

A Study of the Relationship Between Capital Structure and Corporate Performance

Kaiyuan Deng^{1,a,*}

¹Department of Finance, The University of Melbourne, Parkville, VIC 3052, Australia
a. kaideng@student.unimelb.edu.au

*corresponding author

Abstract: This study examines the impact of capital structure on the corporate performance. The findings on different industries like capital-intensive, labor-intensive, and technology and healthcare indicate that low leverage companies operate with greater capital flexibility and with reduced financial risk, but their ability to grow and expand will be constrained by a lack of sufficient funding. Highly leveraged businesses use money more efficiently, but they also carry a larger financial risk. The capital structures of the technological and medical sectors change at different phases. Typically, this innovative industry's substantial capital investment carries a considerable danger of financial strain in addition to the possibility for large reward. For different markets, developed countries' capital structures and impact are like those of low-leverage businesses, whereas developing countries' capital structures and impact are like those of highly leveraged sectors. Furthermore, it examines China and Vietnam among developing countries, considering their distinct features within the same market. China and emerging nations have comparable traits, but Vietnam depends more on retained earnings for development like developed countries, which reduces financial strain and risk but has an impact on the growth and development of businesses.

Keywords: Capital Structure, Firm Performance, Different Industries, Different Markets.

1. Introduction

In contemporary economy, the corporate sector plays a crucial role in particularly important role in economic growth through increased investment and transactions, innovative technology, and job creation. Thus, ensuring business performance is the key to economic growth. The corporate performance of is affected by its capital structure, which is an important variable, that is, the way in which its assets are financed by some combination of equity, debt, and mixed securities [1]. However, selecting an adequate capital structure to help the business achieve the intended performance is a challenging task, since the business must also determine if the capital can be used efficiently and identify the right source of funding. Due to insufficient capital structure, an excessive number of enterprises experience losses or bankruptcy. For instance, financial scandals and a highly leveraged capital structure caused the German industrial giant Siemens to incur large losses. This ultimately resulted in the arrest of some senior officials at the time, and the business was put under a great deal of financial and legal pressure. Whereas, a lot of businesses, like Amazon, have prospered with highly leveraged capital structures. Their combination of a highly leveraged capital structure and business strategy has allowed them to sustain steady, long-term growth in a fiercely competitive industry. In

addition, there are also many companies with little or no equity financing, which can be understood as low-leverage companies, and have achieved considerable success, such as Huawei, which is a private company and its equity is mainly held by its founders and employees, rather than a publicly traded company. Although Huawei supported its development through a small amount of venture capital in the early days of its establishment, it did not undertake large-scale equity financing, but supported its business development through its own funds and sustained profits. This indicates that capital structure is like a puzzle, which is such complicated that different industries in which the company is located must be taken into consideration when analyzing the effect of capital structure on the performance of the enterprise [2]. It might be a labor-intensive sector with low leverage, a capital-intensive sector with high leverage, or the technology and healthcare sector through innovation to grow. Moreover, consideration should be given to various markets. Businesses that are situated in various countries may be found in developed countries that tend to be capital-intensive or in developing countries that are more likely to be debt intensive.

In summary, the capital structure of a corporate has an impact on its performance. But capital structure is a complicated variable that varies among industries and markets. This study specifically addresses this issue.

