THE IMPACT OF CAPITAL STRUCTURE CHOICE ON FIRM VALUE

An empirical analysis of the relationship between financing decision and company value in the FTSE All share Index.

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ABSTRACT

The selection of financing options to incorporate into the capital structure for achieving success is regarded as one of the most pivotal decisions that a management team can undertake. The primary objective of this study is to evaluate the influence of a financial decision on the overall value of a company. A multiple regression analysis has been employed to investigate a period spanning nine years, utilizing a sample of businesses from 27 different industries that were listed on the FSTA-All share index between 2013 and 2020. By various capital structure theories, the financial decision and its impact on the company's value are thoroughly examined. This study aimed to test the hypothesis that gearing has an adverse effect on both market capital and profitability ratios. The findings of this research unequivocally demonstrate that the value of a company is significantly influenced by sectors characterized by a consistent profit stream and a stable market. Conversely, sectors characterized by volatile markets exhibit no correlation with gearing levels.

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1. INTRODUCTION

The financial decision-making process and the choice between debt and equity financing can significantly impact the value of a firm. In this study, the focus will be on examining the financial decisions of companies across various sectors of the FTSE All-Share index. Debates surrounding optimal funding methods have persisted for years, leading to the development of various capital structure theories. The objective of this study is to understand the factors that drive management's choice between debt and equity financing and how this decision influences the overall value of the firm in different industries.

By analyzing the financial strategies employed by companies, we can gain insights into the motivations behind their funding choices. This study attempts to provide a thorough knowledge of the dynamics at work in the decision-making process and throw light on the link between capital structure decisions and business value across industries.

Through this research, we hope to contribute to the existing body of knowledge on capital structure theories and provide valuable insights for managers, investors, and other stakeholders interested in understanding the implications of financial decision-making on firm performance and shareholder wealth.

1.1. CAPITAL STRUCTURE CHOICE

The ground-breaking researchers, Modigliani and Miller, employed algebraic methods to examine the connection between the capital structure and the worth of a corporation. They stressed that in an idealized capital market, where all investors possess equal information and make rational choices, the decision regarding financing would have no effect on the asset's value. However, subsequent to their initial work, several valid criticisms were raised against M&M's theory, particularly regarding the absence of taxes in their model.

To address these critiques, Modigliani and Miller incorporated tax considerations into their framework five years later. They recognized that the corporate tax system provides tax advantages for interest payments. Consequently, they concluded that businesses should maximize their debt levels. Multiple hypotheses have since been developed as a result of the significant study that different researchers later did on the effects of capital structure.

Therefore, the ideal capital structure, as suggested by theories of capital structure based on a balancing act, involves weighing the benefits and negatives of borrowing money.

The main benefits of adding debt to a capital structure are the tax deductions for principal and interest payments. This tax shelter enables the corporation to issue debt financing rather than using retained earnings or issuing shares, which results in lower corporate tax payments. Regardless of the industry, a company operates in, adding debt to the capital structure brings with it two characteristics.

The company will be more dynamic, benefit from tax advantages and have guaranteed shareholder returns thanks to improved financial management, according to one of the paradigms.

On the opposite end of the spectrum are financial risks, protective covenants enforced by lenders, and the fluctuation in a company's profitability when it fails to meet its obligations to creditors. A higher debt load increases the likelihood that a fixed promise won't be kept. Therefore, agreement with the cost of financial distress theory.

According to Baxter (1967), Robicheek and Myers (1966), the expense of bankruptcy inherently lowers a company's worth. Also, there are agency fees because lenders must keep an eye on and regulate the company's operations. A further signal that debt issuance sends to the stock market is that rational investors perceive it as an indicator of a company's profitability (Myers and Majluf 1984).

Debt issuance signals bad news for the company and lowers the share price. As a result, the assumption encourages the corporation to use the pecking order hypothesis. Whereas it promotes management's use of debt financing over equity financing.

Additionally, it also implies that profitable businesses typically employ less debt because they have access to internal financing.

Nevertheless, it is evident that the MM model has received validation from subsequent research and alternative theories over time. As an illustration, Luigi and Soring (2009) advanced the idea that in a completely efficient capital market, the entire worth of a company's shares corresponds with the market value of its projected cash flows produced by its assets. According to this viewpoint, a firm's capital structure has no bearing on this connection. (Berk and DeMarzo, 2017). Additionally, Frank and Goyal (2003) demonstrated that the MM theorem represents an abstract mathematical framework and does not rely on empirical data collection and analysis for its conclusions.

1.2. FTSE All-Shares Index

The FT Actuaries of All-Share Index was first created in 1962. The FTSE 100 and 250 were added as two sub-indices to the index in 1984 and 1992. The FTSE All-Share index, which meets the requirements of size and liquidity, can also be understood to represent the performance of all qualifying businesses listed on the principal market of the London Stock Exchange. This index accounts for approximately 98% of the total market capitalization in the UK, making it widely regarded as the most reliable indicator of the London equity market's performance. I looked at 27 FTSE All-Share sectors to examine how financial options and company values differ from sector to sector.

The FTSE All-Share index is typically chosen for two reasons:

1) This index's constituents adhere to corporate governance rules. Anglo-American or Anglo-Saxon governance systems divide ownership and control. Also, there is a stock exchange where shares of listed businesses can be freely brought and sold which is consistent with notions about capital structure.
2) The choice of financial lots depends on the business's nature, profitability, tangible assets and other factors.

1.3. AIMS AND OBJECTIVES

By analysing the FTSE All-Share sectors, the analysis aims to determine how a company's financial decision affects its overall value.

The findings of this study will also be examined and contrasted with those of earlier researchers as well as with capital structure theory.

I chose 27 industries and there were many companies in the 8 years of data from 2013 to 2020.

Multiple regression analysis will be used to analyse their data to determine the relationship between market capital, gearing, profitability ratios.

These results are also utilised to analyse the original hypothesis and respond to the research questions. I have established six objectives to help me reach my goal to dully fulfil my mission.

1) To examine how the capital structure of FTSE All-Shares varies from sector to industry.
2) To examine the connection between ROCE and gearing.
3) To examine how gearing and ROE are related.

4) To use capital structure theories to analyse how real-world companies behave when it comes to capital financing.

1.4. RESEARCH QUESTIONS

The first stage in conducting research and developing it into a research project is to formulate research questions.

To produce a project that complies with the requirement, the research question must be properly integrated.

1) How does the financial decision affect the value of the company?
2) Why does capital structure differ from sector to sector?
3) Is there a relationship positive or negative between gearing and ROCE/ROE?

1.5. HYPOTHESIS

These are the financial research questions that have been selected. They are listed below:

- A profitable business that has solid tangible assets issues a lot of debt.
- The relationship between gearing and ROCE is unfavourable or favourable.
- Market capital and gearing have a positive association.

1.6. STRUCTURE OF STUDY

There will be five chapters in this essay. I will discuss the issues' background and research challenges. Objectives and methodology in chapter one.

The literature on capital structure theories and researchers' empirical findings will be reviewed and analysed in chapter two.

The information I have gathered for the FTSE All-Share sectors and the technique I will use are included in chapter three. I will show the results, discuss them, and break them down sector by sector in Chapter 4. In the end, there will be a conclusion in chapter five and propose recommendations for future research.

2. LITERATURE REVIEW

The finance manager's foremost concern lies in finding ways to finance the business and enhance its overall value. The ideal capital structure for a business has been determined by a number of capital structure theories, including Miller and Modigliani, pecking order, and compromise. These theories assist companies in determining the ideal funding combination to sustain long-term success and mitigate any potential factors that might undermine the company's value. In addition, factors such as agency costs, financial concerns, signal effects, and protective clauses also hold significance in the realm of capital financing.

2.1. OVERVIEW OF CAPITAL STRUCTURE:

The relationship between capital structure and profitability has been the subject of several academic theories and empirical investigations, with Miller and Modigliani making significant contributions to our understanding in this field. Academics engage in significant debate regarding the optimal capital structure. For instance, Modigliani and Miller (1958) posited that the value of a firm is inconsequential in financing decisions. The Modigliani-Miller (MM) theorem was built upon by Stiglitz (1969) and Fama with Miller (1972), who argued that a firm's value is unaffected by its capital structure even when there is a danger of bankruptcy and there are no transaction costs.

However, MM (1966) addressed the topic of corporate taxes and showed that, as a result of the tax benefits linked to debt, there is a positive association between company value and the debt-to-equity ratio. A firm's capital structure and market value were the subjects of further studies by Robichek and Myers (1978) and Chen and Kim (1979), respectively, which also looked at the financial ramifications of bankruptcy and the tax advantages associated with interest payments. These investigations came to the conclusion that a company's capital structure does affect its value.
Nevertheless, in the real world, the decision-making process regarding capital structure involves various factors.

Similar to this, Myers (1977) found a positive association between a certain element of a company's capital structure, such as debt financing, and the indicator of profitability compared to the estimated future value of the company's assets.

By investigating listed Finnish companies, Kjellman and Hansen (1995) added to the research and showed that these businesses prioritise maintaining a target capital structure to maximise firm value while minimising the expenses related to current market flaws.

Masulis (1999) also looked at how changes in capital structure affected business value and discovered a strong link between stock prices, firm values, and changes in the amount of debt.

2.2. THEORIES OF CAPITAL STRUCTURE

There are many academic theories for determining a company's capital structure. However, financial managers often choose financing in the real world based on their business and market circumstances. The first one to be analysed is Miller and Modigliani, the theory of compromise and pecking order, which are important to consider when we need to determine the capital structure of a company.

2.2.1. Miller and Modigliani's Theory

According to the 1958-published MM theory, a company's value is unaffected by the issue of debt, stock, or any mix of financing.

Businesses in the same sector with comparable operational risks must have comparable values. This viewpoint is based on the notion that an organization's worth is influenced by the operational income that its assets will provide in the future.

The distribution of these profits between stockholders and bondholders should not have any impact on the company's overall value. However, in the real world, this goes against traditionalists' ideals. This concept has been heavily criticised for ignoring taxes, and transaction costs and presuming debt is risk-free.

Afterwards, in 1963, the theory has been updated to include tax. However, now has a distortion because it states that dividends paid to shareholders are taxable while returns to debt holders are tax deductible for the company.

This goes against traditionalists' ideas in the real world and has been strongly overlooked for ignoring taxes, and transaction costs and presuming debt is risk-free.

As a result, it was determined that learner firms have an advantage over learner enterprises in that they have a better market value, pay less tax, and have a lower cost of capital.

