}) + u_i + e_{it}$$

where *i* refers to companies and *t* refers to years.

In the second model, I explore the potential time-lagged effect of capital structure determinants through a dynamic panel estimation.

Regression model 2:

$$Capital\_Structure_{it} = \alpha + (\rho * Capital\_Structure_{i,t-1}) + (\beta_1 * Tangibility_{it}) + (\beta_2 * Profitability_{it}) + (\beta_3 * Firm\_Size_{it}) + (\beta_4 * Non\text{-}Debt\_Tax\_Shield_{it}) + (\beta_5 * Growth_{it}) + u_i + e_{it}$$

where *i* refers to companies and *t* refers to years.

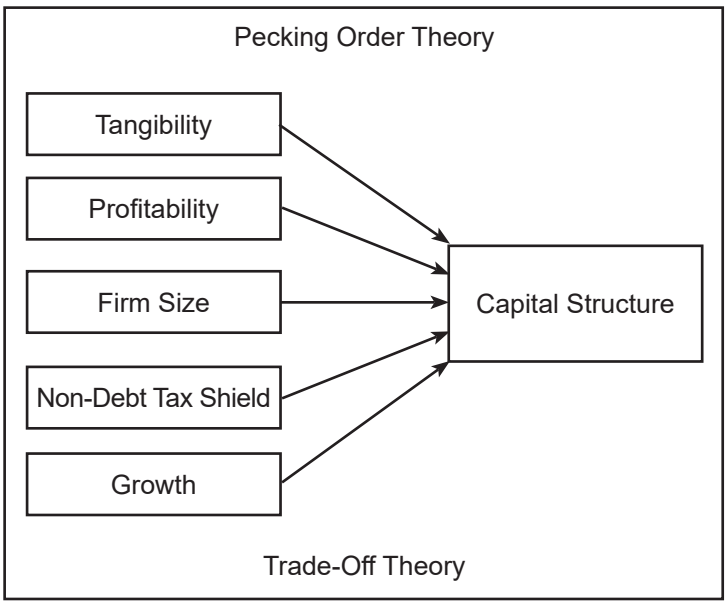

Figure 1
Conceptual Framework: CFP Metrics' Impacts on Capital Structure on Philippine Publicly Listed Companies

This approach incorporates a one-year lag of the dependent variable, enabling the examination of the temporal influence of firm-specific determinants on capital structure (Baker & Wurgler, 2002).

Conceptual Framework

The method comprises five business performance criteria: tangibility, profitability, firm size, non-debt tax shield, and growth, examining their impact on the capital structure of the debt-to-equity ratio. This theory expands on the trade-off theory, which posits that firms weigh tax advantages against bankruptcy expenses to establish an optimal capital structure (Modigliani & Miller, 1958), and the pecking order theory, which maintains that firms prioritize financing alternatives according to the degree of information asymmetry (Myers & Majluf, 1984).

Hypotheses Development

The determinants of corporate capital structure have been the subject of extensive research in financial literature. Tangibility, representing the proportion of fixed assets, is expected to have a positive relationship with leverage due to its role as collateral, reducing agency costs of debt (Titman & Wessels, 1988). Profitability, on the other hand, may have a negative relationship with leverage according to the pecking order theory, as companies prefer internal financing over external debt (Myers & Majluf, 1984). Firm size is generally associated with higher leverage due to lower bankruptcy risks and better access to debt markets (Rajan & Zingales, 1995). Non-debt tax shields, such as depreciation, are expected to have a negative relationship with leverage as they serve as substitutes for the tax benefits of debt (DeAngelo & Masulis, 1980).

Moreover, growth opportunities may have a negative relationship with leverage due to potential underinvestment problems (Myers, 1984). In the context of Philippine companies, Yu and Aquino (2009) found that profitability and firm size significantly influence capital structure decisions. However, the applicability of these determinants may vary due to the unique characteristics of the Philippine market, such as its bank-based financial system and the prevalence of family-owned conglomerates (Meneses & Palo, 2023). Therefore, this study aims to provide a comprehensive analysis of these determinants in the Philippine setting, contributing to the ongoing discourse on capital structure in emerging markets.

H1: Tangibility, profitability, firm size, non-debt tax shields, and growth significantly influence corporate capital structure.