2. Capital Structure in Different Industries

2.1. Capital-Intensive Industries

As a capital-intensive industry, real estate industry is one of the most representative industries. Firstly, companies with high levels of leverage are more dependent on debt to fund their assets and activities, which puts them at more risk financially. Because businesses need greater returns and performance to offset the risks, managing these risks is essential to their success. According to Sarajoti and Sahin's analysis of leveraged portfolio performance, highest leveraged portfolio did not make up for the risks that investors assumed [3]. Hence, capital structure management and balancing the leverage-based portfolios are essential to corporate performance. A suitable debt ratio may lower financial risks and boost corporate performance. According to Ioana's paper, less than 66% is the ideal range for the total debt ratio [4]. The likelihood of bankruptcy and the company's financial autonomy are inversely correlated with the ratio. Secondly, the corporate performance in high leveraged industry is sensitive to market fluctuations, including macroeconomic factors, policies and regulations, market supply and demand. The operations and profitability of businesses can be significantly impacted by this uncertainty and volatility, particularly highly indebted businesses that must respond to market fluctuations with more caution. For example, according to Sarajoti & Sahin's study, highly leveraged real estate corporations would be disproportionately affected by the financial crisis-induced tightening of credit markets, which might result in financial difficulty or even insolvency [3]. Real estate industries are finding it more expensive to refinance or roll over their debt. During the crisis, investor attitude changed, leading to increased risk aversion and skepticism about highly leveraged investment vehicles. It may lead to financial difficulties and a decline in performance.

Furthermore, manufacturing industry is another one representative high leveraged industry. Corporate performance and the manufacturing industry's highly leveraged financial structure are strongly and positive associated. According to Stoiljković et al.'s paper, leverage functions as a disciplinary mechanism in minimizing the agency costs of outside equity, shareholders work in the owners' best interests to gain returns beyond the needed amount [5]. The existence of debt in the capital structure can serve as an incentive for management. Additionally, leverage function is reflected in capital investment efficiency, highly leveraged businesses typically rely more on outside funding for investment and expansion. More production capacity and market share can result in increased sales and profit margins for these businesses. When it comes to market competitiveness,

borrowing to finance growth may help businesses introduce new goods and enter new markets more quickly. This can boost business competitiveness and ultimately lead to improved corporate performance. However, Stoiljković et al. constructed a nonlinear model specification and discovered that, at high leverage levels, the link between capital structure and company efficiency is non-monotonic, or it can turn negative [5]. Since businesses with high levels of leverage are subject to increased financial risk and interest costs. Their solvency may be impacted by market swings or economic recessions, which will have a detrimental effect on performance.

The correlation between high leverage and corporate performance is non-monotonic, which can be attributed to factors such as return on investment efficiency, debt risk, and market volatility. For highly leveraged companies, how to manage risks and control leverage ratio is the key to ensuring corporate performance.

2.2. Labor-Intensive Industries

In different industries, there are also low-leverage industries in addition to high-leverage industries. As a representative of the low leverage industry is the retail industry. As a low-leverage industry, retail industry's positive impact on corporate performance is usually reflected in financial stability. Low-leverage retail businesses often have lower debt levels, which might make them more resilient during unstable economic times. The ongoing operations and expansion of the business are facilitated by this type of financial stability, and the business's performance benefits from this as well. Csamspees, Gonzalez, and Molina have noted that since corporations raise equity funds without paying interest on those funds, a substantial portion of the equity in funds raised by the organization helps save money on interest payments [6]. Furthermore, low-risk external funding or debt financing is necessary to support the organization's financial health because equity stockholders are the company's owners and are exempt from repaying the cash. The flexibility of finances is another indicator of the low-leverage retail industry's beneficial performance on businesses. Retail businesses with low leverage typically have larger cash reserves and may find it simpler to get funding. Financial flexibility of this sort may enhance company performance and help businesses adapt more effectively to changes in the market and emergency scenarios. The perspective of Eshna's paper, who underlined that paying dividends would result in a drop in retained earnings, which would impact liquidity [7]. Low-leverage sectors are more financially stable because they often have stronger credit records, require less capital to pay interest and principal on loans, and experience less financial stress. They are therefore more likely to receive favorable lending conditions. However, the retail industry, being low leverage, also has some detrimental implications on business performance, which are evident in investment limitations. Low leverage could make it more difficult for businesses to expand and make significant investments. Businesses may not be able to take full advantage of market possibilities owing to inadequate financial backing, which has an impact on the expansion and development of businesses. According to Muhammed Jadheer, the lack of activities and control between low-leverage enterprises and organizations leads to more opportunities and performance decline [6]. On the other hand, Karmazin and Bondar's research also believed that when the market interest rate is low, the cost of equity is higher than that of debt, which reduces the actual profits of enterprises [6]. This suggests that low-leverage businesses may find it difficult to implement the essential product innovation or scale upgrade in the fiercely competitive retail market owing to a lack of funding, which would put them at a competitive disadvantage.