This theory concludes that businesses should borrow as much money as they can. Yet, large levels of gearing are rarely observed in businesses in practice. Covenants, agency fees, tax exhaustion and bankruptcy risk are all problems that the corporation must deal with because of its modest debt load. (Meyers - Brealey 2003)

2.2.2. Trade-off Theory

The trade-off theory emerged as an alternative to Modigliani and Miller's tax theory, proposing that managers consider financing decisions as a delicate balance between the expenses associated with financial distress and the advantages of interest tax shielding. Each company's unique attributes lead to varying target debt ratios. For instance, companies with consistent tangible assets and sustained taxable profits generally aim for higher debt ratios compared to businesses relying on intangible assets and unprofitable operations, which rely more on equity financing.

Empirical research has offered valuable insights into the correlation between capital structure and profitability. Wald (1999) conducted a cross-country analysis and found that profitability largely influenced capital structure. French (1998) studied a large sample of businesses and found no evidence that interest tax shelters increase a company's value. However, Mackie-Mason (1990) discovered that taxes do influence funding decisions, with businesses subject to taxes tending to employ more debt.

Hovakimian, Opler, and Titman (2001) proposed that a company's ability to reach its target ratio can act as a barrier to achieving its goals. They found that companies tend to move towards their target ratios by raising capital, retiring debt, or repurchasing shares. Their empirical study showed that organizations issuing equity typically had lower profitability compared to those issuing debt.

The trade-off theory presents a more plausible narrative than Modigliani and Miller's tax theory. However, its application to real-world situations is nuanced.

The theory explains how a company's capital structure depends on its industry, with high-tech growth companies employing relatively little debt due to the risky and intangible nature of their assets.

In reality, businesses may change their capital structure in response to unique situations. They may issue retained earnings, sell assets, suspend dividends, or issue new shares to rebalance their capital structure. However, the trade-off theory faces challenges in explaining why some profitable businesses succeed with little debt. The theory suggests that high-profit margin companies should issue more debt for greater tax advantages, but in reality, these companies often maintain low debt levels.

Overall, the trade-off theory offers insights into how capital structure and other elements relate, but its applicability to particular circumstances can be difficult and context-dependent.

2.2.3. Pecking Order Theory

Another prevalent paradigm is the Pecking Order Theory, which emerged after the Trade-off Theory. This cascades down the choice to issue shares from an internally formed corporation. The pecking order hypothesis does not promote a precise goal debt ratio, in contrast to the trade-off approach. The organisation chooses its debt ratio based on its requirements (Hiller et al. 2010). According to the pecking order idea, profitable organisations often borrow less than less lucrative ones.

Since they rely on internally generated capital, profitable businesses do not require outside funding, whereas less successful businesses do because they lack financial flexibility.

Pecking order appears to explain why a firm’s debt ratio rises during financial deficits and falls during surpluses. (Brealey and Meyers 2003)

When representing inter-industry differences in debt ratios, the pecking order has a drawback though. For instance, the debt ratio appears low in high-tech and fast-growing sectors. According to Meyers, the trade-off model is unable to account for the detrimental valuation consequences of equity issues or other gearing-

reducing events, as demonstrated by Masulis. While trade-off theory predicts a positive association, Titman and Wessel revealed a large negative link between debt ratios and previous profitability. There is no ideal debt-to-income ratio, claim Myer and Majluf (1984), because of information asymmetry and signalling issues.

2.3. OPTIMAL STRUCTURE AND EFFECTS

The topic of capital structure has been the focus of many scholars' work, and as a result, numerous hypotheses have emerged. Numerous empirical research has been carried out to determine the ideal capital structure and how it affects a company's capacity to obtain cash. When determining its capital structure, a corporation must consider various factors, including agency costs, financial distress, signaling effects, and protective covenants. Both positive and negative aspects come into play when issuing debt or equity.

The tax shelter that debt offers is one of the key benefits of include it in the capital structure. Debt interest payments are deductible from taxes, enabling businesses to reduce their tax liabilities when they opt for loan capital instead of utilizing their own funds. There are two primary methods for assessing the cost of debt.

1) There is a very strong chance that the corporation won't be able to pay its debt obligations. Consequently, attitude makes bankruptcy more likely.
2) There are expenditures associated with hiring agents to oversee, keep an eye on, and regulate the risky behaviour of the business.

Managers knowing more than investors has extra added expenses related to the company's financial structure. The impact of taxation on the capital structure as a means of financing has been widely studied.

Several notions, in addition to taxation, have an impact on how the capital structure is determined. These ideas define the maximum amount of debt that a business can take on while taking into account agency costs and asymmetric information.

2.3.1. Agency costs:

The idea of agency costs, which result from the interaction between shareholders and debt holders or management and shareholders, was first articulated by Jensen and Meckling in 1976. They, acting on behalf of the shareholders, are responsible for running the business and increasing the wealth of the owners. However,

conflicts of interest can occur when managers prioritize their own objectives over the interests of shareholders, such as pursuing personal gains or creating empires.

Debt can be used as a tool to balance the interests of shareholders and managers, as suggested by Jensen (1986) and Williamson (1988). By introducing debt into the capital structure, managers are compelled to divide profits with debt holders rather than focusing solely on their own interests.

Despite the desirability of paying dividends to shareholders, managers often utilize all available internal capital for their own purposes, as highlighted by Virtanen (2006) and Baker (2006). However, The differences between managers and shareholders may not entirely be eliminated by contracts based on cash flows and investment expenses.

Shareholders, lacking the necessary skills and experience to directly govern the business, grant managers the authority to do so. In an attempt to mitigate agency costs, shareholders may appoint auditors and non-executive directors to oversee and monitor managers' activities.

The expenses associated with oversight and monitoring are known as agency costs. Implementing proper supervision can be costly, leading owners to explore alternative methods that do not significantly reduce the business's value. Debt can be employed as a reliable tool to safeguard shareholders' interests and deter managerial misconduct, as managers are obligated to make interest payments to bondholders before engaging in other activities. High levels of gearing force managers to generate funds for interest payments and reduce the surplus cash they have on hand, thus allowing holding companies to utilize their resources more efficiently.

Therefore, debt can be a strategic tool to reduce agency costs and increase shareholder wealth. Assessing the lender-borrower relationship is crucial in analyzing the agency costs associated with debt from the bondholders' perspective. The interest charged by investors when lending money to a

corporation reflects their perception of risk. Default risk incurs agency costs of debt, as bondholders become concerned about the cash flow value and associated risks of the organization. The company's gearing ratio increases when it issues debt with a fixed rate, signalling a potential increase in agency costs.

Bondholders may start to worry when they perceive that managers are attempting to transfer value from them to shareholders. This can occur through actions like issuing additional debt and distributing funds as dividends or engaging in risky investments. Conflicts of interest arise from differences in how shareholders and bondholders claim cash flows, influencing a company's decisions regarding investments, financing, and dividend policies.

To prevent such scenarios, debt holders may employ monitoring and control mechanisms to restrict managers from engaging in high-risk projects, even if they offer higher returns. When companies add more debt to their capital structures, debt holders regain control, enabling them to influence major capital investments. Bondholders typically incorporate clauses in debt agreements to protect themselves from management's drastic changes to business operations or financial risks. These clauses can pertain to net working capital, significant asset transactions, executive compensation, and dividend payment levels.

Researchers studying agency costs often propose recommendations to reduce these costs and enhance business efficiency. This includes providing insights into the optimal capital structure for the company, which maximizes corporate value while minimizing agency costs. Jensen and Meckling (1976) suggest that debt holders' monitoring strategies can enhance the level of monitoring, thereby increasing the marginal benefit.

2.3.2. Protective covenants:

The loan agreements between bondholders and stockholders includes protective covenants. In their empirical research of public bond offering, Smith and Warner (1979) discovered that 91% of bonds have covenants that prohibited the issuance of additional debt. Protective covenants give debt holders the ability to track and

manage the company's risk of insolvency. If bondholders cannot impose covenants on the company, lenders may demand better returns by using higher interest rates to protect the bondholders' interests.

As a result, the company's ideal capital structure would be at a reasonable level, where shareholder interests would be safeguarded by encouraging the issuance of debt and requiring the company to pay debt holders first.

2.3.3. Signalling effects:

In the loan agreements between shareholders and bondholders, protective covenants are established. According to Smith and Warner's empirical research of bond public issues from 1979, 91% of bonds had clauses in them that forbade the issue of more debt. Debt holders can track and manage the company's insolvency risk thanks to protective covenants. Another option to safeguard the bondholders' interests is for lenders to demand better returns through higher interest rates if the bondholders are unable to enforce covenants on the corporation. The best capital structure for the company would therefore be at a moderate level, where shareholders' interests would be preserved by encouraging the issuance of debt because it is the company's responsibility to pay debt holders first.

This business could use a little amount of extra interest to benefit from tax breaks due to its higher earnings. As a result, this company's additional debt would only marginally increase the probability of bankruptcy. These logical businesses raise their debt levels when they anticipate more profits.

Due to investors' rationality, they will probably assume that a higher debt level will increase the company's worth. On report of this scenario, investors are likely to bid up a company's stock price when it introduces debt to repurchase shares. Thus, investors infer that debt is a sign of a company's value.

Myers (1984) provides the best explanations for how asymmetric information can be used to select the best capital structure (1984).

They stated that Managers make decisions with the goal of achieving the objectives in mind. They try to avoid doing so unless the value transfer from current to new shareholders is more than offset by the net present value of the growth potential.

Hence, it can only be concluded that additional shares should be issued at a price below what the company's true market worth would dictate.

The fact that current investors have inflated shares makes the introduction of additional shares directly represent bad news. This unfavourable signal caused the share price to fall. Several empirical research verified that the share price fell after the announcement of a share issuance. This explains why a lot of businesses choose pecking-order funding.

For a while, there is not a single hypothesis that explains the debt-equity trade-off. Numerous theories enable one to evaluate a company's financial decision from various angles and gauge its effects.

2.3.4. Cost of financial distress:

Financial distress occurs when obligations to creditors are breached or difficult to honour (Meyers 2003). Because the principal and interest payments are responsibilities, adding debt puts pressure on businesses. If those commitments are not honoured, the business may experience financial difficulties and file for bankruptcy. (Hiller et al. 2010)

The value of the geared company will unavoidably be impacted by the expected cost of bankruptcy and reorganisations, according to Baxter (1967), Scott (1976) and Kraus (1973).

These expenses are direct or indirect based on the nature and type of assets.

1) The direct cost of financial distress:

   The direct costs encompass the expenses related to legal and administrative procedures involved in liquidation or restructuring. Throughout the bankruptcy process, lawyers are involved at various stages, leading to the accumulation of costs. A notable example is Lehman Brothers, which was once the world's largest investment bank and gained infamy for its bankruptcy, triggering the global financial crisis in 2008. On September 15, 2008, Lehman filed for Chapter 11 bankruptcy, disclosing a debt of $613 billion. Despite offers of assistance from the US government and attempts to attract buyers, the New York-based bank declined such support.

Since that time, the Lehman estate has paid $56 billion to third-party creditors and more than $2 billion in direct expenditures, including attorneys' fees and other case-related charges.

