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Capital Structure, Industry Differentiation, and Firm Performance

Yifang Xu[1,a,*]

[1]*Department of Management, University of Toronto Mississauga, Mississauga, ON L5L 1C6, Canada*
a. yifang.xu@mail.utoronto.ca
**corresponding author*

Abstract: This study examines the impact of capital structure on firm performance, highlighting industry-specific differences and the influence of economic and regulatory environments. Capital structure, particularly the debt-to-equity (D/E) ratio, plays a critical role in financial management, affecting both profitability and financial risk. The Modigliani-Miller theorem serves as a theoretical foundation, positing that in the absence of taxes, a firm's value is unaffected by its capital structure. However, real-world applications reveal significant variations due to tax considerations, market imperfections, and industry-specific factors. Developed countries, with mature financial markets and stable economic conditions, allow firms to optimize their capital structures using diverse financing instruments. In contrast, firms in developing countries face higher financial risks and rely more on internal and short-term financing due to economic instability, high interest rates, and underdeveloped financial markets. Industry characteristics further influence capital structure; capital-intensive industries often have higher D/E ratios due to the need for significant investment in technology and infrastructure. The study underscores the importance of tailoring capital structure strategies to specific market conditions and industry needs to enhance financial stability and performance. Policymakers and business leaders must navigate these complexities to foster sustainable growth and minimize financial risks.

Keywords: Capital Structure, Industry Differences, Debt-to-Equity Ratio, Financial Leverage

1. Introduction

Warren Buffett refrains from investing in organizations that suffer from excessive debt. Therefore, equity and debt are crucial. Excessive debt is hazardous during periods of corporate downturn. Success necessitates the preservation of a favorable equity balance. The corporation must preserve a favorable debt-to-equity ratio to guarantee long-term profitability and financial stability. The debt-to-equity ratio is frequently employed to evaluate the financial leverage of the company. To ascertain a company's financing, the debt-to-equity ratio compares the total debt to the total equity. The debt-to-equity ratio is also referred to as the financial leverage ratio and the increased debt-to-equity ratio.

Additionally, the tax shield effect generated by debt financing reduces a firm's overall financing costs, as interest charges are tax deductible. On the other hand, equity financing does not entail fixed interest payments, which is why the cost of equity is typically higher than that of debt.

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In terms of corporate risk, a high percentage of debt financing necessitates the company to pay a substantial quantity of interest. This results in an increased financial risk for the organization. The company is at a higher risk of insolvency because it will be required to pay interest, regardless of its growth. In the event of a company's insolvency, shareholders are the last group to receive compensation. Consequently, they resort to egotistical strategies to maximize their profits, including overinvesting and exploiting the strategy. From a corporate leverage perspective, leverage enhances the profitability of a company and increases the potential return on investment or operating activities, thereby increasing shareholder returns. Nevertheless, when the company's cash flow is insufficient to cover interest and principal payments, high leverage entails a greater financial risk, which can potentially increase at any given moment.

Optimal Debt-to-Equity Ratio determination has been a critical concern in corporate financial management. The pursuit of an optimal capital structure, akin to the pursuit of the "Golden Fleece," has captivated the attention of economists and financiers for decades, as Brusov, Filatova, and Orekhova contend [1]. By adjusting the debt-to-equity ratio, it is feasible to augment a company's market capitalization and, consequently, accomplish the primary objectives of corporate management.

2. Theoretical Background

Exploring the theoretical frameworks and concepts that underpin the analysis is essential for establishing a firm foundation for this study. This section will explore the established theories and models that are associated with capital structure.

Initially, the Modigliani-Miller theory establishes a fundamental foundation for comprehending the correlation between a company's capital structure and its overall value. Developed in the 1950s by Merton Miller and Franco Modigliani. The fundamental components of M&M theory can be reduced to two propositions. M&M Proposition 1 emphasizes that the market value of a company is not influenced by its capital structure, which is the ratio of debt to equity, in the absence of taxes. The total market value of a firm remains constant regardless of whether it is financed entirely by equity or a combination of debt and equity. Consequently, there is no optimal debt-to-equity ratio. and the shareholders' demand for return increases in a linear manner as the firm's leverage increases. When a company continues to increase its leverage, it increases its financial risk. Consequently, shareholders will demand a higher rate of return to compensate. M&M Proposition 2 was created to address real-world circumstances more effectively. It posits that a company can enhance its market value by increasing its debt financing in the presence of taxes, as the pre-tax deductibility of the interest on the debt creates a tax shield. A company's shareholders' required rate of return increases less than it would in the absence of taxes when debt is financed.