Low-leverage businesses thus impact corporate performance in both good and bad ways in the retail sector. From the standpoint of cash reserves, they provide the business with stability and financial flexibility, both of which can enhance corporate performance. Regarding investment limitations, the absence of substantial funding and the capacity to grow creates a competitive disadvantage that might lower performance.

2.3. Technology & Healthcare

The technology and healthcare sectors are worth considering in relation to several industries. In general, the medical and technological sectors are known for their expensive research and development fee. Most high-tech businesses do not have very leveraged financial structures. According to Hogan and Hutson's survey, high-tech businesses are hesitant to forgo financial rewards to accomplish these objectives [8]. It shows why using debt rather than equity and internal funding instead of external funding is preferred. High-tech businesses often don't have very leveraged capital structures, but they nevertheless need a lot of money up front to fund their research. Hogan and Hutson pointed out that high-tech companies often demand more money and have longer product lead times compared to low-tech enterprises [8]. Consequently, to finance in the early stages, the high-tech business must expand leverage. Due to its ability to address these information asymmetries, venture capital and angel financing—forms of private equity—may be the most suited source of outside funding [8]. The capital structure features of the medical business are similar to those of the science and technology sectors in that they both have high market values, require substantial funding to continue research and development, initially finance through leverage, and have relatively low total leverage in later years. The Riyandi and Riyanto's findings indicate that the average percentage and makeup of the capital structure of healthcare issuers in the healthcare industry listed by IDX between 2017 and 2019 are mostly made up of their own capital [9]. The fact that R&D and innovation are typically funded by substantial sums of money indicates the beneficial effects of the capital structure of the research, technology, and medical industries on company performance. As a result, businesses may improve their capacity for innovation and foster the creation of new goods and technologies with the support of a modest capital structure, which will increase their performance in the market and competitiveness. Furthermore, there is a lot of room for growth in the technology and medical industries today, and both sectors might grow quickly because of the advancement of technology and the growing awareness of health issues.

According to Ravšelj and Aristovnik's descriptive statistics compiled by worldwide research organizations between 2015 and 2017, the profitability of these businesses is comparatively high when measured against their present operational performance [10]. This further demonstrates how businesses in the technology and medical sectors may increase the size of their investments, better grasp market possibilities, and achieve both company and profit development with the right capital structure and prudent use of leverage. Ravšelj and Aristovnik argued that investments in R&D have an adverse effect on operational performance in the now and an advantageous effect on operating performance in the future [10]. Because not enough profit is made to offset R&D investment, R&D spending initially has a negative effect on operating performance. This demonstrates the considerable risk and unpredictability that the technology and healthcare sectors usually encounter, as well as the possibility that they won't be able to make money until a product is released onto the market. Leverage may exacerbate financial strain, making it more difficult for businesses to pay off debt and continue operating daily. Overleveraging may make a company's risks worse and put it in danger of severe financial hardship if the market shifts or the project fails.

In summary, the technology and healthcare sectors have a capital structure that is generally positive about corporate performance, and if businesses are properly funded and leverage is utilized, they have enormous expansion potential. Otherwise, excessive leverage combined with a capital structure that demands a lot of financial support would hinder business performance.

