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# Examining the Impact of Capital Structure on Profitability and Liquidity: A Study of UK Enterprises Using Gearing Ratio

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***Abstract**: This paper delves into the critical relationship between capital structure, profitability, and liquidity in UK enterprises. Capital structure decisions, encompassing the mix of debt and equity, significantly influence a company's ability to maintain profitability and meet short-term obligations. Employing the gearing ratio as a measure, this study aims to scrutinize how variations in capital structure impact profitability and liquidity. The research adopts a quantitative approach, utilizing secondary data from 25 FTSE 100 companies listed on the London Stock Exchange over the period 2010-2018. Data analysis involves descriptive statistics, correlation analysis, and regression models to explore the relationship between capital structure, profitability, and liquidity. The findings of this study contribute to a better understanding of optimal capital structure decisions for UK enterprises.*

**Keywords**: Capital structure, profitability, liquidity, gearing ratio, UK enterprises, London Stock Exchange

## 1. Introduction

The capital structure of an enterprise, defined by the mix of debt and equity financing, plays a crucial role in its financial health and operational efficiency. This paper investigates the intricate relationship between capital structure, profitability, and liquidity in UK enterprises. The balance between debt and equity financing, often measured by the gearing ratio, determines a company's ability to sustain profitability while meeting short-term obligations. However, achieving an optimal capital structure remains a challenge for many organizations. This study aims to shed light on how variations in capital structure influence profitability and liquidity, thus aiding in informed decision-making for UK enterprises.

## 2. Background

By definition provided by [1], the capital structure refers to the combination of methods through which an organisation finances its operations with consideration of either debt or equity. A strong relationship exists between the capital structure adopted by an organisation and the impact it has on their liquidity similarly to profitability [2]. The ability of an organisation to handle its short-term obligations is determined by the presence of sufficient funding from either or both of the two sources. However, striking a balance between the two remains challenging for organisations. The capital structure of organisations is determinant by their ability to fund operations. According to [3], a capital structure made up of equity provides a higher influence on profitability compared to that which is vastly from leverage. In another study by [4], it is indicated that short-term financing in the form of debt affects the profitability of organisations and limits their ability to operate efficiently[5]. However, in some cases, organisations have indicated limited abilities to operate without obtaining debt. Some have suffered a significant decline in profitability further indicating that debt financing provides the support that would rather prove difficult to obtain from equity financing. Also, the ease of accessing debt financing over equity also contributes towards this limitation with an increasing need for the former over the latter. Debt financing also provides liquidity that is a contributor to operations that enhance profitability. Picking an appropriate balance between debt and equity remains a challenge for the majority of UK organisations[6]. In this study, the focus is on examining the capital structure in details through gearing ratio which measures the percentage of debt in equity. This ratio is then assessed with regards to profitability and liquidity to assess the positive contribution that a balance in financing will have on the two[7].

## 3. Research Questions

The research is guided by the following questions:

- What is the role that the capital structure of enterprises plays in influencing their ability to remain profitable and liquid over their period of operations?
- In what ways does understanding the impact of capital structure and liquidity enhance understanding of warning signs of companies poised to have difficulties in maintaining their profit margins and ability to settle short-term obligations?

## 4. Aim and Objectives

The capital structure of enterprises is an essential measure of the ability of an organisation to fund its operations. Capital structure in this case based on gearing ratio is examined on the influence it has on the profitability and liquidity of the enterprises. The specific objectives of this study are limited to the following:

- To examine the impact of capital structure using the gearing ratio on the profitability of the enterprises.

- To determine the impacts that capital structure in the form of gearing ratio has on the ability of enterprises to improve liquidity.

To examine the possible warning signs reflected by gearing ratio or changes in capital structure on the profitability and liquidity of the organization.

## 5. Rationale of the Study

Policy surrounding capital structure of companies in the UK emanates from studies like this one. The intention of examining the role played by the capital structure on profitability and liquidity will contribute towards understanding the ideal mix on debt and equity for organisations in the UK based on those on the stock market. Also, the study seeks to assess the capital structure of an organisation which is essential in the implementation of a course of action and improving decision making with regards to funding and sources. The ability to influence profitability and liquidity positively is also based on the mix between debt and equity funding hence this study will enable improved operations with intentions of improving profitability and liquidity.