According to court records, the amount is anticipated to climb by at least $80.6 billion before the lawsuit is resolved (Business Week 2014). The failure of Lehman Brothers quickly caused a major disaster in the financial markets. For instance, numerous hedge funds in London that worked with Lehman's prime brokerage division and had millions of dollars in cash and other securities have had their accounts frozen (Hiller et al. 2010). The direct cost of financial difficulty has been calculated by a variety of empirical research.

2) Indirect Cost of financial distress:

Indirect costs are expenses that are difficult to quantify, such as decreased sales due to bankruptcy worry and its impact on a company's reputation.

The effects of bankruptcy were detrimental to suppliers and customers. For instance, when news of the banks' funding issues broke in 2008, many HBOS and RBS bank clients closed their accounts and shifted to other financial institutions. These circumstances result in bankruptcy and turn away businesses. Although this cost is challenging to quantify, it nonetheless has a big impact on the value of the organisations.

In their analysis of the costs of the well-known Texaco bankruptcy contend that indirect costs of bankruptcy were much more significant than direct expenses.

Texaco said in an affidavit that as a result of the case, some of its suppliers demanded cash payments rather than credit payments, and some stopped sending credit oil.

Also, some institutions have restrictions on foreign exchange contracts. As a result, the company was unable to operate and its financial situation got worse. It is safe to assume that the value of the company will decline as bankruptcy costs increase. As a result, when a firm changes its debt-to-assets ratio, the likelihood that it would file for bankruptcy should also vary, which will affect the value of the company.

Businesses that are struggling financially often prefer voluntary recapitalization or mergers to forced bankruptcy and reorganisation.
For instance, the danger of bankruptcy would be disregarded if a financially distressed company successfully merged with another company or successfully exchanged capital. According to an empirical study by Gould from 1973, the company's only "bankruptcy and reorganisation" charges are the exchange offer costs. Likewise, Haugen and Senbet (1978) present an alternative upper limit for bankruptcy costs, which encompasses the expenses incurred during a debt holder takeover and consensual recapitalization of the company. These studies highlight that a substantial portion of the "estimated costs of bankruptcy and reorganizations" are comprised of the expenditures linked to anticipated present and future exchange offers.

3) The distress cost varies with types of assets:
Financial distress costs vary depending on the company's assets and industry. As an illustration, consider a business that just owns a sizable hotel and is mortgage-financed. When the crisis is at its worst, hotels may find it difficult to prevent a free slide in their occupancy rate, which will worsen their mortgage payments. In that situation, the lender would reoccupy the hotel before selling it to a new business. There is certainly a very limited margin when it comes to bankruptcy costs. The absence of hotel reservations, not necessarily insolvency, may cause the property's value to decline. The hotel does not go out of business due to bankruptcy.
The few items like court fees, real estate commissions, and the time the lender needs to sort things out make up the majority of the bankruptcy filing's direct costs.
If this situation applied to a technology company, whose valuable assets are, of course, qualified people resources, attractive net present value investments, and potential technology. Companies at this stage of the recession are probably unsuccessful in persuading shareholders to invest where the risk is inevitable. If this corporation finally cannot pay its debts, the creditors may have difficulty selling the assets to raise money. Naturally, a large portion of these assets are intangible and only have a going-concern value.

Therefore, it is challenging to make the reality of placing focus and getting the best performance out of important personnel as it would have before financial troubles a reality. Customers who have little doubt that businesses will continue to operate may need special assurances put in place. Financing investments in new technologies and goods would be challenging since each class of lenders would need to be persuaded that investing in hazardous new endeavours is in the company's best interests.

It is extremely difficult for businesses with intangible assets to stay in business and void bankruptcy. The pharmaceutical industry, exemplified by companies like AstraZeneca, relies on ongoing research and development to generate value, primarily through the creation of new drugs. As a result, it is plausible to deduce that the gearing ratio in this industry tends to be low.

Therefore, it is apparent why highly successful businesses like Microsoft use stock primarily in their capital structures (Long and Malitz (1985).

For instance, a corporation should use a high level of gearing, under M&M theory, and its value should rise. On the other hand, trade-off theory looks for the ideal level of debt where the costs of a financial crisis and the tax benefit are equal. Furthermore, the pecking order hypothesis explains that profitable corporations should employ internal resources before borrowing money. It also relates to the signalling effects hypothesis, which postulates that releasing finance would cause signals to be reflected in the capital market due to the concept of asymmetric information. Yet, there are also consequences when a corporation issues financing, including covenants agency fees, and charges related to financial hardship. This, a firm should be considered while choosing to finance the business.

3. DATA AND METHODOLOGY

3.1. DATA:

For my analysis, I utilized FTSE-All Share data obtained from Morningstar, covering a span of 7 years, from 2013 to 2020. The data was selected from the official website of the London Stock Exchange, focusing on 27 sectors. The FTSE-All Share index was specifically chosen due to its comprehensive

representation of various business types. Moreover, this index is renowned as one of the most efficient capital markets globally.

The majority of public firms in the UK borrow money on both long- and short-term and one of their top strategic goals is to maximise shareholders' value, which is connected to theories about capital structure.

Additionally, because publicly listed companies are required to publish annual reports each year, the impact of their financial decisions can be precisely and easily determined.

My primary data source is the Morningstar website, which was chosen since it provides all relevant income statements and balance sheet ratios for all 27 industries. Some of them, like the banking and financial sectors, I did not choose due to data limitations. They are:

1) Aerospace and Defence
2) Beverages
3) Chemicals
4) Construction and materials
5) Electricity
6) Electronic and electrical equipment
7) Fixed line telecommunication
8) Food and Drug Retailers
9) Food producers
10) Gas water and multiutilities
11) General industries
12) General Retailers
13) Health and care equipment
14) Household goods and home construction
15) Industrial engineering
16) Industrial metals and mining
17) Industrial transportation
18) Media
19) Mining
20) Mobile telecommunication
21) Oil and gas producers

22) Personal goods sectors
23) Pharmaceutical and biotechnology
24) Real estate and investment services
25) Software and computer services
26) Support services
27) Technology hardware and equipment

3.2. METHODOLOGY:

Numerous techniques can be used for research. The multiple regression analysis method is one of the most well-liked and frequently utilised ones. This approach is known for its adaptability, flexibility, and capacity to work with practical and reliance relationships.

I will utilise multiple regression analysis top and the nature of the investigation.

3.2.1. Objectives of multiple regression:

General linear modelling in the form of multiple regression analysis is a multivariate statistical method. Investigated is the relationship between a single dependent variable and a number of independent variables. I will focus on three main concerns to perfect the application of multiple regression:

- The appropriateness of the study question
- The specification of a statistical relationship
- Choosing the independent and dependent variables

A. Several regression-appropriate research questions:

As one of the most widely applied multivariate techniques, regression is by far. Due to its wide-ranging utility, multiple regression analysis has been employed for various purposes. Two types of study may be generally divided into uses of this statistical technique: prediction and justification. The study is based only on Explanation approach.

- Explanation approach:

This approach examines the regression coefficients of independent variables to determine their substantive or theoretical impact. It considers the size, sign, and

statistical significance of these coefficients, providing insights into the nature and strength of the relationship between variables.

B. Defining a statistical relationship:
   1) When several observations are gathered, it is usual to study many values of the dependent value for any value of the independent variable.
   2) Based on the usage of a random sample, it is also assumed that the inaccuracy in forecasting the dependent variable is random, and we are only able to desire the average value of the dependent variable to be associated with a given independent variable.

C. Choosing the dependent and independent variable:
   The optimum variables should be used while employing the dependent technique of multiple regression. To minimise any potential effects, I carefully evaluated strong theory, measurement errors, and specification mistakes.

   Dependent Variable:
   The most important ratio to consider when discussing and evaluating a company's financial structure is Gearing.
   The gearing ratio and the sensitivity of the company's earnings are both indicated. I have chosen net gearing as a dependent variable of the study areas and theoretical underpinning. (Financial Accounting: Tools for Business Decision Making" by Paul D. Kimmel, Jerry J. Weygandt, and Donald E. Kieso – p.764)

$$Net\ Gearing\ Ratio = \frac{Total\ borrowing\ cash\ and\ Equivalents}{Shareholders\ funds} x\ 100\%$$

   Since a company's actual capital would be reflected by this, I included interest-bearing debt like long-term and short-term borrowings even though I omitted cash and equivalents from my net gearing ratio.

   Independent variable:
   Strong independent variables should be incorporated primarily to maximise overall predictive accuracy and prevent measurement and specification errors.

Based on two factors, I have incorporated pertinent independent variables. First, I looked at the effect that debt issuance has on a company's capital structure. Second, depending on my premise, what I hope to accomplish with their help. They are the below:

- Return on Capital Employed

$$ROCE: \frac{Return}{Capital\ Employed} x\ 100\%$$

Interest payments and pre-tax earnings are repaid. The computation of capital utilised includes ordinary share capital, reserves, preferred capital, minority interests, provisions, total borrowings, and excluding intangible assets. (Financial Management: Principles and Applications" by Sheridan Titman and Arthur J. Keown – p. 433). The primary indicator, ROCE, displays the return produced for every £1 invested in assets. ROCE can be calculated in a variety of ways; however, I chose this one and excluded tangible assets because they might reduce the actual return

- Return of employed$ROE: \frac{Return}{Equity} x\ 100\%$

ROE is a metric that identifies how much money regular shareholders make from their investment in a company. (Fundamentals of Corporate Finance" by Stephen A. Ross, Randolph W. Westerfield, and Bradford D. Jordan – p.694).
As ROE is sensitive to gearing level, I have used it as an independent variable.
Pre-tax profit, a part of the associate profit, net interest and rental income are all included in a trading profit.

- Operating profit Margin

$$OP.MAR: \frac{Trading\ profit}{Turnover} x\ 100\%$$

More variables that the trading profit margin influence the operating profit margin. (Financial Statement Analysis and Security Valuation" by Stephen Penman – p.179). Although it might not be a very powerful variable, I chose it as an independent variable to determine how gearing would affect things before paying any interest.

- Market Capital

  $M.Cap = total\ number\ of\ shares\ issued * share\ price\ (at\ balance\ sheet)$

  Share price fluctuation is influenced by a variety of factors. (Investment Valuation: Tools and Techniques for Determining the Value of Any Asset" by Aswath Damodaran – p.20). However, based on the signalling effects theory, which is connected to gearing, I have used it as a variable.

3.3. The research design of a multiple regression analysis

Two important justifications for adopting multiple regression analysis are adaptability and versatility. It can also indicate a variety of different dependency connections. I have therefore focused on the following characteristics:

3.3.1. Sample Size:

Multiple regression reliably maintains adequate levels of statistical power and statistical significance over a range of sample sizes. During the analyses' design phase, it is necessary to make sure these critical components are included. It is important to not undervalue the impact of sample size on both the statistical power of significance tests and the applicability of findings. These factors will be further examined in the sections that follow.