The dynamism of capital structure decisions shows the interaction between the trade-off theory and pecking order theory, as firms continually adjust their leverage ratios over time. The trade-off theory says that firms strive for an optimal capital structure by weighing the tax benefits of debt against the risks of bankruptcy. In contrast, the pecking order theory asserts that firms adhere to a hierarchy preference in financing owing to knowledge asymmetry. This temporal lag effect occurs as organizations progressively align with their desired

Independent Variables	Trade-Off Theory	Pecking Order Theory
Tangibility	+	–
Profitability	+	–
Firm Size	+	–
Non-Debt Tax Shields	–	+–
Growth	–	+

Figure 2
Apriori Expectations of the Relationship Between Capital Structure and Its Determinants; Dependent Variable: Debt-to-Equity Ratio

capital structures, taking into account both theoretical models.

Kayhan and Titman (2007) showed that prior financing decisions of firms and current markets have enduring influences on capital structure, confirming both theoretical ideas. The trade-off theory highlights firms' long-term growth toward ideal leverage ratios, yet the pecking order theory clarifies the reasons for temporary deviations from these aims due to available internal capital and market timing opportunities. Their findings indicate that these effects might persist for more than a decade, indicating an intricate correlation between the two theories in practice.

Yu and Aquino (2009) found evidence of partial adjustment toward target leverage ratios in the Philippines, indicating that local companies actively manage their capital structures while aligning with theoretical considerations. The observed time-lagged effects align with the trade-off theory's concept of optimal leverage and the pecking order theory's inclination towards organizational hierarchy. This dynamic adjustment process signifies that publicly listed companies in the Philippines consider both contemporary and historical factors in their financing decisions, illustrating the complementary elements of capital structure theories in explaining corporate finance behavior.

H_2: There is a time-lagged effect of these determinants on capital structure, reflecting a dynamic adjustment process as companies optimize their financing strategies.

The outcomes from H1 and H2 explain how the determinants of capital structure affect significant investment decisions. By recognizing these linkages, firms may enhance their weighted average cost of capital (WACC) and more effectively manage changes in monetary policy. This insight empowers management to make strategic capital structure decisions that improve financial performance, mitigate risk, and seize investment opportunities in the evolving Philippine business landscape.

Results and Discussion

Descriptive Statistics

The dataset of 21 firms listed on the PSE, spanning several sectors of the Philippine economy, consist of the following companies; (1) Ayala Corporations, (2) Acen Corporation, (3) Aboitiz Equity Ventures, (4) Ayala Land, (5) DMCI Holdings, (6) International Container Terminal Services, (7) GT Capital Holdings, (8) Manila Electric Company, (9) LT Group, (10) PLDT, (11) San Miguel Food and Beverage, (12) Semirara Mining and Power Corporation, (13) Universal Robina Corporation, (14) Alliance Global Group, (15) Emperador, (16) Globe Telecom, (17) Jollibee Foods Corporation, (18) JG Summit Holdings, |(19) PureGold Price Club, (20) SM Investment Corporation, and (21) SM Prime Holdings. These firms are chosen based on their active recent tradability and have sufficient data to be included as the study subjects.

I excluded banks and financial institutions from the dataset, as these entities act as the primary source of financing for the examined businesses. This strategic exclusion allows for a more focused analysis of capital structure decisions among non-financial corporations, avoiding potential confounding effects that might arise from their inclusion.

Capital structure (debt-to-equity) shows substantial variability in leverage among companies, with a mean of 80.38, suggesting a range from relatively low to highly leveraged companies. ROA has a mean of 5.74%, suggesting moderate profitability across companies. The average profit margin is 12.93%, ranging from -8.90% to 43.75%, reflecting high profitability from some companies.

Firm size varies significantly, with the smallest firm having total assets of PHP 361.333 million and the largest reaching PHP 29,279.90 million. Tangibility reflects differences in companies' assets, with an average of PHP 3,799.80 million and PHP 6,588.22 million for gross fixed assets and market capitalization, respectively.

Growth has a mean of 13.45% for total assets (CAGR Assets) and 15.58% for net fixed assets (CAGR Fix Assets), which show diverse expansion trajectories. Non-debt tax shields indicate a considerable variation across companies, with the minimum depreciation expense being PHP 3.64 million and the maximum is PHP 1,818.80 million. The WACC is averaged at 7.58%, reflecting differences in the cost of capital across firms.