3. Capital Structure in Different Markets

3.1. Comparison Between Developed and Developing Countries

The effect of capital structure on the performance of a corporation may also be examined in terms of distinct markets, like developed and developing nations. As developing countries are more likely to use highly leveraged financial structures, or equity financing. Zeitun and Tian stated that given the undeveloped and stagnant bond and mutual fund markets in emerging nations like Jordan and others, commercial banks are crucial to the lending process [11]. Businesses' capital structures contain a greater amount of debt because of bankruptcy cost risk. This demonstrates that, businesses prefer debt financing in developing nations due to the generally less developed capital markets, restricted listing financing channels, relatively easy access to bank loans, and generally unstable financial and economic environments in developing nations when compared to developed nations. According to Zeitun and Tian's model, there is a negative relationship between growth and leverage, and a positive relationship between risk and leverage [11]. Therefore, debt financing typically has a lower cost, which has a positive impact on the performance of developing countries. However, debt financing can also put more pressure on businesses to repay their debts, especially in the event of rising interest rates or poor performance, which could jeopardize the businesses' ability to do so and negatively impact their financial stability and performance. Furthermore, debt financing raises an organization's financial risk. Businesses may have operational issues or even insolvency if the market climate shifts or there are financial challenges. Companies in developed countries tend to have more diversified capital structures, better capital markets and financial systems, and more flexibility to choose financing methods that suit their own development. Kijkasiwat et al. argued that financial leverage is found to have a strong negative correlation with ROA when leverage is employed as an independent variable in the context of developed economies [12]. The performance of the company will decline as financial leverage rises. Developed countries typically have little trouble securing enough capital through equity financing and other channels to support R&D, corporate expansion, innovation, and other endeavors that yield a larger return on investment and boost the company's profitability and competitiveness. But in advanced economies, the cost of debt and equity financing is typically higher, particularly when there are higher risks or interest rates. Businesses may also have to pay higher financing costs, and their profitability may be impacted by power imbalances and shareholder conflicts. Strong corporate management can lessen the likelihood that a business will encounter problems in the event of a financial crisis or conflict of interest [12].

In summary, among developed and developing countries, developing countries have the advantage of low financing costs while experiencing financial pressures. Developed countries have high flexibility but also need to be careful of risks and conflicts of interest, which can have different effects on company performance.

3.2. Comparison Among Developing Countries

Moreover, China and Vietnam are two examples of typical contrasts, which have particularities on capital structures as developing countries. China's capital structure is similar as a developing nation since many Chinese businesses often have a high-leverage capital structure, or one with a comparatively high percentage of debt. Due to the comparatively late emergence of China's financial system, enterprises' access to equity financing is somewhat restricted. Based on observations of Chinese listed companies, debt financing is less expensive than equity financing, and when financial leverage increases, ROE significantly improves [13]. This is due to the possibility that larger leverage would result in more money available for expansion and investment, which will foster the growth and development of the company. Furthermore, debt financing often has lower costs than equity financing,

which can minimize an enterprise's capital costs and improve business performance overall. However, China's capital structure has the same detrimental effects on corporate performance as those of most developing countries. High leverage can also raise an enterprise's financial risk, particularly in the event of economic instability or intense industry competition. A high debt load can result in reduced solvency and even an increased risk of bankruptcy. Vietnam is a developing country whose capital structure is distinguished by a comparatively low leverage ratio, and it has recently been recognized as a market with strong development potential. Businesses in Vietnam often rely on retained earnings or their own cash and may choose to use a relatively low-leverage capital structure. According to Nguyen and Nguyen's research, there is a favorable correlation between financial leverage and total company performance for businesses that operate in developed countries [14]. Companies with large debt ratios may turn out to be inefficient businesses, especially in developing nations like Vietnam where it is difficult to control the post-loan operations of commercial banks. Vietnam is a developing nation, therefore its capital structure benefits business performance. A lower leverage ratio can minimize an organization's financial risk, ease the burden of repaying debt, and support the long-term stability and sustainability of the business. Furthermore, decreased debt levels might cut an organization's cost of capital. On the other hand, an excessive dependence on internal funds or retained earnings may impede an organization's capacity to expand and make investments, leading to a deceleration in growth. Moreover, businesses could pass up some investment opportunities when the cost of financing is lower due to the comparatively low leverage ratio.