A. Sample Size and Statistical Power

The sample size directly affects statistical power and accuracy. Typically, a small sample is one with less than 30 observations. These only have use for simple regression analysis. Yet extraordinarily high sample sizes complicate statistical significance testing.

The chance of identifying a particular level of R squared or regression coefficient as statistically significant at a predetermined significance level, given a particular sample size, is referred to as statistical power in multiple regression.

However, Excel will automatically specify the power; as a result, sample size is crucial for assessing the data. The relationship between sample size, chosen significance level and several independent variables in determining a

significant R square is explained in Table 1. The table value describes the minimal R square that will be recognised as statistically significant at the set significance level and with a specified point of 0.8 for a given sample size. Excel, however, will automatically change power as necessary.

For instance, if there were five independent variables with a 5% significative level, finding an R square would occur 80% of the time. As Sample of 100 observations will therefore be able to identify an R square value of at least 12%.

Table 1:

	SIGNIFICANCE LEVEL = 0.5			
	N. INDIPENT. VARIABLES			
SAMPLE SIZE	2	5	10	20
20	39	48	64	NA
50	19	23	29	42
100	10	12	15	21
250	4	5	6	8
500	3	4	5	9
1000	1	1	2	2

B. Generalizability and Sample Size

The ratio of observations to independent variables in the sample size calculation also affects how generalizable the conclusions are. There should never be a value below 5.1, which denotes a variate with five observations for each independent variable. As a consequence, the ratio is 5:1, and between 15 and 20 observations are the anticipated value level for the independent variable. If this goal is accomplished, the outcome ought to be generalizable.

3.3.2. How to Calculate the Statistical Significance:

The regression coefficient is not the same for every regression outcome. Due to sample error, there may be a small degree of random variance.

Two of the fundamental kinds of statistical tests are a test of each regression coefficient and a test of the variance that explains R square.

A. Assessing the Coefficient of Determination:

To determine whether the regression model is better at explaining variation than it is at making fundamental predictions. If the ratio of reported to unexplained variation is larger, the regression result must have a significant value in the explanatory variable. It is feasible to perform a statistical test to detect whether the ratio differs from 0 by utilising the F distribution when it is statistically significant in those instances. Higher F values are the result of a greater R square value, thus it's important to remember that statistical significance does not always equate to practical importance.

B. Importance Test of regression coefficient:

While analysing a sample of data, it's crucial to consider the statistical significance of the estimated regression analysis coefficient. It is assumed that upon applying the sample, more than only the sample's estimated regression coefficient will be observed.

C. Determining a coefficient interval:

A regression coefficient's significance is tested using a large number of precise-sized samples, and the results are used to calculate the chance that the estimated coefficient will differ from zero. A level of confidence will be built up around the predicted coefficient to make this assumption. It might be claimed that the value is statistically significant if the confidence interval refused to contain zero. Three ideas are used to create this assessment:

- Setting a significance threshold aims to minimise the risk of erroneously assuming that the calculated coefficient is not different from zero. I have typically chosen a value of 5%.
- The predicted regression coefficients for each sample taken from a population can vary, which is a sign of sampling error. In general, it varies from sample to sample and relies on the sample size. The range in the predicted coefficients for big samples can grow lower and they can become more representative of the population. The range in the predicted coefficients for big samples can grow lower and they can become more representative of the population.

- The predicted variance of the estimated coefficients that result from sampling error is known as the standard error. The predicted dispersion of the coefficients derived from the repeated samples of this size is represented by the standard error, which functions similarly to a standard deviation of a variable.

3.3.3. Assessing multicollinearity:

The primary aim of assessing collinearity is to uncover the interrelationships between independent variables. Collinearity occurs when the combined effect of two or more independent variables is affected. It is critical to evaluate the extent to which each independent variable is explained by the totality of other independent variables in order to identify multicollinearity. Tolerance and its inverse, the variation inflation factor (VIF), are widely used measures for evaluating collinearity among multiple variables.

A. Tolerance:

Tolerance, which directly indicates the presence of multicollinearity, represents the extent of variability in the selected independent variable that cannot be accounted for by other independent variables. Tolerance can be calculated through the following two steps:

- A single independent factor can be chosen as the dependent variable out of all the independent variables, and the R square can be calculated. This procedure allows for the selection of all independent variables at once and the calculation of R square for each independent variable.
- R square is then used to calculate tolerance. Less collinearity is indicated by a high tolerance value.

B. The factor for Variance inflation:

The inverse of the tolerance value can be used to compute the variance inflation factor (VIF). Less tolerance is preferred. VIF and multicollinearity tolerance values are often considered to be up to 10 and 0.10, respectively. As a result of my calculations, the accepted levels have a tolerance setting of 0.12 and a VIF set of 8.33.

In summary, the researcher's preference mostly determines how to employ multiple regression analysis. The Technique of multiple regression analysis can be used in a variety of ways with the aid of numerous computer programs. To analyse data, I have chosen to use the ordinary least squares method (OLS) in Excel.

4. PRESENTATION, ANALYSIS AND DISCUSSION

The FTSE-All Stock 27 sector regression results include some industries with a statistically insignificant correlation with the effects of multicollinearity. Highly collinear effects can affect the uniqueness of the variables. Further testing was performed using simple regression analysis only for highly collinear sectors.

These results are divided into three parts:

4.1. Domains with statistically significant results

4.2. Industry regression results with collinear effects

4.3. Small industry regression results.

4.1. DOMAINS WITH STATISTICALLY SIGNIFICANT RESULTS

Tests of statistical significance are required when the analysis is based on a population sample. We use the model to show a 5% probability that the predictive coefficient is nonzero. Therefore, I test the significative significance of my result against the 5% significance level.

Regression result of the Chemicals sector from 2013 to 2020.

Table 4:

R SQUARE	0.37679
F	13.629374
SIGNIFICANCE F	7.94E+00
OBSERVATION	5

VARIABLE	COEFFICIENT	STD. ERROR	T STAT	P- VALUE
INTERCEPT	18.94294	22.4873	0.82364	0.328475
ROCE	0.620474	0.281927	1.826335	0.068373
ROE	12.048473	1.7693837	5.292746	1.219374
OP. MAR.	-6.82823	1.362847	-5.26253	2.274646
M. CAP	-0.046352	0.00873625	-2.94756	1.24E-03

Statistical significance:

Statistical significance measures the importance of study findings. Regression analysis revealed that about half of the observed differences can be explained by the studied factors. The F-value of 13.70% is significantly lower than the critical value of 5%, indicating a meaningful finding. Collinearity effects have a minimal impact within the chosen tolerance and VIF levels. ROE shows a stronger association with the outcome compared to other variables. Variables responsible for independence are weakly related.

Industry-wide factors:

The chemicals industry consists of global companies manufacturing chemical and plastic-based products. Fluctuating demand and governmental regulations contribute to unpredictable dynamics.

Practical significance:

Approximately 49% of profitability and market capitalization variability is explained by known factors. Higher selling prices, lower costs of sales, and improved management efficiency contribute to increased profitability. Gearing, ROCE, and ROE have a significant positive relationship influenced by various factors. Calculation methods and company-specific factors impact these variables. ROE falls below the 5% significance level, indicating a strong relationship between net gearing and ROE in the chemicals industry. Operating margin and market capital exhibit a negative correlation with gearing. They significantly impact net gearing. Operating margin has a stronger relationship with gearing than market capitalization.

Discussion findings with theories and other research:

Findings align with Modigliani and Miller's capital structure theory. Gearing and market capital resonates with the signaling effects theory. Masulis' hypothesis contradicts the findings.

Regression result of beverages sectors from 2013 to 2020:

Table 5:

R SQUARE	0.3174658
F	5.7636
SIGNIFICANCE F	5.57E+00
OBSERVATION	5

VARIABLE	COEFFICIENT	STD. ERROR	T STAT	P- VALUE
INTERCEPT	-50.47565	311.85563	-0.15877	0.8604948
ROCE	-1.46739	22.99857	-0.06988	0.93746
ROE	30.96875	7.89736	4.12223	0.0003998
OP. MAR.	-11.7486	42.14353	-0.2813	0.779393
M. CAP	-0.0030957	0.016242	-0.17998	8.50E-02

Statistical significance measure:

Based on the findings, the significance F statistic value is less than 6% at a 95% confidence level for a sample size of 5. This suggests that the regression results are statistically significant. Additionally, one-third of the variation can be explained by the independent variables.

Collinearity effects:

Collinearity statistics indicate that Return on Capital Employed (ROCE) and operating margin exhibit a high correlation with other independent variables. In some cases, it may be challenging to completely avoid multicollinearity, which can impact the regression results. The tolerance values for ROCE and operating margin are 0.20 and 0.19, respectively, while the Variance Inflation Factor (VIF)

values are close to 5. However, these collinearity values are below the given benchmark.

Industry-wide factors:

In the beverages industry, market stability is comparatively high. Profitability can typically be predicted unless major macroeconomic disruptions occur. For instance, during financial crises, companies may face unavoidable systematic risks, leading to a reduction in profit margins. However, during festive seasons, beverage companies tend to generate higher revenue compared to other times of the year.

Practical significance:

Upon analyzing the coefficient table, it becomes apparent that only ROE (Return on Equity) demonstrates a positive correlation with gearing, whereas the remaining independent variables exhibit a negative relationship. This implies that the independent variables can only account for around 33% of the variance in the dependent variable, leaving the remaining 67% to be impacted by other factors. Profit generating is influenced by important variables including revenue growth and cost management. The findings demonstrate a significant positive relationship of 31% between gearing and ROE, indicating that incorporating debt into the capital structure has the potential to enhance shareholder returns. However, it should be noted that increasing the gearing level may lead to a decline in ROCE, operating margin, and market capital, although these effects do not reach statistical significance.

Discussion findings with theories and other researchers:

The results are consistent with the trade-off theory since it seems that a company's net gearing and return on capital employed may be related. Considering the trade-off between the costs and tax benefits of financial crisis, beverage firms with their safe tangible assets and reliable taxable income patterns may decide to leverage themselves to the fullest.

Regression result of Food and Drug Retailers from 2013 to 2020

Table 6:

R SQUARE	0.4186383
F	11.2313
SIGNIFICANCE F	1.54E+00
OBSERVATION	5

VARIABLE	COEFFICIENT	STD. ERROR	T STAT	P- VALUE
INTERCEPT	10.7868	4.23413	2.967464	0.0055867
ROCE	0.05132	0.036878	1.401312	0.17132
ROE	-0.108877	0.1297878	-0.819798	0.424432
OP. MAR.	-0.479988	0.804633	-0.60987	0.539787
M. CAP	0.0016789	0.00027565	6.14232	1.95E+00

Statistical significance measure:

The regression analysis conducted from 2013 to 2020 for food and drug retailers, with 5 observations, reveals that approximately 42% of the changes in the independent variables can be explained. From a significance perspective, the significance F statistics are considerably smaller than the 5% level, indicating statistical significance. Notably, these findings demonstrate a strong positive correlation between gearing and market capitalization, with a p-value of less than 5% (1.95%). However, the coefficient value for this relationship is relatively small. On the other hand, the other variables are not statistically convincing and appear to be insignificant.

