

HOW DO INTEREST RATE CHANGES INFLUENCE CAPITAL STRUCTURE DECISIONS AMONG SMES IN THE TECHNOLOGY SECTOR IN THE INDIAN ECONOMY?

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Abstract

The purpose of this study is to determine the impact of interest rate changes on the capital structure decisions of the SMEs in the Indian technology sector. SMEs play a crucial role in the India as they help in creating employment opportunities, innovations and creating value to the economy. However, the sources of funds that include debts as well as equities are very much vulnerable to macros especially the interest rates. This paper also looks at the theoretical frameworks such as the trade-off theory of capital structure and internal factors such as firm size, profitability, and managerial characteristics and external factors such as technological advancement and market fluctuations. It also defines the way of changes in rates of interest on the funding cost for SMEs, cash flow, credit customer or debts. Other factors that are also referred to as names include the government policy and cost of capital as among the major factors that affect the capital structure of SME's. In this way, the research offers an insight into the financial risk management and capital structure of the Indian tech SMEs in a volatile environment.

Keywords: Interest rates, capital structure, SMEs, trade-off theory, financial risk, cash flow management, debt-equity financing, tech industry.

INTRODUCTION

Since the liberalization policy in the early 1990's the IT industry in India has played a major role in the growth of the economy and development of new technology. SMEs are a fundamental part of this sector, and therefore, it is crucial to know how changes in the interest rates affect their capital structure. SMEs have major share in the economy through employment opportunities as well as creating economic values. They form an important source of growth in numerous countries as has been dubbed by Boocock and Shariff (2005). Over the last five years, there are indications of growth with annual compound rate of about 4.5% in the sized SME sector in India in the last one decade. The 2014 economic survey reveals that there are about 48 million SMEs out of which 90 percent constitute the industrial setting of the country.

The IT and BPM industries are the key drivers of the country's economic growth that enhanced the GDP and social utility. The IT sector has in FY 23 contributed 7.5% to the national GDP, and the estimates depict that the contribution would be 10% in 2025.

In the recent past, there has been growth and maturity of the Indian ST industry involving SME companies as key players.

Given such a dynamic and highly competitive environment, the SMEs' capital structure is essential to secure the funds to finance existing operations and future growth and investment in technology and expansion. Interest rate remains a major influence on capital structure in SMEs due to movement in the rate.

This study is an empirical study that seeks to examine the effect of interest rates on the capital structure of tech-based SME's in India and their problems and prospects in managing their financial risks owing to fluctuating interest rates environment.

By focusing on this critical aspect, we can gain valuable insights into SMEs' financial decision-making process and contribute to a broader understanding of how macroeconomic factors influence the financial landscape of the Indian technology industry.

In this analysis, I will explore the impact of interest rate changes on the financial framework of SMEs operating within the Indian tech industry.

This study seeks to examine the effect of interest rates on capital structure of SMEs and has the potential to support business decisions so as to formulate good strategies. SMEs may be categorized according to the annual turnover, total assets or by the number of employees but each category has its unique cut off point per country. At other times, the type of business that the operating company is in is also taken into consideration.

The paper brings out the pattern in capital structure determination and discusses different theories on capital structure prevalent in Indian SMEs. For that as well, it examines the effect of change in interest rates on capital structure with a focus on technological industries.

This means that costs of debt which are an important determinant of the capital structure of companies are determined by interest rates. There are two ways through which businesses can raise funds for their activities, that is thru the use of debt Securities or equity securities. Equity financing is the process of seeking funds from the investors such as shareholders in exchange for an equity share while debt financing means borrowing of money. Some of the typical avenues to obtain funds through the debt include; loans from the bank, ordinary loans from friends and relatives, credit card balances, and bonds.

Imagine a lively street in the middle of Bangalore and a tech startup, which struggles to implement its plans and creations. The technology industry in India comprises of many SMEs like this one and constitutes a central role in the booming economy related to innovative technology. Being spirited and flexible in their operations, these firms have been quite influential ventures in the growth and technological improvement of the country's economy (Ayyagari et al., 2011; Kathuria et al., 2010).