Nevertheless, the construction of any theory is influenced by certain assumptions, which also tend to impose restrictions on the theory. The M&M theory is founded on the principles of homogeneous expectation, homogeneous risk class, perpetual revenue flow, and perfect capital markets. These idealized assumptions frequently contradict actual circumstances. For instance, the traditional Modigliani-Miller theory presupposes that debt is risk-free, meaning that the interest rate on the debt is fixed and constant, and the firm will not default.

However, this presumption is not based on reality. In reality, debt is a hazardous investment, as the interest rates fluctuate to the firm's financial position and market conditions. Additionally, the risk of default is actual. According to Brusov, Filatova, and Orekhova, the weighted average cost of capital (WACC) consistently decreases as leverage increases or decreases in the Modigliani-Miller theory, which permits hazardous debt capital [1]. Breuer and Gürtler note that the M&M hypothesis ignores capital market shortcomings [2]. The authors attack the M&M assumptions for assuming the "same risk level," which is not always true [2]. Because people and companies borrow at different market

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interest rates. Despite M&M theory's theoretical achievements, these complaints show its limited practical applicability.

3. Capital Structure in Different Industries

Following the Modigliani-Miller theory, which underpins capital structure analysis, industry-specific details can greatly impact a company's D/E ratio. Understanding this complexity is necessary for a complete inquiry. Therefore, studying how sectors have changed their capital structures can reveal the factors that affect their debt/equity ratios.

3.1. Capital-Intensive Industries

Capital-intensive industries have the following characteristics: high financial risk, technological complexity, a long period of investment recovery, and high fixed costs. To sum up, capital becomes a strategically committed factor. It is necessary for an industry of scale that relies on vast-scale investments in the purchase of equipment, in maintenance, and primarily, in technological updates. These are fixed costs that can hardly be reduced over a short-term period, underlining, in this sense, the industry's commitment to long-term expenditures and investments. The need for investment is also underlined by the long payback periods, representative of capital-intensive operations, which last several years, in general, to consolidate on the market and depreciate the equipment. Capital-intensive industries, however, are exposed to a financial risk directly proportional to their innovation potential, concerning the sensitivity that technology presents in light of market and demand fluctuations.

3.1.1. Real Estate (China Real Estate Industry Crisis)

The financial management and regulatory enforcement of giant developers in China have been under pressure. This further shows that the industry has huge, fixed costs that have to be paid, considering that it pertains to meeting regulatory compliance, site acquisition, and construction. The government revamped its efforts to curb critical debt problems through the "three red lines" initiative, thus deepening the recession for developers who are already overleveraged by making it harder for them to find new financing. Companies like Evergrande have a liquidity crisis due to their huge debts and incapability to quickly discharge their properties [3]. A quick and volatile market and firm governmental regulations did not allow the long-term return from the sector to grow, reducing the level of profitability and cooling down new projects and sales. This crisis indicated that the financial stability of the real estate business depends on an appropriate proportion of operating cash flow and debt [4].

3.1.2. Manufacturing

Expensive apparatus, technology, and infrastructure are utilized in the manufacturing process. High fixed costs are prevalent in the industry due to the necessity for companies to invest in state-of-the-art technology and equipment to remain competitive. Financial difficulties arise as a result of extended payback periods and frequent enhancements. The production line and R&D expenditures of the automobile and electronics manufacturing industries necessitate substantial capital expenditures [5]. A decline in demand could result in the underutilization of capital assets and a decline in profitability, which also poses a significant financial risk for the industry. To ensure long-term stability and growth, manufacturing organizations must maintain a balance between leveraged debt and cash flow to finance these essential expenditures and mitigate excessive financial risk [6].

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3.1.3. Oil and Gas Companies

Filimonova, Komarova, and Chebotareva found various funding options for Russian oil and gas businesses [6]. Novatek uses over 80% of its funds for operations, whereas Rosneft uses over 70% of borrowed capital. The authors advise oil and gas companies to consider company size, return on equity, and worldwide markets when building their capital structures. The larger businesses, like Rosneft, borrow funds and supply a high percentage of their products to worldwide markets, along with government backing and a concentration on peripheral and Arctic extraction.