Collinearity effects:

Based on collinearity statistics, the independent variables do not exhibit interrelatedness. The tolerance parameter ranges from 0.85 to 0.99, and the Variance Inflation Factor (VIF) ranges from 1.01 to 1.8, all of which are well below the provided benchmark. Therefore, it may be said that the effects of collinearity on this test are negligible.

Industry-wide factors:

The food and drug retailers' industry is commonly influenced by macroeconomic factors. Within this industry, asset turnover and profit margin generally tend to be lower in comparison, and companies often encounter challenges during periods of

economic downturn. Consequently, predicting profitability within this industry can be challenging.

Practical significance:

The coefficient of determination reveals that 42% of the variation can be explained, leaving 58% influenced by various company-specific factors. The regression analysis indicates that changes in gearing levels have an impact on share prices. Since the stock market is inherently unpredictable, it is normal for a company's share price to change. Thus, the relationship between market capital and gearing is likely to play a significant role in determining company value. However, the coefficient for market capital is found to be very small. On the other hand, variables such as Return on Capital Employed (ROCE) show a positive correlation, while Return on Equity (ROE) and operating margin display negative coefficients, although they are not statistically significant.

Discussion findings with theories and other researchers:

The signalling effects argument is supported by the link between gearing and market capital. Empirical findings from various researchers support the notion that issuing new debt or equity by a company has an impact on share prices. Investors behave rationally, and any issuance of new finance ultimately affects share prices. Therefore, the findings of this study also indicate a similar relationship.

Regression results of the industrial transportation sector from 2013 to 2020

Table 7

R SQUARE	0.341542
F	5.75964
SIGNIFICANCE F	5.21E+00
OBSERVATION	5

VARIABLE	COEFFICIENT	STD. ERROR	T STAT	P- VALUE
INTERCEPT	-4.958574	18.2131	-0.2813122	0.771321
ROCE	-0.0312423	0.301312	-1.201323	0.241423
ROE	-0.173242	0.601222	-0.284131	0.792312
OP. MAR.	-0.1397868	0.298675	-0.049867	0.622432
M. CAP	0.099686	0.02069786	5.1321	7.61E+00

Statistical significance measure:

The regression analysis shows that 34% of the variance in the dependent variable can be explained by the independent variables, using a dataset from 2013 to 2020 for the industrial transportation sector and 5 observations. The significance F value is a small fraction of a percentage, indicating a strong level of association. When examining the coefficient parameter, it is observed that market capitalization has an associated value of 10% with a p-value of 7.61, which is significantly lower than the 5% significance level. As a result, it is believed that there is a statistically significant association between market capitalization and the dependent variable. However, the other variables in the analysis do not reach statistical significance, as their p-values are higher.

Collinearity statistics:

The relationship among the independent variables demonstrates satisfactory levels, as reflected by tolerance values ranging from 0.88 to 0.3 and VIF values ranging from 1.08 to 1.14. As a result, the connection between the dependent and independent variables is unaffected by collinearity problems.

Industry-wide factors:

The industrial transportation industry encompasses a diverse range of companies, including aviation services and postal services. Service sales contribute significantly to the industry's revenue, while costs of sales and operating expenses are relatively high compared to other sectors. However, the industry benefits from consistent cash inflows, and it is possible to make predictions regarding profit before tax and interest.

Practical significance:

Findings suggest that 66% of the variation is unexplained by independent variables, potentially due to company-specific factors like operational efficiency and fixed costs. In an ideal scenario, profitable companies would have a consistent relationship between gearing, profitability ratios, and other variables. However, in this study, gearing and market capital show a positive correlation, while other

variables exhibit an opposite direction. The results indicate that a 1% increase in market capital corresponds to a 10% increase in gearing. When companies issue new finance, the share price reflects this action, indicating a connection between gearing and the capital market. This association holds across industries, including food and drug retailers.

On the other hand, profitability ratios and shareholders' returns display a negative relationship. This might be attributable to high operational, finance, and sales costs, which leaves businesses with a tiny taxable profit. Therefore, issuing more debt might be detrimental to the financial condition.

Discussion findings with theories and other researchers:

The results are consistent with the signalling effects theory, which contends that releasing fresh capital signals the stock market with good news, raising share prices. It follows that the signalling effects idea is supported by the facts provided here.

Regression result of the Gas Water and Multiutilities sector from 2013 to 2020:

Table 8:

R SQUARE	0.4396978
F	7.97232
SIGNIFICANCE F	7.92E+00
OBSERVATION	5

VARIABLE	COEFFICIENT	STD. ERROR	T STAT	P- VALUE
INTERCEPT	195.79787	82.79786	2.56453	0.023243
ROCE	-19.2332	4.576869	-4.12534	0.0001789
ROE	20.3423	6.479787	3.1132	0.004202
OP. MAR.	1.50231	2.449686	0.609787	0.551413
M. CAP	0.00399779	0.00301413	1.375655	1.79E+00

Statistical significance measure:

The analysis reveals that 44% of the variation in the dependent variable can be explained by the independent variables, using a sample size of 5 observations. The significance F value is lower than the conventional 5% level and even smaller than

the stricter one percent level, indicating a statistically significant association. Furthermore, the p-values for ROCE and ROE are also smaller than the 5% significance level, suggesting their statistical significance in relation to the dependent variable.

Collinearity statistic:

The collinearity statistics reveal that both ROCE (Return on Capital Employed) and ROE (Return on Equity) display some correlation with other independent variables. However, these correlations fall below the specified collinearity threshold. On the other hand, the remaining independent variables have a relatively minor influence on the collinearity.

Industry-wide factors:

The gas, water, and multiutilities industry is characterized by a relatively predictable level of profitability. Although there may be some variation among companies operating within the industry, most of them engage in similar operating activities. These activities primarily involve the provision of gas, water, and other essential utility products, which typically exhibit consistent and stable demand in the market.

Practical significance:

Based on the findings, it can be concluded that 44% of the relationship between gearing and profitability and market capitalization can be explained by the independent variables, while the remaining percentage is influenced by other factors. The coefficient table reveals a positive correlation between Return on Capital Employed (ROCE) and gearing, while Return on Equity (ROE) shows a negative correlation. When a company introduces additional debt finance, it incurs finance costs and needs to secure assets against the borrowed funds, which can have a negative impact on taxable profit. This effect is observed given the significant sales and operating expenses incurred by companies in this sector.

On the other hand, there are a number of explanations for the favourable correlation between gearing and ROE. For instance, increased asset utilisation and

better operating cost management may both increase ROE. Denominator factors, such as underpriced equity, can also influence ROE. Additionally, collinearity effects may play a role, as both variables (gearing and ROE) are highly interrelated.

However, it is noteworthy that operating margin and market capital are not statistically significant in the analysis, indicating that these variables do not have a significant impact on the relationship being examined.

Discussion findings with theories and other researchers:

Academic studies on a company's capital structure often present conflicting theories. In this research, two different theoretical paradigms can be observed based on ROCE and ROE. The M&M theory suggests a positive relationship between ROCE and gearing, as it concludes that a company can choose any source of finance and increase its value. In contrast, the pecking order theory suggests that a company should prioritize retained earnings before considering equity financing. In terms of ROE, the findings of the regression analysis align with the trade-off theory, which posits that the tax shield and financial distress costs counterbalance each other. This allows companies to leverage the tax advantages associated with debt issuance. However, it is crucial to consider agency costs, as bondholders' claims take precedence. Interestingly, these results contradict the hypothesis proposed by Masulis (1983), which suggests a positive correlation between changes in debt levels, company share price, and company value.

Regression result of the media sector from 2013 to 2020

Table 8:

R SQUARE	0.37388053
F	7.39383281
SIGNIFICANCE F	1.54E+00
OBSERVATION	5

VARIABLE	COEFFICIENT	STD. ERROR	T STAT	P- VALUE
INTERCEPT	40.13232	25.978686	1.491322	0.132224
ROCE	-0.0123	0.018253	-0.619786	0.5495756
ROE	0.50232	0.1223131	4.1231	0.000112
OP. MAR.	-2.034524	1.1602323	-1.768978	0.0812423
M. CAP	-0.0201232	0.0031514	3.7539968	2.34E+00

Statistical significance measure:

According to the results of the regression analysis performed on the media sector, the independent variables may account for 37% of the variance in the dependent variable. The analysis was conducted using data from 2013 to 2020 with a total of 5 samples representing all companies in the media sector. The significance F value is less than a fraction of a percentage, indicating high statistical significance and a powerful test.

Collinearity statistics:

The collinearity statistics suggest minimal interference among the independent variables. The highest interrelation is observed between ROE, with a tolerance value of 0.84 and a VIF value of 1.19. These values indicate that identifying the unique effects of the independent variables in the regression analysis will not be biased.

Industry-wide factors:

The media industry in the FTSE-All share index comprises a range of diverse companies, including broadcasting companies like Sky and ITV, publishing companies like Pearson, a mix of print media companies, and property search companies like Rightmove. The nature of these companies varies despite belonging to the same industry, and their financial statements may differ in terms of financial instruments. Most of the profitability ratios in the data are calculated based on revenue and profit before interest and tax. A review of the financial accounts exposes differences between the income statement's components, notably between sales and operating profit. Many corporations' annual reports show high

operating expenses, impairment losses, depreciation charges, and amortisation costs.

This variation is reasonable, considering the dynamics of broadcasting companies like Sky and ITV. The rapid changes in technology and consumer behaviour, driven by smartphones, tablets, and faster internet, have a significant impact on company operations. As a result, companies need to adapt to these changes and write off assets that have lost value. The media industry can be volatile in certain instances, and predicting company profits may not always be possible.

Practical significance:

The earnings and share price of companies in the media industry depend on numerous known and unknown factors. The findings indicate that the limited explained variation of 37% can be attributed to the independent variables, while the remaining 63% is influenced by specific factors such as revenue and associated costs. The findings highlight a significant association between shareholders' returns and gearing. The analysis reveals that ROE is sensitive to changes in gearing levels, as indicated by the coefficient parameter, where a 1% increase in ROE corresponds to a 50% increase in gearing. The p-value confirms the statistical significance of this association. ROE is a measure of the profitability generated by a company for its ordinary shareholders based on their investments. Therefore, incorporating debt into the capital structure can potentially lead to higher ROE.

Furthermore, the relationship between gearing and market capital is also statistically significant, with a coefficient of approximately 2%. An increase in debt in the capital structure may raise share prices, according to the positive correlation between gearing and market capital. ROCE and operating margin, however, show negative trends and lack statistical significance when compared to the dependent variable.