However, these SMEs face a constant challenge behind the scenes: for dealing with their money and for raising the amount of money they need to cover their expansion. They are always at the crossroads about their choice of capital structure, the ratio of debt to equity that would define their future success or failure, (Berger & Udell, 1998). In addition, another striking consideration most associated with these choices is the interest rate.

The change of interest rate by the Reserve Bank of India has a domino effect that spreads throughout the length and breadth of the country (Mishkin, 2007). To SMEs in the tech industry especially in developing nations, variations in inflation directly impacts the possibility of acquiring cheap funds for the realization of expansion goals and the cost of funding (Cassar & Holmes, 2003).

Nonetheless, there should be a direct correlation between interest rates and capital structure and it was lacking. Some of the studies have provided mixed evidence and most of the research-oriented work has targeted big firms instead of the complexities faced by SMEs (Jalilvand & Harris, 1984; Taggart, 1985). These are often smaller firms which, unlike some of their larger counterparts, exist in a different world, characterized by higher risk, information trade-offs and limited access to capital markets (Michaelas et al., 1999). Coupled with this is the fact that the technology industry is fast paced and capital intensive, making the problem even harder to solve (Hogan & Hutson, 2005).

That is where this research comes in. Our theoretical assumption and therefore research question is to investigate the influence of interest rate change on capital structure of Indian technology and services SMEs. We will ask tough questions: The points of interest are: How do these firms modify its financing policies with change in interest rate? What are those factors? Furthermore, how are they conversely, able to maneuver through the probabilities and probabilities for these transitions?

The answers we come up with can be significant in its impact. It also meant that understanding these dynamics could prove helpful should policymakers seek to devise more creative forms of monetary support for the growth of the SMEs.

For financial institution it could lead to more relevant products and services in especially lending. Furthermore, for SMEs themselves, it may imply better ways of how they can tackle their financial aspects and meet their great visions of success.

Please come with us on this journey of interest rate, capital structure and future prospect of India's tech SMEs. The subsequent sections of this paper will provide a literature review of the existing literature, a description of the research methodology adopted in this study, the analysis of the findings of this research and the implication of the findings to the stakeholders involved. We've written this paper to help cast light on this important subject and pave a path to a brighter future for India's technology market.

Generally, SMEs depicts a trading organization that utilizes small amounts of revenues, resources and even has a limited number of employees than what has been stipulated as the limit. These enterprises are strategic in the development of the economy because they offer employment to their workers and stakeholders and in addition, they encourage innovations and above all, they have a very central influence on the economy's improvement in GDP.

Since SMEs are small businesses, they sometimes encounter some problems in some spheres, for instance, they have a lack of resources. SMEs especially have very limited resources and aspiring market competitors from other firms in the sale of similar products and services.

The government sometimes offer SMEs a subsidy in order to enable it to expand and evolve. Such supports may range from, taxes credits, loans, or subsidies for the purpose of supporting research and development. SMEs can use these for the purposes of expansion and business development as well as for the purpose of countering their competition. In the case of SMEs, those who are willing to go further in the research and development and are more informed can normally outcompete their rivals.

SMEs support the entrepreneurship venture besides employment and innovation and contribute to the economic growth of that area. Also on the nerd side, SMEs have a low capital base which is among the major issue they consider. The capital base therefore can be defined as the funds that are available to support operations, investments and growth of a business entity, a financial house or organization. SMEs are mainly characterized by limited financial reserves a feature that distinguishes them from large business organizations. It is the total pool of funds for their operations and expansion; consisting of the shareholders equity the money from investors and owners. When it comes to capital, there are those SMEs with massive capital thus they are capable of or willing to invest in higher technological equipment which can be of great use to them especially in the area of research.

They shall be in a position to protect them from the financial risks that they may be required to assume in future and also expand their business. This is another advantage I consider to be endowed due to government subsidies to SMEs since it enhances their capability to boost their capital base. Apart from the above stated challenges faced by SMEs, they have limited access to technology, credit policy issue, inconsistency of business services, and scarcity of good human resource.