Equitable capital (approximately 70% of the capital structure) should be used if the largest companies have domestic fields and have not entered the shelf area or areas where extraction is difficult, have low returns, and focus on international market supply. Medium-sized enterprises prioritize international market supply, offshore operations, and return on equity. The continental shelf corporation with a high return should prioritize equity capital. Conversely, if the company exploits fields in several Russian areas and has a balanced supply structure on international and local markets, it should seek a more balanced capital structure when selecting financing sources.

3.1.4. Telecommunication Industry

Fauzi et al. found that the capital-intensive telecommunications business must choose between equity and bond financing [7]. Equity financing may increase shareholder equity but decrease shareholder ownership, they say. Bond financing, while providing a steady source of money, may increase the firm's financial leverage ratio and debt servicing risk. Thus, while choosing a capital structure, a firm must carefully weigh the pros and cons of these two financing techniques to make the best choice for its financial status, stage of development, and market conditions. In their study, Fauzi et al. found a link between capital structure and firm performance [7]. The study found a negative link between capital structure and company performance in Nigeria, Vietnam, Romania, India, Malaysia, and Jordan. However, research in East Africa and Germany showed a favourable association. The capital-intensive and leveraged telecommunications industry highlights the importance of capital structure. This matches Getzman et al. and Dorselaer and Breazeale [3, 8]. Thus, capital structure's impact on business performance must be considered in D/E ratio analysis to better understand and manage capital-intensive industries' finances.

3.2. Labor-Intensive Industries

Labor-intensive companies need a large workforce to produce or provide services. They use less equipment and automation technologies than capital-intensive sectors, resulting in lesser automation. The concentration is on human resources, and starting and maintaining operations requires little cash. These companies have low fixed costs but high variable costs, especially labor expenses, which rise with production. In recent years, hospitality firms have been transitioning to a business model that is more expense-driven, which is referred to as an asset-light and expense-oriented strategy (ALFO) in Li, Yuan, and Manisha's study [9]. This strategy has become increasingly prevalent. The capital structure decisions of a company are significantly influenced by debt and equity financing. Despite the potential to increase firm profitability and reduce the cost of capital through the interest tax shield, research has demonstrated that excessive debt financing has also resulted in the bankruptcy of numerous hospitality industry firms [10].

Additionally, researchers have investigated the significance of capital structure decisions in the hospitality sector. Although the short-term and long-term debt behavior of hospitality and manufacturing firms is influenced by traditional leverage determinants, Tang and Jang found that certain determinants (e.g., earnings volatility and firm size) only affect the long-term debt use of software firms, but not of lodging industry firms [11]. According to trade-off and agency cost theories,

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debt is a crucial portion of a firm's capital and is expected to improve performance, especially for highly profitable enterprises, as She, Rui, and Guo found [12]. However, excessive leverage may hurt firms. The theory of preferred financing holds that debt is not the best capital financing option for companies with large retained earnings. This may indicate a negative relationship between capital structure and firm performance [5].

In labor-intensive retail enterprises, these theories are important. Retail enterprises, which rely on many people, use non-physical storefronts, outsourced warehousing and shipping, and electronic payment methods [4]. The capital structure selection procedure is crucial for retail companies. E-commerce businesses like Amazon can use moderate debt funding to expand and invest in technology due to their large market share and efficient operations. However, if the organization relies too much on debt funding, market volatility or economic uncertainty may threaten its financial stability. Thus, to ensure long-term continuous growth, a retail firm should examine its profitability, market position, and operational risks when choosing a debt-to-equity financing ratio.

4. Capital Structure in Different Markets

These differences in capital structure arise from differences in the regulatory environments, economic stability, and financial markets across developed countries.

4.1. Developed Countries

Developed countries' corporations have better access to the capital market and will make the best use of both debt and equity financing. The financial instruments and institutions in these countries become so developed that companies can optimize their capital structure. US and German corporations may issue bonds, equities, or sophisticated financial derivatives. It is more appealing for enterprises to enter the capital market in these countries, which is more stable and predictable compared to developing countries, so debt financing is also considered relatively safe [1]. The United States corporations can, at the same time, custom-make their financing strategy, with diverse financial instruments - from corporate bonds, convertible securities, to derivatives, and the very efficient stock markets. Corporate America can access large pools of capital at low cost through the depth and liquidity of U.S. capital markets. This provides the right environment for enterprises to optimize debt and equity and to balance their capital structures to minimize capital costs and maximize shareholder return [1].