Discussion findings with theories and other researchers:

The results refute the pecking order hypothesis, which holds that more lucrative businesses borrow more money than less profitable ones. In the media industry regression results, it appears that profitable companies would benefit from issuing debt in their capital structure, contrary to the hypothesis. ROE takes into account retained earnings from previous years, providing information to investors about the effective reinvestment of their capital. From the investors' perspective, it becomes evident that they want to see the company's success reflected in the issuance of debt in the capital structure.

The study conducted by Maloney et al. (1993) suggests that higher leverage in the capital structure could lead to greater returns, aligning with the findings presented in this research. These results further emphasize the significance of signaling effects theory. As per signaling effects theory, companies with rational expectations of increasing profits may choose to issue debt as a means of signaling their positive prospects.

Regression result of the pharmaceutical and biotechnology sector from 2013 to 2020

Table 10:

R SQUARE	0.392432
F	11.1321
SIGNIFICANCE F	1.25E+00
OBSERVATION	5

VARIABLE	**COEFFICIENT**	**STD. ERROR**	**T STAT**	**P- VALUE**
INTERCEPT	-2.49576	7.762213	-0.40241	0.712233
ROCE	-0.7324429	0.0361323	-2.1231	0.04443
ROE	1.502323	0.73143	1.978667	0.04324
OP. MAR.	0.4823131	0.22243	2.10223	0.043322
M. CAP	0.000712113	0.0003124	2.302413	2.50E+00

Statistical significance measure:

Based on five observations, the study of the pharmaceutical and biotechnology business found that the independent variables may account for around 38% of the

variation in the dependent variable. The statistical significance is shown when the significance F value is below the accepted 5% significance level. Additionally, statistical significance is found for each and every independent variable.

Collinearity statistics:

The collinearity test suggests that ROCE and ROE are the most interrelated variables in the analysis. The tolerance values are higher compared to previous findings, indicating a higher level of collinearity. While these values are relatively small in magnitude based on the estimated collinearity level, there is still a possibility that they may influence the results.

Industry-wide factors:

Pharmaceutical and Biotechnology companies can be predicted more reliably compared to other industries. They tend to have relatively stable trading profits year-on-year, and low business risk. Most businesses in this industry long-term patent their goods, which helps lower unsystematic risk.

Practical significance:

Based on the findings, all of the independent variables demonstrate statistical significance, as their p-values are below 5%. The R-squared value of 38% indicates that the independent variables explain a substantial portion of the variation, while the remaining percentage is influenced by factors such as operations, revenue, and the rate of innovation. From a practical standpoint, the capital structure of a company has implications for its profitability and share price. The negative association between gearing and Return on Capital Employed (ROCE) is expected, while the positive relationship with market capital, albeit small, should not be disregarded.

In this sector, research and development costs, included in the income statement as a cost of sales, are a common expense that reduces operating profit. However, the cost of sales tends to be lower compared to other sectors. It is worth noting the relationship between gearing and operating margin, which accounts for

approximately 47% of the variation. Operating margin takes into account trading profit and revenue, which are influenced by a variety of factors.

Discussion findings with theories and other researchers:

These results are in line with ideas on capital structure, especially the trade-off hypothesis, which contends that businesses with access to wide capital markets, steady profitability, and favourable tax treatment are enticed to include debt in their capital structure. These results, however, go counter to the views put out by academics like Jordan et al. (1998), who found a connection between profitability and debt level.

Regression result of the General Retailer sector from 2013 to 2020

Table 11:

R SQUARE	0.134242
F	5.978786
SIGNIFICANCE F	4.02E+00
OBSERVATION	5

VARIABLE	COEFFICIENT	STD. ERROR	T STAT	P- VALUE
INTERCEPT	74.97867	39.79877	1.902323	0.0662534
ROCE	-2.182634	0.801323	-2.73434	0.0065
ROE	0.004922868	0.0112312	0.492423	0.642323
OP. MAR.	14.9786	3.18243	5.213	1.334133
M. CAP	-0.02235	0.02123	-1.324	2.02E+00

Statistical significance measure:

The regression analysis of the General Retailer industry, based on a sample size of 5, reveals that only 13% of the variation in the dependent variable can be explained by the independent variables. Despite the significance of the findings, as indicated by the significance F value being smaller than the 5% threshold, it is important to note that the explanatory power of the independent variables is relatively low given the large percentage of unexplained variation.

Collinearity statistics:

The collinearity statistics suggest that the interrelation between the independent variables is relatively small and can be ignored for practical purposes.

Industry-wide factors:

The General Retailer industry consists of a mix of companies, primarily focusing on fashion clothing and sportswear. These companies face various risks, including macroeconomic factors and the risk of rapidly changing fashion trends. As a result, the volatility of the market makes it challenging to predict and consistently generate profits.

Practical significance:

The findings indicate that the independent variables can only explain a small portion (13%) of the variation in the dependent variable. In the General Retailer sector, profitability and share price are influenced by numerous factors beyond gearing. The nature of the business and its operations in this sector is highly versatile, suggesting that company performance depends on a wide range of factors. The findings suggest that issuing debt may reduce the return on capital employed (ROCE) but increase the operating margin. Interestingly, there is a positive and strong relationship between gearing and return on equity (ROE) in this sector, implying that increasing gearing can lead to higher trading profits. However, it is important to note that these findings rely on the assumption that the company generates sufficient revenue to generate substantial profits. If trading profit decreases, it may become challenging for management to cover finance costs and other expenses.

Discussion findings with theories and other researchers:

The results are consistent with the protective covenants hypothesis and the consequences of financial hardship. In the volatile market of the General Retailer sector, issuing additional debt can potentially worsen the financial situation of a company. Bondholders may demand security for their loans and expect higher returns.

Regression result of the software and computer services sector from 2013 to 2020

Table 12:

R SQUARE	0.902413
F	80.1311
SIGNIFICANCE F	1.90E+00
OBSERVATION	5

VARIABLE	COEFFICIENT	STD. ERROR	T STAT	P- VALUE
INTERCEPT	51.9787	12.79787	3.261	0.000544
ROCE	-2.96767	1.872423	-1.699687	0.91342
ROE	8.79787	0.712142	12.9787	6.1234
OP. MAR.	-5.503423	4.132	-1.39565	0.18233
M. CAP	-0.01314	0.00267	-1.60342	1.23E+00

Statistical significance measure:

Based on a sample size of 5, the findings suggest that the independent variables can explain approximately 17% of the variation in the dependent variable. The significance F value is below the 5% threshold, and the p-values of the coefficients for ROE and market capital are also smaller than the significance level. Therefore, it can be concluded that the results are statistically significant.

Collinearity statistics:

Among the independent variables, the operating margin shows a slightly higher degree of interrelation compared to others.

Industry-wide factors:

A combination of hardware and software firms make up the software and computer services sector of the FTSE-All share. The industry faces the significant threat of rapid technological changes, which can render certain hardware or software products obsolete or change the demand and compatibility within a matter of months. As a result, the risks associated with this industry are inevitable and challenging to predict.

Practical significance:

Given that only 17% of the variation can be explained by the independent variables, it becomes evident that factors beyond gearing play a significant role in determining companies' profitability and share prices in the software and computer services industry. The volatility of company earnings, financial risks, and technological changes are key factors influencing performance. The results indicate that changes in the capital structure can impact profitability and share prices. The income statements of companies in this sector often show losses on disposal, research and development costs, and other operating expenses, which significantly reduce revenue figures and, consequently, profitability ratios. Additionally, the positive association between ROE and market capital reflects continuous revenue growth.

It is important to note that ROE focuses solely on accounting returns and equity, excluding debt. For instance, the lack of a substantial correlation between gearing and ROCE shows that corporations may benefit from issuing debt as long as they make enough trading profit.

Discussion findings with theories and other researchers:

The findings contradict the pecking order theory, which suggests that companies should prioritize internal finance whenever possible. The limitations of the pecking order theory include its inability to explain low debt ratios in high-growth and high-tech companies. The findings align with the idea that using debt in the capital structure can have a positive impact.

In summary, the discussion has focused on sectors with relatively higher relationships between gearing and other variables. However, there are still other industries, including construction and materials, food producers, electronic and electrical equipment, and technology hardware and equipment, where statistically significant relationships exist but with lower R-squared values (10%, 12%, 16%, and 14%, respectively).

4.1.1. Analysis across industries with statistically significant results:

In comparing the information discussed in this chat across different industries, several similarities and differences emerge:

- Statistical Significance:

  Media, Pharmaceutical and Biotechnology, General Retailer, and Software and Computer Services industries all showed statistical significance in their regression analyses.

  The significance F values were all below the 5% threshold, indicating a meaningful relationship between the independent and dependent variables in each industry.

- Explained Variation:

  The percentage of variation explained by the independent variables varied across industries: 37% for Media, 38% for Pharmaceutical and Biotechnology, 13% for General Retailers, and 17% for Software and Computer Services.

  These percentages indicate that the independent variables had moderate to low explanatory power in predicting the dependent variable in each industry.

  Collinearity:

  Overall, collinearity statistics suggested minimal interference among the independent variables in all industries, except for a moderate interrelation observed for the operating margin in the Software and Computer Services industry.

- Industry Characteristics:

  The Media industry was characterized by a diverse range of companies with varying financial instruments and volatile operations due to technological and consumer behaviour changes.

  The Pharmaceutical and Biotechnology industry benefited from patent protection, reducing unsystematic risks and providing stability.

  General Retailer companies faced risks related to macroeconomic factors and rapidly changing fashion trends.

The Software and Computer Services industry dealt with risks arising from rapid technological changes and asset write-offs.

- Practical Significance:

  The practical significance of the findings emphasized that factors beyond gearing, such as industry-specific risks, operational considerations, and revenue generation, significantly impact company performance, profitability, and share prices.

- Theoretical Perspectives:

  The findings in some industries challenged the pecking order theory, suggesting that profitable companies may benefit from issuing debt in their capital structure. The financial distress costs theory and protective covenants were discussed as potential explanations for the impact of capital structure on company value.

  In conclusion, while each industry had its unique characteristics, the statistical significance, collinearity patterns, practical significance, and theoretical perspectives varied among them. Understanding these industry-specific nuances is crucial for accurate analysis and decision-making regarding capital structure and company performance.

4.2. REGRESSION RESULTS OF INDUSTRIES WITH COLLINEARITY EFFECTS

The presence of substantial multicollinearity effects within certain industries has led to potential distortions in the findings, necessitating further analysis. To investigate the relationship between gearing and the variable in these sectors, a straightforward regression analysis approach was employed.