Capital structure on the other hand is the blending of debt and equity by which a given business entity finances its operations as well as development. This demonstrates how a business supports its undertakings and funding as per the organization's funding requirement. This means that while developing capital structure for SMEs, it may be necessary to take into consideration one or several of the following aspects: availability of finance for the enterprise depends with the stage of growth, risk and sources of financing within the industry. It is also important to identify that there are Internal and External factors of capital structure especially in relation to SMEs. Internal factors comprise of profit/loss projection, endowment projection and the economically feasible growth projection while the outside factors include legal requirement for funding, availability of funding and market situation. This research study will therefore aim at determining how the small and medium enterprises can formulate better ways of managing interest rates on capital structure in their respective decision-making processes.

Understanding the impact of interest rate changes on SMEs' capital structure is essential.

In other words, capital structure holds the concept of the way through which companies mobilize the fund for its investment and there end up in lowering the cost of financing and enhancement of profitability. It is crucial to understand how changes in interest rates can affect SMEs' financial strategies, investment decisions, and overall stability.

Rising Interest Rates: SMEs that depend on external financing to fund operations, expansion, or capital investments face higher expenses when interest rates rise. This cost increase can be attributed to loans or credit lines. SMEs need to be aware of this impact, which helps them plan their finance management and mitigate the risks associated with increased costs.

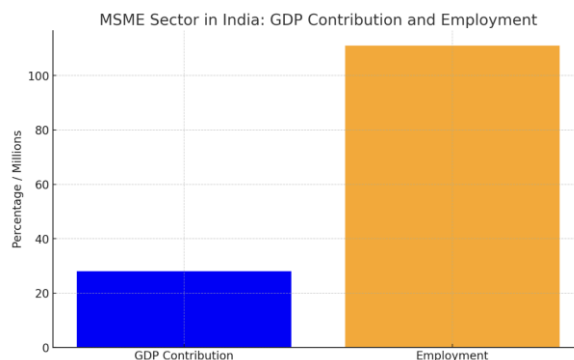
Decrease in Interest Rates: Conversely, a decrease in interest rates reduces the cost of borrowing, making it cheaper for SMEs to finance new projects or refinance existing debt.

How does the interest rate on debt financing impact a business's overall financial performance



This can lead to growth opportunities but also requires careful consideration to avoid over-leveraging. Also, changes in a business's interest rates eventually affect its current liabilities and thus change the capital of SMEs. For instance, change in interest rate may impair value of the fixed-rate debt already floated in the market which is not good for the company. Hence, it is essential to examine this correlation.

The MSMEs play a significant role in the economy of India contributing more than 28% of the Indian GDP and nearly provides employment to a population of about 111 million (2019) (Expert Committee on Micro, Small and Medium Enterprises 2019). Even after the emerging measures and policies being introduced by the Government of India along with the Reserve Bank of India the MSMEs are still struggling and vulnerable to structural changes as well as macro-economic volatility (Expert Committee on Micro, Small and Medium Enterprises, 2019).



Theoretical implications

The “trade-off theory of capital structure” decisions in Indian tech SMEs deals with balancing different factors to maximise organisational outcomes. Including learner feedback loops, as suggested by (Atkinson et al. (Editors) et al.), highlights the importance of decision-makers aiming for high predictive accuracy while keeping things less complex.

This idea corresponds to the characteristic of a real-life situation that SMEs experience when making capital structure decisions at the time of fluctuating interest rates. Moreover, the discovery by Cresswell and colleagues provides information on the prediction capacities of individual-based risk trade-off models and, which is important, emphasizes the possibility of predicting population course that is linked to the danger of predators.

Similarly, Indian tech SMEs must manage a tangled network of financial risks and make strategic trade-offs in their capital structure choices to lessen negative consequences and improve long-term viability. The amalgamation of theoretical concepts and practical insights emphasises the value of incorporating trade-off theory to grasp intricate dynamics surrounding capital structure decisions amid fluctuations in interest rates within the Indian tech industry.