Table 1. *Descriptive Statistics Determinants of Capital Structures of Philippine Publicly Listed Corporations*

Variables	Obs	Mean	Std. dev.	Min	Max
Year	210	2018.5	2.879145	2014	2023
Firm	210	11	6.06977	1	21
Roa	210	5.737027	5.16726	-5.7806	50.2323
Debt-to-Equity	210	80.37656	50.10521	7.7248	273.8971
Total Assets	210	9048.816	7227.179	361.3307	29278.09
Gross Fixed Assets	210	4799.801	4036.899	148.2451	15964.37
Market Capitalization	210	6588.219	5234.431	107.0502	26317.48
CAGR Assets	210	13.44545	25.91613	-12.911	206.0557
CAGR Fix Assets	210	15.58069	38.01875	-62.2728	358.0949
Depreciations	210	229.4788	241.3448	3.6363	1818.802
Profit Margin	210	12.93284	8.280012	-8.9014	43.7526
Tobin's Q Ratio	210	1.707519	1.196479	0.7438	15.7503
WACC	210	7.582156	2.164457	3.1418	14.3093

Means and Standard Deviations (see Appendix B)

In the years 2020 and 2021, enterprises encountered substantial financial and operational challenges due to COVID-19. The debt-to-equity ratio marginally declined from its 2019 apex, indicating that corporations have implemented less aggressive leveraging tactics to reduce risk. Companies tend to sustain or augment fixed assets despite economic challenges, as demonstrated by the progressive increase over the years, rising from PHP 5,061 million in 2019 to PHP 5,720 million in 2021.

Moreover, ROA had a significant decline in 2020, decreasing from 4.99 to 2.89, indicating diminished profitability attributable to asset use and efficiency. By 2021, firms appeared to respond to the comeback, as seen by the higher ROA of 5.54, demonstrating their adaptability in unpredictable economic conditions. Total assets rose to PHP 10,936 million in 2020 and subsequently steadied at PHP 10,920 million the following year.

Market capitalization experienced a modest growth from PHP 7,036 million in 2019 to PHP 7,259 million in 2021, indicating a resurgence of investor confidence attributable to economic measures and favorable conditions for certain industries during the pandemic. In 2020, the profit margin significantly decreased to PHP 9.23 million, potentially due to profitability issues arising from reduced demand, supply chain interruptions, or increased operational costs. However, it increased to PHP 14.1 million the following year, indicating that companies possess a commendable capacity for adaptive recovery through improved operations or the use of cost reduction methods.

Depreciation values demonstrate resilience in their increase during the pandemic, potentially linked to various costs connected with the maintenance and use of fixed assets that continued to represent a financial burden. The compound annual growth rate (CAGR) for total and net fixed assets significantly decreased in 2020, notwithstanding the subsequent recovery in the following year. It may signify the persistence of asset investment and expansion when conditions were normalized for the majority of enterprises.

Determinants of Corporate Capital Structure

Tangibility, which is measured by gross fixed assets, shows a positive yet statistically insignificant

correlation with leverage with a p-value of 0.339 among Philippine firms.

On the other hand, profitability exhibits two significant links with leverage. ROA has a considerable negative correlation with a coefficient of -3.214877, whereas profit margin reveals a positive association of 1.189019, with both having a highly significant p-value of 0.000. The reverse correlation between ROA and leverage may indicate that the higher profit a firm makes, the more preferable it is to utilize internal financing rather than debt, which supports the pecking order theory (Myers, 1984). The positive correlation with profit margin may suggest that profitability promotes the use of debt among firms that have adequate optimism about their future revenues, which may also be caused by the tax advantages that are linked to interest payments (Modigliani & Miller, 1963). The abovementioned outcomes underline a balance between the inclination for internal financing and the strategic use of debt (Berger & Udell, 1995).

Furthermore, firm size shows varied impacts on capital structure measures, which are evidently marked by two metrics—total assets and market capitalization. The results suggest that large firms that acquired a great amount of total assets are less dependent on debt financing, perhaps owing to enhanced access to retained earnings and stock markets (Frank & Goyal, 2009; Meneses & Palo, 2023). This is indicated by a coefficient of 0.002 with a p-value of 0.000. On the other hand, market capitalization exhibits an insignificant result with a p-value higher than the significant threshold of 0.713. Altogether, these validations correspond with other research on capital structure determinants in the Asia-Pacific region, emphasizing the intricate interaction of noticeable financing factors among Philippines enterprises (Deesomsak et al., 2004; Cortez, 2025).