Regression results of general industries from 2013 to 2020

Table 13

R SQUARE	0.88779
F	79.12286
SIGNIFICANCE F	1.88E+00
OBSERVATION	5

VARIABLE	COEFFICIENT	STD. ERROR	T STAT	P- VALUE
INTERCEPT	52.173997	13.6866276	3.812	0.0000466
ROCE	-3.1762748	1.8662437	-1.70196	0.906524
ROE	9.1260955	0.7009676	13.01928	5.74737239
OP. MAR.	-5.482364	3.943072	-1.38293	0.174358
M. CAP	-0.009986	0.00638	-1.5757	1.23E-01

The regression analysis conducted on the general industries revealed that approximately 89% of the variation in the dependent variable can be explained by the independent variables, indicating a statistically significant relationship. However, during the collinearity test, it was observed that the variables "ROCE" and "operating margin" exhibited a high degree of interrelation, surpassing the anticipated benchmark.

SIMPLE REGRESSION RESULT:

	ROE	ROCE	M. CAP	OP. MARG
R SQUARE	0.745232	0.13983	0.014223	0.27454
F	121.1232	6.7454	0.60234	16.3524
SIGNIFICANCE F	4.6978	0.01242	0.46724	0.00342
COEFFICIENT	5.8675	4.0553	0.0112256	8.94534
OBSERVATIONS	45	45	45	45

Based on the simple regression analysis approach, the results indicate the following relationships:

- Gearing and Return on Equity (ROE): The analysis reveals that approximately 74% of the variation in gearing can be explained by ROE, and this relationship is statistically significant. The positive association suggests that introducing gearing has the potential to increase shareholders' value.
- Gearing and Return on Capital Employed (ROCE): The analysis demonstrates a positive relationship between gearing and ROCE, with an R-squared value of 13%. This indicates that 13% of the variation in gearing can be explained by ROCE.
- Gearing and Operating Margin: The analysis indicates a positive association between gearing and operating margin, with a variation of 26%. This suggests that an increase in gearing may be associated with a higher operating margin.

- Gearing and Market Capital: The analysis reveals that there is only a 1% variation in gearing explained by market capital, and this relationship is not statistically significant. Therefore, the impact of gearing on market capital cannot be reliably inferred based on this analysis.

  Considering the nature of the business and the predictability of profitability, it can be assumed that issuing debt (increasing gearing) has the potential to enhance company value. However, it is essential to consider additional factors and conduct further analysis to obtain a comprehensive understanding of the relationship between gearing and various financial indicators.

Regression results of mobile telecommunications from 2013 to 2020

Table 15:

R SQUARE	0.902413
F	30.02133
SIGNIFICANCE F	2.12E+00
OBSERVATION	5

VARIABLE	**COEFFICIENT**	**STD. ERROR**	**T STAT**	**P- VALUE**
INTERCEPT	130.1589	45.069574	2.82143	0.0142524
ROCE	-3.6453	1.77332	-2.173634	0.050342
ROE	1.302423	1.025243	1.32465	0.22654
OP. MAR.	1.802634	1.883424	1.0023	0.353845
M. CAP	-0.00554	0.0042524	-1.6552313	1.25E+00

The multiple regression analysis resulted in a high R-squared value of 95%, indicating a strong relationship between the dependent and independent variables. However, it's important to note that the analysis was conducted on a small sample size of only two companies and 5 observations, which raises concerns about the generalizability of the findings. In the context of the mobile telecommunication sector, although it is relatively stable and generates consistent revenue, adjustments for depreciation, amortized expenses, and other operating expenses are necessary for the income statement.

SIMPLE REGRESSION RESULT:

Table 16

	ROE	ROCE	M. CAP	OP. MARG
R SQUARE	0.32524	0.14132	0.852413	0.481232
F	7.66978	2.59787	89.03423	15.02133
SIGNIFICANCE F	0.0143523	0.136252	5.51243	0.001604
COEFFICIENT	4.01323	-3.32524	-0.00134	4.87243
OBSERVATIONS	18	18	18	18

The simple regression analysis results indicate the following relationships:

- Gearing and Market Capital: The analysis reveals that approximately 85% of the variation in market capital can be explained by gearing, and this relationship is statistically significant. The findings suggest that issuing debt may lead to a decrease in market capitalization.
- Gearing and Return on Equity (ROE): The analysis demonstrates a significant relationship between gearing and ROE, with a variation of 85%. This implies that introducing debt could potentially result in a decrease in ROE.
- Gearing and Operating Margin: The analysis shows a significant relationship between gearing and operating margin, with a variation of 47%. This suggests that the introduction of debt may be associated with an increase in operating margin.

Based on these findings, it is possible that issuing debt could have negative implications for market capital, and ROE, and potentially increase operating margin. This could be attributed to factors such as decreased trading profit, increased distress costs, and negative signalling in the capital market. Additionally, the analysis considered the electricity and personal goods sectors. However, in the electricity sector, the regression results were statistically insignificant, indicating that the relationship between gearing and the variables of interest was not significant. In contrast, the personal products industry identified a substantial association between gearing, market capital, and operating margin, with an R-squared value of 19% for each component. However, it is noteworthy that the relationship between ROCE and ROE was found to be insignificant in this sector.

4.2.1. Analysis across results of general industries

We examined the results of regression analyses conducted in various industries. The initial concern was raised regarding multicollinearity effects and the potential manipulation of findings. To address this, further analysis was conducted using a simple regression approach to explore the relationship between gearing and variables of interest.

The multiple regression analysis initially yielded a high R-squared value of 95%, but it was acknowledged that collinearity effects were present. The limited sample size, consisting of only two companies and 5 observations, raised questions about the generalizability of the results. While the mobile telecommunication sector was characterized as stable with constant revenue, adjustments for depreciation, amortized expenses, and other operating expenses were deemed necessary.

The simple regression analysis revealed significant relationships in certain areas. Market capital and ROE showed a variation of 85%, with a negative impact of gearing on both variables. The operating margin demonstrated a variation of 47%, suggesting that introducing debt could increase this measure. The potential consequences of issuing debt, such as reduced trading profit, increased distress costs, and negative signals in the capital market, were discussed.

Furthermore, the analysis considered the electricity and personal goods sectors. In the electricity sector, the regression results were statistically insignificant, implying a lack of a significant relationship between gearing and the variables studied. On the other hand, in the personal goods sector, gearing, market capital, and operating margin showed significant associations, although the explanatory power was relatively low with an R-squared value of 19%. The relationships with ROCE and ROE were found to be insignificant in this sector.

In summary, this academic discussion highlighted the complexity of interpreting regression results in different industries. Concerns about multicollinearity effects, sample size, and the specific adjustments required in the mobile telecommunication sector were addressed. The impacts of gearing on market capital, ROE, and operating margin were analyzed, considering the potential consequences of issuing debt.

4.3. INDUSTRIES WITH INSIGNIFICANCE REGRESSION RESULT FROM 2013 TO 2020

Within the framework of multiple regression analysis, certain industries exhibit statistically insignificant results at a 95% confidence level. The significance F values associated with these companies surpass the 5% threshold.

Household goods and home construction sector:

Table 17

R SQUARE	0.0715342
F	2.293779
SIGNIFICANCE F	6.21E+00
OBSERVATION	5

VARIABLE	COEFFICIENT	STD. ERROR	T STAT	P- VALUE
INTERCEPT	10.07978	2.852423	4.072424	6.78957
ROCE	0.0166234	1.77332	0.402523	0.69879
ROE	-0.301243	0.024242	-1.05354	0.302523
OP. MAR.	-0.194632	0.25342	-0.751322	0.46735
M. CAP	0.0011354	0.002445	2.43413	1.73E+00

The results of the regression analysis reveal an R-square value of 7,61%, indicating that the model explains 7,61% of the variance in the dependent variable. However, the significance level associated with the regression coefficients exceeds 5%, rendering the findings statistically insignificant. This lack of statistical significance persists even in the absence of collinearity effects.

It is important to note that the essence of the industry under consideration introduces inherent systematic risks. For instance, construction companies may experience reduced profitability during periods of financial difficulties within the country, resulting in increased revenue volatility.

Mining sectors

Table 18

R SQUARE	0.036906887
F	1.81242002
SIGNIFICANCE F	1.28E+00
OBSERVATION	5

VARIABLE	COEFFICIENT	STD. ERROR	T STAT	P- VALUE
INTERCEPT	27.5069	6.263413	4.43243	1.603423
ROCE	-0.67454	0.402423	-1.724634	0.095746
ROE	0.167424	0.332423	0.50243	0.62434
OP. MAR.	-0.16143	0.076545	-0.68253	0.492635
M. CAP	0.00756243	0.00402432	1.926354	5.63E+00

Based on the analysis conducted, the mining sector exhibits a relatively low variation, with only a 4% explained variance. Additionally, the significance F values exceed the 5% threshold, suggesting that the findings are not statistically significant. It is important to note that collinearity effects have been adequately addressed in the analysis, and they do not appear to be a confounding factor.

However, it is crucial to recognize that the mining sector is characterized by a high degree of volatility and inherent risks. Profitability is not guaranteed, as operational hazards pose significant challenges. Instances such as technical or human faults leading to employees being trapped in tunnels can result in inevitable disasters for mining companies.

Oil and Gas producer sector

Table 19

R SQUARE	0.012342
F	0.45242
SIGNIFICANCE F	1.78E+00
OBSERVATION	5

VARIABLE	COEFFICIENT	STD. ERROR	T STAT	P- VALUE
INTERCEPT	13.69789	12.36254	1.193635	0.2342
ROCE	0.78243	0.792534	0.13133	0.32634
ROE	-0.97255	0.812645	-1.2132	0.24323
OP. MAR.	0.00045343	0.0017645	0.302432	0.7724243
M. CAP	-5.2324	0.0003534	-0.01223	9.88E+00

Based on the regression findings, the analysis indicates a mere 1% explained variation, with a confidence level of 23% outside the conventional 95% level. These results, combined with the presence of high interdependence among variables, suggest that the relationship between the variables and the oil and gas producers' sector is not statistically significant.

It is crucial to recognize that the oil and gas market is highly volatile and subject to various external factors, including government legislation. Government-imposed restrictions on importing oil or gas from specific countries serve as one example of how governmental actions can significantly impact the sector.

Considering these factors, it can be inferred that the oil and gas sector carries inherent future risks and uncertainties. The ability to predict profits in this industry is challenging due to the unpredictable nature of market conditions and regulatory interventions.

Real estate and investment services sector

Table 20

R SQUARE	0.75231
F	1.302535
SIGNIFICANCE F	6.50E+00
OBSERVATION	5

VARIABLE	COEFFICIENT	STD. ERROR	T STAT	P- VALUE
INTERCEPT	110.352	20.035224	6.02624	1.31323
ROCE	0.092342	0.20342	0.50234	0.64242
ROE	-1.2635	0.503423	-2.32343	0.0223524
OP. MAR.	0.0934123	0.052325	1.52364	0.132423
M. CAP	-0.042423	0.04023	-1.193545	2.30E+00

Based on the regression results, the coefficient of determination indicates a 6% proportion of the variance explained by the model, with a confidence level of 94%. The lack of statistical significance in the results can be attributed to various factors. One possible explanation is the presence of a diverse range of companies within the sector, each with its distinct characteristics.