Factors Influencing Capital Structure Decisions in Tech SMEs

A complex examination of the factors that explain capital structures in technology-based “small and medium enterprises” (SMEs) reveals a combined internal and external influence system. This work shows that characteristics of the organisations themselves, including size and growth prospects, as well as profitability, play the main role in choosing

between debt or equity financing (Andrade et al.). Moreover, owner-manager personalities come into bearing; extraversion, and conscientiousness can influence the nurturing of ambidextrous behaviour in these businesses, hence influencing the formation of capital structure decisions (Andrade et al.). At the same time, the outer context characterized by technological disruption and market volatility adds the levels of complexity to tech SMEs decisions on capital structure, stressing flexibility and matching with the changing circumstances (Andrade et al.). Understanding these multiple forces is helpful for Indian tech SMEs to bear the consequences of the changes in interest rate on their decisions of capital structures to unanimously provide wise and elastic financial strategies under a shifting business environment.

IT Industry

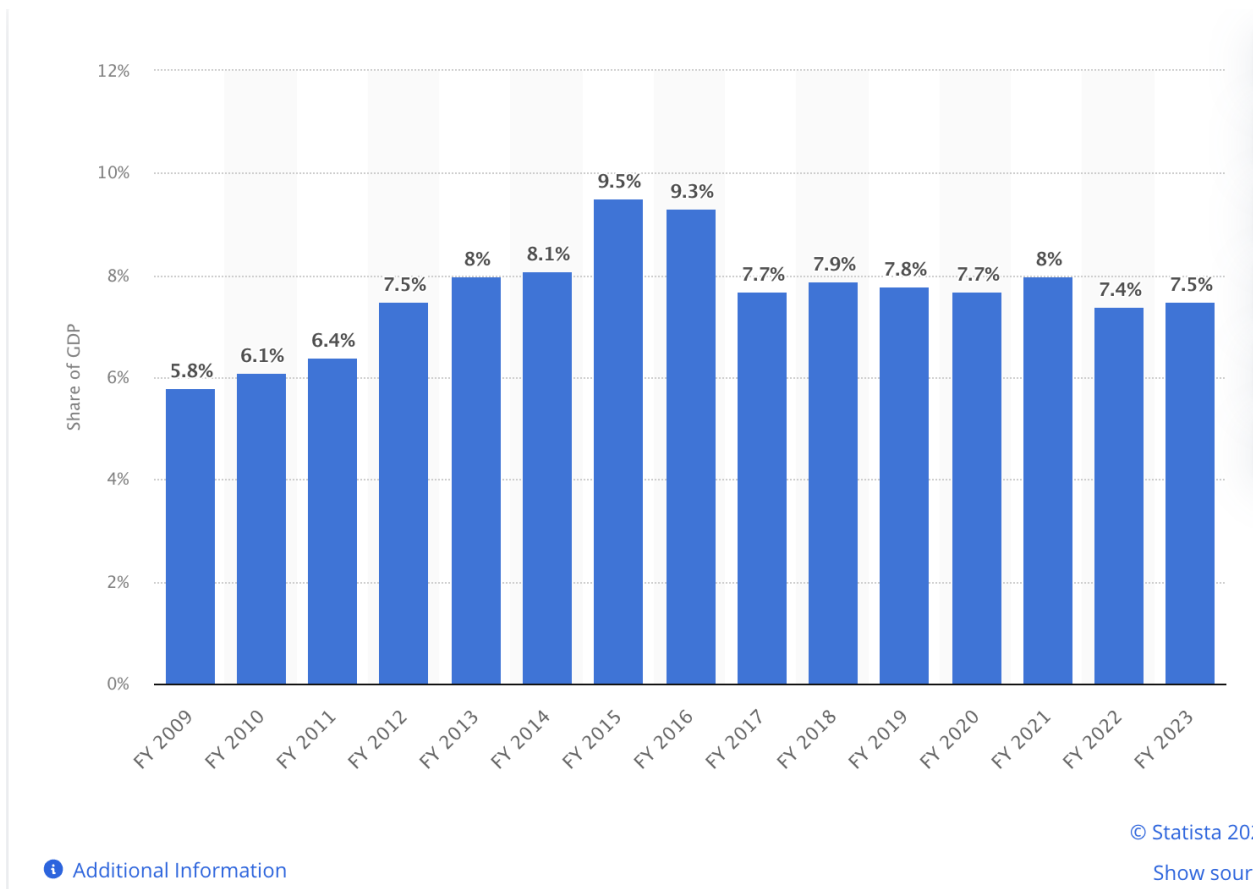
The Indian technology sector shapes India's future.