Non-debt tax shields, which are assessed with depreciation, show a significant positive correlation with leverage, indicated by a positive coefficient of 0.140733 and a significant p-value of 0.000. This is an indication of the trade-off theory posited by Modigliani and Miller (1963).

Table 2. *Determinants of Capital Structure of Philippine Publicly Listed Companies, Cross-Section GLS Regression*

Debt-to-Equity	Coefficient	Std. err.	z	P>z	[95% conf.	interval]
Tangibility						
Gross Fixed Assets	0.0016496	0.0017255	0.96	0.339	-0.0017324	0.005032
Profitability						
ROA	-3.214877	0.5872547	-5.47	0.000***	-4.365876	-2.06388
Profit Margin	1.189019	0.3369022	3.53	0.000***	0.528703	1.849335
Firm size						
Total Assets	-0.0020339	0.0005033	-4.04	0.000***	-0.0030203	-0.00105
Market Capitalization	-0.0002417	0.000657	-0.37	0.713	-0.0015294	0.001046
Non-debt tax shield						
Depreciation	0.140733	0.0212034	6.64	0.000***	0.0991752	0.182291
Growth						
CAGR assets	-0.1373772	0.1335927	-1.03	0.304	-0.3992141	0.12446
CAGR Net Fixed Assets	0.2322617	0.0923618	2.51	0.012***	0.051236	0.413288
_cons	61.4546	6.408204	9.59	0.000	48.89475	74.01445

****p<0.001, **p<0.01, *p<0.05*

Similarly, growth appears to have mixed results among its two metrics of CAGR fixed and total assets. A notable and significant positive result is verified by the CAGR fixed assets with a coefficient of 0.2322617 and a significant p-value of 0.012. This is potentially due to the requirements for funding to facilitate development and expansion because tangible assets could function as collateral. On the other hand, the CAGR of total assets is unlikely correlated and signified by a p-value of 0.304, suggesting that growth measurements do not necessarily influence leverage choices.

The constant term (61.4546, $p < 0.000$) signifies the baseline of capital structure, indicating a predisposition towards elevated leverage, which may mirror the features of the Philippines' capital market and its dependence on debt financing. The findings offer empirical validation for both trade-off and pecking order theories regarding capital structure determinants, with specific implications for emerging countries such as the Philippines (Yu & Aquino, 2009; Meneses & Palo, 2023). The findings enhance the current discussion on capital structure in developing markets, emphasizing the intricate relationship between firm-specific elements and overarching market circumstances in influencing financing choices.

Dynamic Panel Estimation

The study finds a mild structural rigidity in the debt-to-equity ratio with the value from the previous year, indicated by a positive coefficient of 0.1686 and a moderate p-value of 0.087. The result implies that corporations implement incremental leverage modifications instead of abrupt changes (Myers & Majluf, 1984; Frank & Goyal, 2009).

Tangibility, as assessed by gross fixed assets, exhibits a negligible positive coefficient of 0.0008 and an insignificant p-value of 0.666. Profitability metrics yield inconclusive outcomes because ROA has a negative coefficient of -0.9484, for which the p-value was 0.074, corroborating the pecking order idea (Myers, 1984). The profit margin shows an insignificant negative impact of coefficient -0.0218 and a high p-value of 0.954; however, total assets reveal a substantial positive correlation of 0.0092 and moderate p-value of 0.036, consistent with the expectations of trade-off theory (Kraus & Litzenberger, 1973).

Market capitalization has an insignificant correlation with a p-value of 0.627, whereas depreciation has a moderate positive correlation with a coefficient of 0.0268 with a p-value of 0.074, thus suggesting complementarity between non-debt tax shields and leverage (DeAngelo & Masulis, 1980).

The CAGR of assets demonstrates a negative correlation of -0.2647 with a significant p-value of 0.001, corroborating the pecking order theory's assertion that growth-oriented firms choose internal financing (Titman & Wessels, 1988). The lagged CAGR of assets has no significant effect, demonstrated by a p-value of 0.377, but the delayed CAGR of net fixed assets reveals a moderately significant positive effect, signaled by a p-value of 0.053.

These findings support both major capital structure theories. The trade-off theory is supported by the positive relationship between firm size and leverage, whereas the pecking order theory is reinforced by the negative associations between profitability, growth, and leverage (Rajan & Zingales, 1995; Ozkan, 2001). The model's overall statistical significance (cons=42.2543, p=0.000) validates the robustness of these relationships in the Philippine context (Yu & Aquino, 2009; Meneses & Palo, 2023).