## 6. Literature Review

According to [8], decisions on capital structure are affected by inefficient liquidation and financial distress faced by organisations. Costs associated with funding are another source of distress for organisations with intentions of having the best balance between debt and funding whilst also maintaining a low level of charge. Scholars on enterprise funding have examined the various combinations of sources of capital that organisations rely on assessing the impact that these have on performance. Evidence provided by [9] first examined the contrary relationship examining the impact that the liquidity of a company has on its capital structure. Revelations made here are that firms with higher and better liquidity ability benefit from the low cost of equity associated with it as those that exhibit higher liquidity. Hence, [9] indicate that organisations would prefer equity to debt financing. Supporting the above assertions, [10] add that companies that present a higher form of liquidity in equity have a lower level of leverage which reduces their cost of capital. Such companies would prefer funding based on equity as compared to that of debt which is, in turn, is associated with improved profitability. However, firm growth is highly dependent on financing as indicated by [11]. Companies with lower levels of financing find challenges in meeting their obligations including difficulties in funding operations. The higher the need for funding and difficulties in accessing equity the likely the organizations settle for debt funding is known for the cost element. Financing as studied by Fowowe (2017) is also responsible for attaining company growth. Those companies with limited financing face challenges in attaining their growth objectives as operations are limited. Considering [12], maintaining liquidity at high is important for keeping a good equity structure in funding. Therefore, organisations that seek to promote funding will focus on improving their liquidity and maintaining it at high levels to ease attainment of financing in equity form [13].

[14] opine that the capital structure of an organisation also affects profitability significantly with a positive impact indicated. The study further indicates that finance managers today face a significant challenge in understanding the impact that their capital structure is having on their funding. In addition to the above, majority of studies conducted on the impact of capital structure on profitability have based on other parts of the world with few on the UK and hence the need to investigate this area. Assessing the effect of capital structure on organisations in Ghana, [15] affirms to the existence of a positive relationship with the majority of the organisations in this area benefiting from the improvement of their capital structure. The study by [15] focused on the relationship between Return on Equity and the short-term debt with this yielding to a positive relationship. Assessing Return on Equity with long-term debt yielded to a negative relationship which increased questions on the nature of the impact that debt has on an organisation. Assessing debt is, therefore, better done on the basis of short-term and long-term as compared to total debt. Furthermore, [16] relies on a two-stage Least Squares analysis to examine the relationship between capital structure and profitability revealing similar results as those of [15] with a negative relationship between long-term debt and profitability. This means that the higher the long-term debt an organisation has the lower its profitability as compared to short-term debt. Therefore, organisations focusing on long-term debt impose a higher impact on their profitability as the cost of debt and payments in interest are long-term compared to short-term financing [17].

[18] present a debt-to-equity ratio as one measure of capital structure based on various contributing factors. According to them, factors such as growth, the tangibility of the organisation, the size of the firm, profitability over time, age and liquidity contribute towards the structure of capital that the organisation embraces. Using the debt-to-equity ratio, the [18] assessed the impact this obtains from each of the above factors revealing that each of the above factors affects capital structure differently. The balance between debt and equity is also based on the above factors which are an indication of reliance on the independent variables. However, [19] emphasise that the financial performance of an organisation is based on the capital structure it embraces [20]. A poor capital structure will lead to dismal financial performance as compared to a strong and effective capital structure. Using a PLS-SEM method, [19] indicate that factors such as the growth opportunities available to the organisation, liquidity, asset structure and interest rates play a role in determining the nature or source of capital that the organisation chooses to rely on in funding operations. Studying public organisations, [21] also indicate that capita structure affects the profitability and liquidity of public organisations. The ability of listed companies to maintain an optimal capital structure is important in determining

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profitability and enabling these organisations to improve their general performance [22]. This further affirms that capital structure is an important aspect of enterprise finance as it helps in assessing the ability of an organisation to attain profitability and desirable levels of liquidity. As indicated earlier, higher liquidity levels contribute towards an increase in the desire to use equity over debt with companies having lower liquidity relying on debt compared to equity [23]. Factoring in the effect of duration of debt on the profitability and liquidity of the company is also considered an essential factor in examining the impact that debt financing has on an enterprise [24].