Economic development - The IT sector has majorly increased its impact on the GDP of India, going from 1.2% in 1998 to nearly 10% in 2019

Helps with innovating—The advancements within the IT sector and the government of India's liberalisation policies are necessary for the evolution of the technological industry.

Education—Skilled labourers have increased in India. Now, the top four largest companies in India such as ‘TCS’, ‘Infosys’, ‘Wipro’, and ‘HCL Tech’, each employ more than 1 million employees. As of 2020, the Indian IT workforce accounts for 4.36 million employees.

Share of Information technology/business process management sector in the GDP of India from the financial year 2009 to 2023



Source: Statista 2024

Conclusion

Over the world, small and medium business entities (SMEs) act as key players of the economies. This is due to factors such as flexibility, utilization of new technology, effectiveness, and creativity of their services as well as being regionally anchored. These include but are not limited to government policies, conscious consumer choices, and SMEs dependence on the community support base that has entrenched them firmly in the context of the broad economic structures.

SMEs hold a huge proportion in economic value regardless of their small size. There are more in number than the large business organizations, give employment to a significant number of the working population, and are prompted into innovativeness, and the creation of new products and services.

DMMAAs are widespread, but mostly push smaller enterprises in those areas of industry that do not need many employees, and less initial capital. Some of the examples include; law practices, dental clinics, restaurants, and bars to mention but a few.

The major difference between SMEs and large global companies is based on size and system of operations. While the current and future large firms require complicated erp systems to help them manage daily tasks, including accounting, scm, financial reporting, and international office, smes work with less complex operations.

On the other hand, SMEs may require fewer systems, given their narrower scope of operations.

Today, Indian SMEs are running in a very competitive environment that is very challenging. These business face numerous challenges and out of all the challenges highlighted by experts of the industry and academic journals and researches, the most notable challenges include financing and credit standing. Fund raising for new investment or starting up principally relies on the accessibility and the possibility of mobilizing funds. In addition, Cook noted that access to finance is one of the crucial factors that define the development of SMEs in the global market.

In this research, we identify variables that define the capital structure, which is necessary to analysis the impact and control of the capital structure of small businesses. This is why it is necessary to focus on the critical factors, including:

Control – The level of control will thus vary depending on the type of the shareholder. If the company has more equity shareholders as compared to preference shareholders then the equity shareholders will be controlling and will possess higher voting powers.

Government Policies— On the same note I agree that it is important as a small business to keep abreast with all government policies since they shape on your capital structure decision. If there are qualitative changes in fiscal and monetary, your choice in the capital structure will also have to change.

Cost of Capital— Small technology firms require capital to finance their operations whereby coming with specified expenses as the cost of capital. Thus, for a business to renew its growth, it has to make adequate sales revenue to cater for these expenses. The other way of reducing the cost of capital is by addressing the problem of an efficient degree of capital structure.

Trading on Equity – Many startups also engage in further fund by using their equities as security for a new line of credit. They use this strategy when the cost of borrowing is less than the yields that is expected on the funds borrowed. On the other hand, if the cost of debt are higher than the expected returns on investment, they may still choose to leverage equity with the intentions of gaining from the trading on equity advantage.

Capital structure is the outcome of firms' financing decisions. The determination of a firm's capital structure has been a much debated issue in the literature on finance. Empirical studies on identifying significant factors responsible for a firm's financing decisions reveal that assessing a firm's capital structure needs to be more conclusive (Hariss & Raviv, 1991).

Interest rates are in a position to rank among the key influential factors in the determination of a corporation's capital structure because they affect the cost of debt. Usually, financing sources of businesses are available either fixed or in the form of debt or equity. Equity capital entails money sourced from investors in a business structure through shareholders while debt capital means that the firm borrows money from a lender. Some of the examples of debt capital are bank loans, personal loans, credit facilities and bonds.