WACC and Monetary Policy Discussion

The role of financial institutions and policymakers is important in shaping favorable monetary policy and interest rates that are adaptable, especially during capital market unsteadiness. The WACC reflects the average rate of how much firms are expected to pay for their capital structure of both debt and equity. This core aspect is critical when firms need to make investment decisions (Modigliani & Miller, 1958). In practice, it is generally understood to lower WACC as it makes financing cheaper, encouraging to pursue new investments and expand operations.

Government initiatives for policies and guidelines are vital to ensure a stable financial circumstance and to optimize businesses' WACC. These interventions may be performed as fiscal reforms, such as tax reductions, subsidies, and direct financial assistance. These programs could potentially boost firm profitability and reduce perceived risks amongst lenders and investors (Graham, 2000). During uncertainties, governments may frequently undertake initiatives that strengthen vital sectors, mitigating their risk while reducing the cost of equity. Government-backed loans or subsidies for sectors such as manufacturing or technology may reduce firms' reliance on equity financing while

Table 3. *Determinants of Capital Structure of Philippine Publicly Listed Companies, Dynamic Panel Model Estimation of One Year Lag*

Debt-to-Equity	Coefficient	Std. err.	z	P>z	[95% conf.	interval]
Debt-to-Equity						
L1.	0.1686155	0.09868	1.71	0.087	-0.0247883	0.362019
Gross Fixed Assets	0.0008058	0.00187	0.43	0.666	-0.0028514	0.004463
ROA	-0.9454819	0.52842	-1.79	0.074	-1.981168	0.090204
Profit Margin	-0.0218741	0.37776	-0.06	0.954	-0.7622758	0.718528
Total Assets	0.0032269	0.00154	2.1	0.036**	0.0002128	0.006241
Market Capitalization	-0.0003932	0.00081	-0.49	0.627	-0.0019811	0.001195
Depreciation	0.0266324	0.01489	1.79	0.074**	-0.0025499	0.055815
CAGR assets	-0.2645754	0.08321	-3.18	0.001**	-0.4276731	-0.10148
CAGR Net Fixed Assets	0.3487943	0.04878	7.15	0.000***	0.2531888	0.4444
Gross Fixed Assets						
L1.	-0.0004396	0.00212	-0.21	0.836	-0.0045899	0.003711
ROA						
L1.	-0.2490206	0.48188	-0.52	0.605	-1.193494	0.695452
Profit Margin						
L1.	0.050447	0.35913	0.14	0.888	-0.6534426	0.754337
Total Assets						
L1.	-0.0017917	0.00144	-1.25	0.213	-0.0046108	0.001027
Market Capitalization						
L1.	0.0004451	0.00074	0.6	0.548	-0.0010083	0.001899
Depreciation						
L1.	0.0343195	0.01506	2.28	0.023**	0.0047982	0.063841
CAGR Assets						
L1.	-0.0595666	0.06738	-0.88	0.377	-0.1916366	0.072504
CAGR Net Fixed Assets						
L1.	0.095951	0.04954	1.94	0.053	-0.0011366	0.193039
_cons	42.25481	8.27211	5.11	0.000	26.04177	58.46786

****p<0.001, **p<0.01, *p<0.05*

improving their exposure to more accessible lending (Kayhan & Titman, 2007).

Government authorities and regulatory bodies are essential in overseeing and modifying financial regulations to mitigate systemic risks and stabilize markets. By establishing discrete principles designed to promote transparency, mitigate financial risks, and support investors. These entities enhance the security of the investment environment (Ozkan, 2001). Regulatory bodies should modify capital adequacy requirements according to the prevailing circumstances, necessitating that banks retain adequate capital to absorb losses during market disturbances. This could enable banks to sustain lending to enterprises without imposing excessive risk premiums (Rajan & Zingales, 1995).