In summary, China and Vietnam are the two developing countries with distinctive capital structures. High leverage lowers financing costs but also carries risks, as seen in China and most other developing nations. Vietnam is a developing nation that depends increasingly on retained earnings for growth, which lowers risk but restricts businesses' capacity to grow and invest.

4. Conclusion

In conclusion, capital structure may be seen from the viewpoint of different markets and industries when analyzing impact of corporate performance. For highly leveraged businesses such as the real estate and manufacturing industry, developing countries, and China, often improve corporate performance in many industries by increasing capital usage and lower financing costs, but it may increase financial stress and risk. For low-leverage firms such as the retail industry, developed countries, and Vietnam, the positive impact on corporate performance is usually lower risk and high flexibility, while the negative impact is limited capital and limited scale expansion and business growth. For technology and healthcare industry, large investments in R&D and technological innovation typically have a positive effect on corporate performance by providing the necessary financial support for the business to foster growth and innovation. On the other hand, large capital investments can have a negative impact due to the pressure and risk they entail. The impact of capital is that structure on corporate performance is a complicated decision-making process. different markets and sectors must be considered while analyzing the impact since their financial structures differ. Additionally, various firms have distinct financial demands and are at different levels of leverage in the capital structure. Examples of these areas include technology and healthcare. Therefore, the impact of these distinctive capital structure on corporate performance will vary.

References

- [1] Singh, A. K., & Bansal, P. (2016). *Impact of financial leverage on firm's performance and valuation: A panel data analysis*. *Indian Journal of Accounting*, 48(2), 73-80.
- [2] Myers, S. C. (1984). *The capital structure puzzle*. *The Journal of the American Finance Association*, 39(3), 574–592.

- [3] Sarajoti, P., & Sahin, O. F. (2023). REIT Leverage Puzzle. *Journal of Accounting & Finance* (2158-3625), 23(5), 143–155.
- [4] Ioana, C. (Timofei). (2020). *Capital Structure and Financial Performance. A Study on Real Estate Sector in Romania. Annals of the University of Oradea, Economic Science Series*, 29, 199–208.
- [5] Stoiljković, A., Tomić, S., Leković, B., Uzelac, O., & Čurčić, N. (2024). The impact of capital structure on the performance of Serbian manufacturing Companies: Application of Agency Cost Theory. *Sustainability*, 16(2), 869.
- [6] Muhammed Jadheer, T. C. (2020). *Evaluation of the Impact of Capital Structure Choice on the Firm's Performance: A Case of Retail Sector in India, National College of Ireland*.
- [7] Usoro, N. J. (2022). *Relationship between Capital Structure and Financial Performance of US Retail Bank*, Walden University.
- [8] Hogan, T., & Hutson, E. (2005). Capital structure in new technology-based firms: Evidence from the Irish software sector. *Global Finance Journal*, 15(3), 369-387.
- [9] Riyandi, T., & Riyanto, S. (2022). Capital Structure Analysis in Healthcare Issuers in the DES Category for 2017-2019. *Interdisciplinary Social Studies*, 1(10), 1270-1286.
- [10] Ravšelj, D., & Aristovnik, A. (2020). The Impact of R&D expenditures on corporate performance: evidence from slovenian and world R&D companies. *Sustainability*, 12(5), 1943.
- [11] Zeitun, R., & Tian, G. G. (2014). Capital structure and corporate performance: evidence from Jordan. *Australasian Accounting Business & Finance Journal*, Forthcoming.
- [12] Kijkasiwat, P., Hussain, A., & Mumtaz, A. (2022). Corporate Governance, Firm Performance and Financial Leverage across Developed and Emerging Economies. *Risks*, 10(10), 185.
- [13] Al-Duais, F. (2016). An Empirical Study on Capital Structure and Corporate Performance of Chinese Listed Companies. *Journal of Commerce & Accounting Research*, 5(3).
- [14] Nguyen, H. G., & Nguyen, A. H. (2020). The Impact of Capital Structure on Firm Performance: Evidence from Vietnam. *Journal of Asian Finance, Economics, and Business*, 7(4), 97–105.