Small business owners dread increasing interest rates as they oversee elevations in the costs of debts, making the general costs accruing to the operations of a business to go high. Gates Little the president of the Southern Bank Company has said,

“In times of increasing rates, small businesses will benefit from reducing expenses and paying down debt as much as possible. These actions will help free cash flow and enable small businesses to survive until either rates come back down or the economy adjusts to a higher rate environment through higher prices and higher wages – changes that typically occur in gradual but random moves.”

In addition to paying down debts and reducing spending, below are some other tips for business owners concerned about the impacts of high interest rates.

Improve Cash Flow Management

This is why ‘interest rates’ affect the operational status and profitability of firms to an extent that requires efficient management of cash flows for the financial security of your firm. Although high and low interest rate cycle necessitate cash flow, it will be more apparent that you need to work on your cash flow when the rates are up.

There are several ways that you can improve your business’s cash flow, such as:

Review Customer Creditworthiness

Non-payment risk can be managed by conducting credit checks on customers as a great way of ensuring that your business does not lose to this issue. Before extending credit to your clients, it is essential to evaluate:

Their payment history

Their business credit profile

Their profitability over time

Indeed, while evaluating the new clients before you start to work with them and then extending terms to them can help avoid fraud, late payments, and even non-payment. This will contribute in enhancing your operating cash flow and enhancing the cash reserve of the business during a periods of economic instability.

Evaluate Debtor Concentration

Debtor concentration is SEO on how accounts receivable are spread out amongst your respective customers. For instance, if one debtor is fully credit-responsive to all your outstanding receivables, then debtor concentration ratio is 100%. On

the other hand, If one debtor is constituted 50% of your receivables and the other debtor constitutes the other 50%, than each of them poses concentration risk of 50%.

Checking the debtor concentration is possible so that the firm can manage the risks of customer credits. This evaluation is very important in situations where interest rates are high, borrowing costs are high as well as when there is limited availability of cash flow. Your financial risk decreases when you expand your customer pots and decrease your debtor dependence.

In summary, we can say that this research aims to analyse how changes in interest rates affect the capital structure choices of small and medium-sized businesses (SMEs) in the Indian technology industry. In India, SMEs are essential to innovation, economic expansion, and the creation of jobs. However, because small businesses frequently struggle to get and manage capital, their capital structure—which consists of debt and equity—is essential to their success. Throughout the research, we have learned more about all the implications and trends of small and medium-sized businesses in tech and suggested some recommendations that an enterprise can use for effective working capital management.