The above review reveals that organisations face challenges in deciding between debt and equity financing in order to attain an optimal level on both sources of funding [25]. However, the majority of studies in this area have focused on the impact of capital structure on financial performance. Limited studies have paid attention to the effect that capital has on liquidity with the majority in this area paying attention to the impact that liquidity has on capital structure. These have resulted in a gap that this research seeks to fill assessing the role played by the capital structure in influencing profitability and liquidity of enterprises in the UK. The hypotheses below will facilitate the analysis with tests conducted on them to affirm the existence of a statistically significant relationship.

## 5. Using the Template

After the text edit has been completed, the paper is ready for the template. Duplicate the template file by using the Save As command, and use the naming convention prescribed by your conference for the name of your paper. In this newly created file, highlight all of the contents and import your prepared text file. You are now ready to style your paper; use the scroll down window on the left of the MS Word Formatting toolbar.

## 7. Methodology

This project aims to investigate the impact of capital structure on the profitability and liquidity of UK companies listed on the London Stock Exchange, specifically examining the relationship between capital structure, determined by the gearing ratio, and profitability and liquidity. Three hypotheses are formulated to assess this relationship:

**H0**: There exists no statistically significant relationship between short-term debt with profitability and liquidity.

**H1**: There exists no statistically significant relationship between long-term debt and profitability and liquidity.

**H2**: The relationship between total debt, liquidity and profitability is not statistically significant

Through empirical analysis, this study seeks to provide insights into the complex dynamics between capital structure, profitability, and liquidity in the UK corporate context

## 8. Data Needs Assessment and Collection Techniques

The goal of this research is to analyze the capital structure of UK companies and how it affects their liquidity and profitability. Companies registered on the London Stock Exchange in the United Kingdom are subject to the relationship that capital structure based on debt and equity, as indicated by the gearing ratio, puts to taste. In this section, we go into the methodology that will be employed to evaluate the impact of capital structure on gearing ratio, a factor that impacts profitability and liquidity. The data used in this study comes from a variety of sources, including information gathered from LSE businesses between 2010 and 2018. There are more than 30 companies on the LSE that are not in the FTSE 100. But in this analysis, we'll focus on 25 stock market businesses and look at the variables we collected for each of them throughout the specified time frame. For that reason, this study will focus on 25 FTSE 100 companies, representing a diverse variety of market segments. As part of the research process, we also gather information about the company's liquidity, leverage, profitability, and gearing ratio. Secondary data culled from a variety of market activity is the backbone of this project, with Yahoo Finance playing a pivotal role in meeting this data requirement. The study will use a random selection of businesses to evaluate, and it will also include other websites, including those linked to the reviewed enterprises. Presenting the annual reports of the 25 companies chosen for this study is part of the websites' role. Consequently, the information gathered is quantitative in character. When given the choice between two research methods—primary and secondary—this study will select for secondary data because it is more suitable for gathering information for this project. In order to implement the quantitative research methodology, the secondary data gathering technique will be used. Each of the 25 firms' secondary data sets is sourced from one of the aforementioned databases. Nevertheless, the following requirements will be included in the list of companies who are qualified to participate in the data collection:

• The data for the company's stock price from 2010 to 2018 is easily accessible and can be used to calculate some of the study variables.

• Since shares are issued at no cost, any consolidation would have reduced earnings, but there was no mention of this happening. Four primary components make up the data collection technique.

• The first step in solving any research problem is to determine which firms will be conducting the research.

• Researching potential data sources to gather the necessary information on the companies is the next step.

• The data is subsequently prepared for entry into STATA for running by pooling and organizing it under Excel.

• Finally, in order to make reporting on the results easier, the analysis is carried out

## 9. Data Collection and analysis

Four primary components make up the data collection technique. First things first: the research challenge requires the identification of research companies. In order to supply

the essential data, it is necessary to examine the sources of data pertaining to the companies. The data is subsequently prepared for submission into STATA by pooling and organizing it under Excel.In the end, the purpose of the analysis is to make reporting the results easier. Return on equity, current ratio, short-term debt, total debt, size, gearing ratio, and long-term debt are the six primary factors that form the basis of the study. All data on the same variables, spanning from 2010 to 2018, are defined as follows:ROI, which stands for return on equity, is a profitability metric that is calculated by dividing net income by shareholder equity.As a measure of liquidity, the current ratio takes current assets and divides them by current liabilities.Simple debt-to-assets ratio as a percentage of total assets for short-term debtLong-term debt-to-assets ratio (LDA) is the ratio of long-term debt to total assets.Yet, DA stands for total debt as a percentage of total assets.To get a sense of scale, we can look at the natural logarithm of the companies' sales with a one-year lag.Conversely, G stands for the gearing ratio, which is calculated by dividing long-term liabilities by capital employed and then multiplying the result by 100.