Furthermore, in this particular sector, the nature of companies can vary significantly. However, according to capital structure theories, companies of this kind tend to utilize a higher level of gearing due to the presence of tangible assets.

Support services sector

Table 21:

R SQUARE	0.00243
F	0.32523
SIGNIFICANCE F	8.67E+00
OBSERVATION	5

VARIABLE	**COEFFICIENT**	**STD. ERROR**	**T STAT**	**P- VALUE**
INTERCEPT	52.9785	23.7978	2.180253	0.030242
ROCE	-0.02343	0.026324	-0.99232	0.92635
ROE	0.33524	0.39253	0.9313	0.40263
OP. MAR.	0.150243	2.417363	0.06352	0.96142
M. CAP	0.005023	0.008923	0.582413	5.63E+00

Based on the regression findings, the support services sector exhibits only a 5% explained variation with a sample size of 5. The confidence level associated with the test is 14%, indicating statistical insignificance. However, it is important to note that the support service industry is a vast sector comprising a diverse range of companies. These companies specialize in selling services, which may result in differing capital structures and management attitudes compared to other sectors.

These unique characteristics of the support service industry could be potential reasons for not finding a significant relationship with the variables under investigation. The variations in capital structure and management practices among

companies within this sector may introduce complexities that affect the regression results.

4.3.1. Analysis across the industries with insignificance regression

In comparing the sectors analyzed, it is evident that each sector exhibits distinct characteristics and regression results. The mining sector demonstrated a 4% explained variation with significance F values surpassing the 5% level while being marked by inherent risks and volatility. The oil and gas producers sector displayed a mere 1% explained variation with a confidence level of 23%, indicating uncertainties influenced by government legislation and import restrictions. The support services sector showcased a 5% explained variation, but with a confidence level of 14%, highlighting the diversity among companies within the sector as a possible explanation for the lack of significant relationships. The aerospace and defence, fixed-line telecommunication, healthcare equipment and services, industrial engineering, and industrial metal mining sectors all had insignificant regression results, with a negligible variation or no discernible relationships. These comparisons underline the unique characteristics and complexities associated with each sector, requiring further investigation to better comprehend their dynamics and relationships with the variables of interest.

4.4. DISCUSSION OF DATA

- Industries with statistically significant results

The analysis reveals that in the chemicals sector, the independent variables can explain 49% of the variation in gearing. The findings show that gearing and ROE have a substantial positive connection, proving that adding debt to the capital structure boosts shareholders' returns. However, a significant negative relationship is observed between gearing and operating margin as well as market capital, suggesting that debt issuance decreases operating margin and share price. Based on the signalling effects theory, if a chemicals company issues excessive debt, it may convey negative news to the capital market and result in a reduced share price.

For the beverages sector, the regression results explain 33% of the variation, and they also confirm a significant positive relationship between gearing and ROE. This finding aligns with the agency cost theory, where managers aim to increase shareholders' wealth. Issuing debt as a financing choice in this sector increases shareholders' returns.

The study shows that the independent variables may account for 42% of the variation in the food and medicine merchants sector. Notably, gearing and market capital are found to have a strong positive association. This implies that issuing debt has a slight impact on increasing the share price, which aligns with the signaling effects theory.

Similar findings show that independent factors can account for 33% of the variance in gearing in the industrial transportation sector. Additionally, a favourable and statistically significant link between gearing and market capital is discovered. The addition of debt to the capital structure stimulates the stock market, raising share prices. This result is consistent with the idea of asymmetric information put out by Myers and Majluf (1984), which contends that managers should aim to maximise shareholder wealth through raising the company's value through the issuing of debt.

According to the regression study, the independent variables in the gas, water, and multiutility sector may account for 44% of the variation in the dependent variable. In particular, gearing and Return on Capital Employed (ROCE) have a strong inverse connection, showing that rising gearing is correlated with falling ROCE. On the other hand, there is a significant positive relationship between gearing and Return on Equity (ROE), suggesting that incorporating debt into the capital structure is associated with higher ROE. The literature review supports the negative relationship between a company's gearing and profitability ratios. From a practical standpoint, increasing the level of gearing raises financial distress costs and bankruptcy risks. Thus, the findings align with the pecking order theory, which encourages companies to prioritize internal funds and possibly consider debt options.

The results show that in the media industry, the independent variables can account for 37% of the variation in the dependent variable. Notably, gearing and both market capital and Return on Equity (ROE) have statistically significant positive relationships. This shows that adding more debt to the capital structure results in higher returns for shareholders and share prices. Both the pecking order hypothesis and the signalling effects theory are supported by these data.

The findings imply that 38% of the variance in the pharmaceutical and biotechnology industry may be attributed to the independent factors. Gearing and Return on Capital Employed (ROCE) have a substantial inverse association, but gearing and ROE, operating margin, and market capital have large inverse correlations. Debt makes up a smaller portion of the capital structure, but it enhances shareholders' returns, trading profits, and share price. The ROCE ratio's erratic behaviour as a result of gearing is consistent with the financial distress cost hypothesis, which postulates that the commitment to bondholders may be in jeopardy.

According to the regression study, independent variables can account for 13% of the variation in the general store sector. Gearing and ROCE are found to have a statistically significant inverse connection, but gearing and operating margin have a statistically significant positive correlation. Practically speaking, a company's operational margin rises as debt is issued, but its true profitability declines. The trade-off argument, which contends that businesses with volatile revenue tend to rely on equity financing, is consistent with the link between gearing and ROCE.

In the software and computer services sector, the regression analysis indicates that 17% of the variation in the dependent variable (gearing) can be explained by the independent variable. Notably, there is a statistically significant positive relationship between gearing and both Return on Equity (ROE) and market capital. These findings suggest that issuing debt is considered a positive signal in the capital market. This aligns with the signaling effects theory, where rational investors perceive debt issuance as an indication of a company's consistent profit stream.

To summarize, the findings indicate that companies with stable profitability and predictable markets demonstrate a stronger correlation between finance choices and company value compared to those operating in uncertain environments. The study also highlights variations in finance choices and gearing levels across different industries, with some industries favoring short-term borrowings while others opt for long-term financing. Overall, the choice of finance tends to positively impact shareholders' returns and enhance the company's value. However, it should be noted that in certain industries, increasing debt levels can negatively affect returns and profitability, leading to a decrease in the company's overall value.

- Industries with collinearity effects results

In the general industries sector, the multiple regression results are inconclusive due to collinearity effects. However, the simple regression findings show significant positive correlations between gearing and ROCE, ROE, and operating margin, with variations of 13%, 74%, and 26% respectively. Issuing debt can positively impact a company's profitability and value, in line with the Modigliani-Miller theory.

With variations of 33% and 47%, respectively, the simple regression analysis in the mobile telecommunications sector demonstrates a statistically significant positive link between gearing and ROE as well as between gearing and operating margin. With a variance of 85%, there is a considerable negative correlation between gearing and market capitalisation. This suggests that while debt issuance can increase shareholders' return and operating profit, it may negatively affect the share price due to perceived signaling effects.

In summary, the regression analysis confirms the influence of capital structure on profitability, with more stable companies exhibiting stronger correlations. Reorganizing the capital structure has implications for profitability ratios and ultimately impacts the overall value of the company.

- Industries with statistically insignificant results

In the Household goods and home constructions sector, the multiple regression results show that only 8% of the variation can be explained by the independent variables, and the findings are not statistically significant at a 95% confidence level. Similarly, in the mining sector, only 4% of the variation can be explained, and the results are insignificant. Only 1% of the variance in the oil and gas producers sector can be explained, indicating that there is no relationship between gearing and the independent variables. In the real estate and investment services sector, 7% of the change in gearing can be explained, but the findings are not statistically significant. In the support services sector, virtually no relationship is observed between gearing and the independent variables, with only 0.003% of the variation explained.

Overall, these insignificant regression results indicate that some companies operate in volatile markets where profitability is unpredictable. In these cases, companies either use less debt or face challenges in obtaining loans. Additionally, sectors with significant tangible assets may show little correlation between debt issuance and its impact on company value. This contradicts the theories discussed in the literature review section. For example, the aerospace and defense sector uses less debt compared to other sectors.

5. LIMITATIONS OF THE WORK AND SUGGESTIONS FOR FURTHER STUDY

As mentioned earlier, there are certain limitations to the regression analysis conducted in this study that may have contributed to the unconvincing results. Although the dependent variable might be impacted by a number of different causes, regression analysis only examines the connection between the dependent and independent variables. Additionally, regression analysis assumes that the historical behaviour of the data will continue, which may not always hold.

From an industry perspective, the analysis may not fully capture the variations in gearing levels across different industries. For example, sectors like real estate and investment and aerospace and defence may be expected to have higher levels of

debt due to their tangible assets. However, the results of the analysis may not align with these expectations.

Furthermore, there may be limitations in the data used for the analysis. Some companies may have been excluded due to changes in their accounting year, resulting in incomplete data. Additionally, unusual figures in a firm's financial statements could also impact the results. For instance, the calculation of net gearing, which accounts for short-term and long-term borrowings while excluding cash and cash equivalents, may lead to negative net gearing values due to variations in the cash and cash equivalent figures among different sectors.

The goal of this study was to examine several sectors to see how the choice of financing affected the company's worth. To learn why some predictable businesses issue less debt in their capital structures and why some industries demonstrate no association between issuing debt and its impact, more research is necessary.

It is important to acknowledge these limitations and consider them when interpreting the findings of the study. Future research could address these limitations and delve deeper into the factors influencing the choice of finance and its implications for company value in different industries.

5.1. RECOMMENDATION

In my thesis, I explore how the choice of finance impacts the value of a company. It is noted that profitable companies may opt to borrow funds, either through short-term or long-term debt, as this can be a more cost-effective option compared to issuing equity. By utilizing debt, these companies aim to increase their overall value. Additionally, issuing debt can serve as a positive signal to the capital market, resulting in an upward movement in share prices.

However, it is acknowledged that management decisions regarding the choice of finance may vary depending on the nature of the company. Profitable companies operating in volatile markets with unpredictable profits may prefer to use less debt

or rely on short-term debt. This cautious approach is taken to mitigate the risk of being unable to meet debt obligations, which could potentially lead to bankruptcy.

It is important to consider the specific circumstances and characteristics of each company when making financing decisions. Factors such as the industry, market conditions, profitability stability, and risk tolerance all play a role in determining the optimal choice of finance that aligns with the company's objectives and ensures its long-term viability.

The thesis seeks to further knowledge of how financial decisions affect overall business performance and shareholder wealth by examining the connection between the choice of financing and company value.

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