Bibliography

1. Ayyagari, M., Demirgüç-Kunt, A., & Maksimovic, V. (2011). Small vs. young firms worldwide: Contribution to employment, job creation, and growth. World Bank Policy Research Working Paper, (5631).
2. Berger, A. N., & Udell, G. F. (1998). The economics of small business finance: The roles of private equity and debt markets in the financial growth cycle. *Journal of Banking & Finance*, 22(6-8), 613-673.
3. Cassar, G., & Holmes, S. (2003). Capital structure and financing of SMEs: Australian evidence. *Accounting & Finance*, 43(2), 123-147.
4. Dammon, R. M., & Senbet, L. W. (1988). The effect of taxes and depreciation on corporate investment and financial leverage. *The Journal of Finance*, 43(2), 357-373.
5. Graham, J. R., & Harvey, C. R. (2001). The theory and practice of corporate finance: Evidence from the field. *Journal of Financial Economics*, 60(2-3), 187-243.
6. 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.
7. Jalilvand, A., & Harris, R. S. (1984). Corporate behavior in adjusting to capital structure and dividend targets: An econometric study. *The Journal of Finance*, 39(1), 127-145.
8. Kathuria, V., Raj, R. S., & Sen, K. (2010). Human capital and manufacturing productivity growth in India. *International Conference on Human Capital and Employment in the Indian Economy*, New Delhi.
9. Michaelas, N., Chittenden, F., & Poutziouris, P. (1999). Financial policy and capital structure choice in UK SMEs: Empirical evidence from company panel data. *Small Business Economics*, 12(2), 113-130.
10. Mishkin, F. S. (2007). *The economics of money, banking, and financial markets*. Pearson Education.
11. Taggart, R. A. (1985). Secular patterns in the financing of US corporations. In *Corporate capital structures in the United States* (pp. 13-80). University of Chicago Press.
12. Atkinson A. C. Bogacka B. Zhiglkilavskify A. A. (Editors), Balcan M.-F., Box G., Dasgupta S., Engel A., Fedorov V. V., Pack-Kaelbling L., S. Still, Schmidhuber J., Shannon C. E., Still S. Bialek W., Still S. Crutchfield J. P. Ellison C., Still S. Precup D., Sutton R. S., Tishby N., Vapnik V., "Information theoretic approach to interactive learning", 2009
13. Rao, P., Kumar, S., & Madhavan, V. (2019). A study on factors driving the capital structure decisions of small and medium enterprises (SMEs) in India. *IIMB Management Review/IIMB Management Review*, 31(1), 37–50. <https://doi.org/10.1016/j.iimb.2018.08.010>
14. Boyte-White, C. (2022, September 29). *How Do Interest Rates Influence a Corporation's Capital Structure?* Investopedia. <https://www.investopedia.com/ask/answers/031615/how-do-interest-rates-influence-corporations-capital-structure.asp>
15. Liberto, D. (2024, June 19). *Small and Midsize Enterprise (SME): Definition and Types Around the World*. Investopedia. <https://www.investopedia.com/terms/s/smallmidsizeenterprises.asp>
16. Petulla, A. (2024, March 22). *Interest Rates and Small Businesses: What You Need to Know*. altLINE. <https://altline.sobanco.com/interest-rates-impact-on-businesses/#:~:text=Slower%20Business%20Growth,to%20invest%20in%20expansion%20opportunities>.
17. Kisseih, K. G. (2017). The Impacts of Interest Rate Fluctuations on the Growth of Small and Medium Enterprises (SMEs) In Accra. *International Journal of Academic Research in Accounting, Finance and Management Sciences*, 7(2). <https://doi.org/10.6007/ijarafms/v7-i2/2788>
18. Rao, P., Kumar, S., & Madhavan, V. (2019b). A study on factors driving the capital structure decisions of small and medium enterprises (SMEs) in India. *IIMB Management Review/IIMB Management Review*, 31(1), 37–50. <https://doi.org/10.1016/j.iimb.2018.08.010>
19. *Information Technology India, Top IT Companies in India - IBEF*. (n.d.). India Brand Equity Foundation. <https://www.ibef.org/industry/information-technology-india#:~:text=Introduction,to%20India's%20GDP%20by%202025>.
20. *Adobe Acrobat*. (n.d.). <https://acrobat.adobe.com/id/urn:aaid:sc:AP:b165f281-58be-4df4-ba2d-adadc159b7aa>
21. ETtech. (2023, March 28). Indian tech SME revenue to grow to \$40 billion by FY30: Nasscom. *The Economic Times*. <https://economictimes.indiatimes.com/tech/technology/indian-tech-sme-revenue-to-grow-to-40-billion-by-fy30-nasscom/articleshow/99067153.cms>

22. Sarath. (2021, October 26). *Capital Structure for Startups* / *Eqvista*. Eqvista. <https://eqvista.com/capital-structure-for-startups/>
23. Boyte-White, C. (2022b, September 29). *How Do Interest Rates Influence a Corporation's Capital Structure?* Investopedia. <https://www.investopedia.com/ask/answers/031615/how-do-interest-rates-influence-corporations-capital-structure.asp#:~:text=Interest%20rates%20primarily%20influence%20a%20corporation%27s%20capital%20structure,to%20money%20that%20is%20borrowed%20from%20a%20lender.>
24. *How the IT Industry is shaping the future of India?* (2021, August 17). Times of India Blog. <https://timesofindia.indiatimes.com/readersblog/youth2020/how-the-it-industry-is-shaping-the-future-of-india-36519/>
25. Boyte-White, C. (2022c, September 29). *How Do Interest Rates Influence a Corporation's Capital Structure?* Investopedia. <https://www.investopedia.com/ask/answers/031615/how-do-interest-rates-influence-corporations-capital-structure.asp>