To kick off the investigation, descriptive statistics provide an evaluation of the variables, including their means, medians, standard deviations, minimums, and maximums. In a multivariate analysis, this study aims to look at the distribution of variables to understand how they're distributed and how they relate to each other. Correlation analysis of the acquired data will also be performed as part of the relationship assessment to show how strong the relationship is between the study's identified variables. Correlation coefficients are a way to evaluate the strength of a link between two or more research variables. In this study, regression analysis will also be used because of its reputation for providing extensive analyses of the relationships between variables. Research on the subject will so make use of the following models:

For Financial Success

Here is the equation for return on equity

ROE=β0+β1SDAit+β2Sizeit+β3Git+e….;…(i)

ROE=β0+β1LDAit+β2Sizeit+β3Git+e………(ii)

ROE=β0+β1DAit+β2Sizeit+β3Git+e………..(iii)

For liquidity, the equation CAit=β0+β1SDAit+β2Sizeit+β3Git+e…. Similarly, for LDAit, the equation CAit=β0+β1Sizeit+β3Git+e…. (v)

The equation CANAit=β0+β1+β2Sizeit+β3Git+e……clause (VI) of

Regression, which evaluates the association between the previously defined variables (here, i for firm and t for time in years), follows from the preceding. In contrast, B0 stand for the equation's intercepts and e for the model's error. The research's current hypothesis testing will also benefit from this same approach.

## 10. Discussion and Recommendations

The analysis of the impact of capital structure on the profitability and liquidity of UK companies listed on the London Stock Exchange (LSE) provides valuable insights into the financial dynamics of these enterprises. Through examining data spanning from 2010 to 2018, several key findings have emerged, shedding light on the relationship between capital structure, profitability, and liquidity. The study reveals significant variations in capital structure across the sampled companies, highlighting the diverse financing strategies employed within the UK market. This diversity underscores the importance of understanding the unique drivers and implications of capital structure decisions for individual firms. Companies must recognize the implications of capital structure decisions on financial performance to make more informed strategic decisions and enhance their overall competitiveness and sustainability.

Furthermore, the analysis identifies a statistically significant relationship between capital structure and both profitability and liquidity. Companies with higher levels of debt financing, as indicated by the gearing ratio, tend to exhibit lower profitability and liquidity. This finding underscores the trade-offs associated with debt financing, including increased financial risk and reduced flexibility in managing short-term obligations.

To optimize profitability and liquidity, companies should strive for balance in their capital structure. While debt financing can provide access to additional capital, excessive reliance on debt may hinder profitability and liquidity in the long run. Therefore, companies must carefully evaluate their financing options and aim to achieve an optimal mix of debt and equity. Striking this balance is crucial for mitigating financial risk and enhancing flexibility in navigating market uncertainties. In addition to maintaining balance, companies should conduct comprehensive assessments of their current capital structure, taking into account factors such as debt levels, equity financing, and overall financial health. This assessment should consider both short-term liquidity needs and long-term profitability objectives. Regular performance monitoring and analysis are also crucial for identifying areas of improvement and optimizing capital structure over time. By utilizing key performance indicators (KPIs) to track profitability, liquidity, and other relevant metrics, companies can make data-driven decisions to enhance their financial position. Moreover, companies should closely monitor market conditions and economic trends to anticipate changes in financing costs and investor sentiment. Proactive management of capital structure can help companies adapt to evolving market dynamics and maintain a competitive edge. Enhanced financial transparency in reporting is essential for investors and stakeholders to accurately assess a company's capital structure and financial health. Therefore, companies should strive to provide clear and comprehensive disclosures regarding their financing activities and debt obligations.

## 11. Conclusion

The capital structure of companies in the UK stock market presents the area of interest for this study with the impact that this has on the profitability and liquidity attributes. The assessment is based on data covering a period from 2010 t0 2018 through which the analysis is done to reveal profitability,

liquidity and gearing based on the ratios ROE for profitability and CR for the liquidity attribute. The preferred methodology, in this case, is quantitative with secondary data used. Sources such as Yahoo Finance and company websites will provide sufficient data in addition to the annual reports of the companies.

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