4.2. Developing Countries

However, some constraints influence capital structure decisions for enterprises that are from developing countries. Such issues include economic and political turbulence, lack of long-term finance, increased interest rates, and less developed financial markets. Problems like these therefore make enterprises from developing countries rely more on internal financing or short-term loans. For example, the study by Fauzi et al. found that enterprises in Nigeria, Vietnam, and Malaysia lack a proper mechanism to access long-term finance; instead, they rely on short-term finances which increase the risks and instability of the business [7]. Corporations have difficulty in preparing long-term financial strategies due to regulatory and political instability [7]. The Nigerian financial market is very volatile and less liquid, and therefore, it is very hard for Nigerian firms to raise funds from long-term sources. The increased borrowing cost, because of increased interest rates, has left no other option than using equity financing or short-term loans, which are riskier.

Although the financial market is relatively young, Vietnam developed quickly due to economic reforms. Vietnamese organizations face difficulties in fulfilling capital market transactions because of high financial underdeveloped market conditions and strict regulations, and this further increases

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an organization's financial risk in significant difficulties in balancing capital structure [7]. The banking sector is, albeit, on the rise, yet underdeveloped compared to other developed economies; therefore, organizations are forced to rely on short-run, high-interest loans.

4.3. Comparison Among Developing Countries

Emerging nations also exhibit diverse capital structures. This variation is influenced by a variety of factors, including economic policies, market trends, and industry features.

Governmental constraints and financial market instability are encountered by Indian and Chinese enterprises. Large Chinese companies, particularly those engaged in manufacturing and real estate, have been able to accumulate substantial amounts of debt as a result of government assistance and substantial economic expansion. For example, the real estate sector in China has been permitted to borrow extensively due to economic development regulations. Nevertheless, this has resulted in a real estate crisis and increased financial risk [13].

To mitigate the risks associated with high interest rates and economic volatility, East African enterprises prioritize maintaining modest leverage ratios [14]. The capital structures of African enterprises are influenced by political instability and underdeveloped financial markets. Firms utilize internal funding and stock more frequently due to the high cost of external borrowing.

According to Fauzi et al., the telecommunications industry in impoverished countries encounters unique challenges. Massive investments in infrastructure are required by capital-intensive industries. Nevertheless, enterprises face a challenge in obtaining long-term funding at acceptable interest rates due to the absence of developed financial markets. Financial risk is elevated by an excessive dependence on short-term debt. The performance of the telecommunications industry in Nigeria and Vietnam is negatively correlated with its business capital structure as a result of financial constraints [15].

Enterprises in developed and developing countries possess distinct capital structures as a result of regulatory administrations, economic stability, and financial market access. Capital structure in developing countries relies very heavily on internal and short-term borrowings. In contrast, financing employed by developed countries is a complex structure in which several avenues are open for finance. Regional disparity plays a huge role in the capital structure of emerging countries.

5. Conclusion

Organizations, therefore, make such arduous and crucial decisions on the kind of ratios of debt to equity to adopt. The impact of the financial markets, economic stability, and level of regulation of a country determine to a large extent a business's capital structure. This is therefore the case for both developed and emerging countries.

Industrialized enterprises can, through a wide array of financing instruments and intricate financial institutions, work with both debt and equity so that costs are reduced and value is maximized for their shareholders by going for the optimal capital structure. Enterprises in developing countries are compelled due to economic uncertainty, higher rates of interest, and weak financial markets to rely on internal financing and short-term debt.

What is more, industry impacts the D/E ratios, whereby capital-intensive industries involve a high level of debt to subsume the high fixed costs, and on the other hand, the labor-intensive business requires equity. Capital structure has been impacted by a variety of factors as testified by case studies from the energy and gas industry of Russia and real estate, and the manufacturing industries of China.

Policymakers and business leaders must be capable of understanding such nuances and the peculiar challenges confronting organizations in other sectors and regions. Companies' capital structure

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policies should be market-condition specific, and this could potentially help improve financial stability, risks, and growth.

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