Public administration and regulatory agencies should formulate methods to enhance equity financing and bolster market stability. Tax incentives for dividends, capital gains, or protections may serve as mechanisms for small investors to increase the attractiveness of stock investments. Consequently, drawing further capital to the stock market (DeAngelo & Masulis, 1980). Additionally, initiatives that encourage foreign direct investment may attract international capital, diversify the investor demographic, stabilize stock valuations, and reduce the volatility of equity expenses. In periods of economic volatility, it is essential to manage the cost of capital and maintain corporate viability through effective collaboration among banks, credit institutions, regulatory bodies, and governments. The central banks of BSP may execute quantitative easing (QE) initiatives by purchasing government assets to inject liquidity into the financial system, hence lowering both short- and long-term interest rates (Fama & French, 2002). This, therefore, lowers borrowing costs and diminishes the component in WACC.

Monetary policies are mostly regulated by a nation's central bank, which is crucial in establishing interest rates that directly affect the WACC for corporations. Central banks often utilize mechanisms including open market operations, reserve requirements, and discount rates to regulate the money supply, hence influencing short-term interest rates (Berger & Udell, 1995). During times of economic uncertainty, central banks sometimes adopt expansionary policies by lowering interest rates to stimulate borrowing and investment. Reduced interest rates diminish the cost of borrowing for companies, hence decreasing their WACC and encouraging investment (Baker & Wurgler, 2002).

During financial recessions, central banks may lower the policy rate to increase liquidity and invigorate economic activity. This drop affects the interest rates offered by commercial banks and credit institutions, hence reducing the interest component of WACC. This strategy gained international recognition as central banks in numerous nations reduced interest rates to near-zero during the 2008 financial crisis and the 2020 COVID-19 pandemic, facilitating more accessible funding for businesses (Cortez & Susanto, 2012). The BSP instituted the Interest Rate Corridor (IRC) mechanism to enhance the transmission of monetary policy and stimulate increased banking operations (BSP, 2022).

Credit institutions such as commercial banks and non-bank lenders naturally affect the cost of capital through their interest rates and assessments of creditworthiness. Amid market fluctuations, they tend to set stricter assessments due to increased potential risks, which could impede firms' capital accessibility and hike their WACC (Frank & Goyal, 2009). If credit institutions adopt a more accommodating approach by relaxing lending criteria or providing flexible terms, they can reduce the WACC for firms, particularly for small and medium enterprises (SMEs) that depend significantly on bank funding (Deesomsak et al., 2004). The BSP's measures to enhance financial inclusion, including the National Strategy for Financial Inclusion (NSFI), may facilitate credit availability for SMEs and perhaps reduce their WACC (BSP, 2024b).

The interaction between WACC and monetary policy highlights the essential function of financial and political institutions in creating a conducive economic environment for enterprises. Banks, credit institutions, legislators, and governments together affect capital costs and market stability through coordinated actions, such as reducing interest rates, sustaining stable credit access, and supporting equity financing via packages of fiscal stimulus (Titman & Wessels, 1988; Myers, 1984). These solutions assist enterprises in sustaining an appropriate financial structure, fostering investment and expansion. The efficacy of these measures depends on synchronized policy responses, customized rules, and adaptable fiscal and monetary policies (Myers & Majluf, 1984). The BSP demonstrates this strategy by employing different monetary policy instruments, including the modification of policy rates and reserve requirements, to ensure price stability and foster

economic growth (BSP, 2023). Institutions have better insights into managing capital market volatility by establishing a financial ecosystem that minimizes firms' exposure to excessive capital costs and market uncertainty through these integrated initiatives. This approach not only benefits small businesses but also enhances the general stability and growth of the economy as a whole.

Management Implications

The results show how pecking order and trade-off theories take shape in Philippine businesses to provide practitioners with a fundamental framework for financial decision-making. The negative relationship between profitability and leverage aligns with the pecking order theory, that is, the more profitable the firms, the higher the chance they prioritize internal financing over debt (Myers & Majluf, 1980). This insight may prompt practitioners to leverage retained earnings to fund growth and expansion, using debt sparingly to avoid high external financing costs. On the contrary, the positive relationship between non-debt tax shields and leverage supports the trade-off theory, indicating that companies with substantial depreciation may still pursue debt financing to make the most of their interest tax benefits (DeAngelo & Masulis, 1980). This perspective may help practitioners ascertain the opportune timing to issue debt to benefit from tax deductions on interest payments, especially in sectors where depreciation on tangible assets is at substantial value.

The negative connection between growth and leverage suggests that growth-oriented businesses have a greater tendency to prioritize internal financing. This observation may be explained by the dynamicity that firms in this period are more beneficial to reinvesting profits instead of increasing leverage. This is particularly relevant for industries with high continued expansion potential where external financing can introduce risks that hinder growth, as exemplified by technology or consumer goods. Practitioners may want to prioritize creativity and perseverance in robust cashflows to support and sustain growth initiatives while mitigating reliance on costly or volatile debt markets. By focusing on organic financial growth through reinvestment, high-growth companies can build resilience while positioning themselves for economically sustainable expansion (Frank & Goyal, 2009).

The inverse dynamic between firm size and leverage signifies a limited reliance on debt for larger firms. This could imply that practitioners of major corporations strategically utilize their scalability in debt negotiations in pursuit of better terms. In addition, they could potentially explore bond markets and equity issuance to reduce dependence on traditional bank loans (Rajan & Zingales, 1995; Titman & Wessels, 1984). By highlighting the strategic value of tangible assets in capital structure decisions, firms in asset-intensive industries should consider leveraging their tangible assets as collateral or negotiate more favorable interest rates due to the reduced risk of accessing lower-cost debt financing with controlled uncertainty (Berger & Udell, 1995).

The beneficial effect of non-debt tax shields on leverage underscores the significance of tax management in capital structure choices. Practitioners must be cognizant of their capital expenditures that produce non-debt tax shields during periods of anticipated high tax liability. This may optimize tax advantages while enhancing after-tax profitability (Graham, 2000). Firms with substantial tax-deductible expenditures might intentionally augment their reliance on debt financing to successfully reduce their overall tax liability.

Recent research has focused on examining two particular categories of debt securities: short-term and long-term debts. The utilization of short-term debt is frequently associated with companies' credit ratings. Higher- and lower-rated enterprises tend to depend more on short-term borrowing compared to middle-rated corporations (Tourville, 1996). Conversely, long-term debt levels seem diminished for companies focused on producing specialized products, whereas they are elevated for those pursuing high-output strategies in very competitive industries (Tourville, 1996). The issuing of convertible debt has been linked to subpar stock performance, which can be assessed using earnings per share (Baker & Wurgler, 2002).

Conclusion

I conclude this study by presenting a distinctive pattern in the emerging market, emphasizing diverse capital structure behavior relative to more mature economies. Philippine firms reflect tendencies that support both pecking order and trade-off theories, influenced by capital market constraints, including

limited accessibility to long-term financing, substantial dependence on debt, and the potential emergence of intangibles in modern way of doing business (Cortez, 2025).

Tangibility tends to be regarded as an inducement of leverage through its function as collateral does not significantly impact the debt decisions of Philippine companies, likely due to a financial landscape in which tangible assets do not ensure more accessible debt financing relative to developed markets.

Profitability shows a negative correlation with leverage, suggesting revenue-generating Philippine firms that prioritize internal financing over external ones, which aligns with the pecking order theory. The decision highlights the significance of preserving earnings in a financial environment where external funding is frequently costly.

Firm size plays a complex role, with larger Philippine companies showing a tendency to rely less on debt financing. Total assets negatively correlate with leverage, contrasting with the trade-off theory's assumption that larger companies are more capable of taking on debt due to stable cash flows and diversified risk profiles.

Non-debt tax shields, represented by depreciation in this study, demonstrate a significant positive relationship with leverage, aligning with the trade-off theory's tax-shielding hypothesis. However, the Philippine context suggests that while companies seek tax savings through debt, this may not be the primary motivation for their capital structure choices.

Growth in fixed assets is positively associated with leverage, implying that Philippine companies often turn to debt to finance expansion initiatives. This behavior illustrates a partial alignment with the trade-off theory and highlights the practical necessity for Philippine companies to utilize debt in financing growth.

By utilizing the Arellano-Bond estimator, the results show Philippine firms adjust their capital structure incrementally rather than performing sudden changes, which is in line with trade-off theory. This incremental adjustment process may point to strategic discipline in capital restructuring, particularly in the context of the volatility of emerging economies and uncertain access to long-term economic finance.

Based on these findings, I propose practical recommendations for financial managers in the Philippines, emphasizing the necessity of understanding the trade-offs between internal and external financing, recognizing market constraints, and aligning growth expectations with prudent debt management. Policymakers have the opportunity to enhance the Philippine financial ecosystem by advocating for policies that facilitate access to long-term finance, reduce dependence on short-term debt, and foster a more resilient capital market.

This research provides significant insights into the discussion of capital structure in developing countries, particularly in the context of the Philippines. This analysis of firm-specific factors and their dynamic impacts on leverage enhances our comprehension of how Philippine firms manage financial constraints and implement capital structure theories in practice. Further studies may expand beyond by examining the impact of macroeconomic variables, particularly interest rate policies and regulatory alterations, on capital structure in the Philippines. This comprehensive viewpoint may assist firms and governments in developing stronger financial strategies for fast-evolving economic landscapes while fostering a sustainable capital structure framework that enables sustainable and resilient growth.

Endnote

[1]Acknowledgement for the research assistance by Spero Galaty and Mochamad Syaafat and grant subsidy from the Center for Inclusive Leadership, Research and Outreach Office, APU.

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Appendix

Appendix A

Philippine Publicly Listed Companies (Non-Bank)

Company Number	Company Name
1	Ayala Corporation
2	Acen Corporation
3	Aboitiz Equity Ventures INC.
4	Ayala Land Inc
5	DMCI Holdings INC.
6	International Container Terminal Services INC.
7	GT Capital Holdings INC.
8	Manila Electric Company
9	LT Group INC
10	PLDT INC
11	San Miguel Food and Beverage INC.
12	Semirara Mining and Power Corporation
13	Universal Robina Corp
14	Alliance Global Group Inc.
15	Emperador Inc.
16	Globe Telecom Inc.
17	Jollibee Foods Corporation
18	JG Summit Holdings Inc.
19	Puregold Price Club INC.
20	SM Investments Corporation
21	SM Prime Holdings Inc.

Appendix B

Means and Standard Deviations Results from 2015 to 2023

	Debt-to-equity		Gross Fixed Assets		ROA		Total Assets		Market Capitalization		Profit Margin		Depreciation		CAGR Assets		CAGR Net Fixed Assets		WACC	
Year	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
2014	63.11607	7.004466	3454.046	718.0097	6.563819	0.843237	6374.211	1147.65	6420.903	882.1793	12.7815	1.505248	150.1384	35.83011	22.44753	8.363712	32.57827	12.24665	5.74611	0.2702277
2015	65.41206	7.611559	3669.065	737.0263	6.293691	0.7711152	6732.763	1180.555	6238.603	907.0988	13.41579	1.980926	156.5613	36.66511	11.88145	2.500538	12.40449	1.574529	7.651105	0.2190673
2016	71.04554	9.553001	3823.852	751.5411	6.551467	0.8798572	7112.075	1250.556	5799.992	975.1025	13.57255	1.671938	172.0353	38.50252	11.60914	2.333482	11.68648	4.805741	7.576076	0.2395285
2017	75.14303	9.130761	4296.45	804.4393	6.098248	0.9514164	7860.256	1348.563	7217.541	1344.634	12.65311	1.68831	205.3317	49.87516	20.04068	9.514201	23.66684	9.980708	6.54139	0.2344278
2018	84.04164	9.245786	4584.991	817.1581	5.227186	0.8133026	8532.889	1478.501	6545.995	1194.636	12.09701	1.76395	213.1814	44.97967	13.21228	3.130003	19.8349	9.403791	6.616376	0.2642127
2019	91.92792	10.881	5061.203	872.7389	4.987481	0.5951739	9684.512	1709.378	7036.11	1458.131	12.04595	1.640714	245.2776	44.50664	15.88519	7.123012	25.57661	16.80897	6.830119	0.3583678
2020	91.39144	11.17058	5545.103	945.6505	2.889848	0.6103783	10936.83	1891.026	7237.314	1453.716	9.234167	1.576332	271.9556	53.32132	15.25186	8.918156	4.944381	3.99726	5.875329	0.2945938
2021	88.15155	13.09502	5720.001	998.3577	5.537157	1.094386	10920.36	1794.145	7259.391	1158	14.10606	1.678714	286.7015	58.75481	7.214019	2.327717	9.182229	3.115829	10.60004	0.4951984
2022	88.53561	14.05652	5826.426	1028.154	7.168929	2.261307	10798.47	1705.715	6132.949	1036.823	15.19145	2.540644	311.7111	85.56345	10.82509	1.823491	7.512295	1.838587	10.37679	0.4140082
2023	85.00077	14.74061	6016.877	1021.728	6.052448	1.398928	11535.8	1831.059	5993.391	1025.555	14.2308	1.875005	281.894	56.89071	6.08731	1.126956	8.420357	2.379454	8.008229	0.31274