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THE EFFECTS OF CAPITAL STRUCTURE ON FINANCIAL PERFORMANCE OF FIRMS: AN EVIDENCE FROM TUNIS STOCK EXCHANGE LISTED FIRMS

SERMAYE YAPISININ İŞLETMELERİN FİNANSAL PERFORMANSINA ETKİSİ: TUNUS BORSASINDA BİR UYGULAMA

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ABSTRACT

For more than sixty years, the primary focus of research in corporate finance has been the analysis of different capital structures. The formation of hypotheses describing the factors that determine the capital structure has occurred in this manner. Despite this, the question of the financial behaviour of corporations is still a contentious issue, as seen by the large number of studies that have been conducted on the subject in recent years.

The aim of this study is to investigate the nature of the probable relationship that exists between determinants of capital structure and measures of financial performance by conducting an analysis of the annual accounting data of five Tunisian businesses that are operating in the food industry. The accessibility of the information that is required justifies the selection of this industry as the focus of this investigation. Because all of the companies that were considered for this study are traded on the Tunisian stock market and regularly make their financial statements public, the necessary information was obtained from the stock exchange's official website. A total of 30 observations were used in the research, which was conducted on a sample of five different businesses over the course of six years, from 2015 until 2020. A multiple regression model was utilised to conduct this investigation's analysis of the data with the assistance of IBM SPSS Statistics 29.

The debt ratio and the debt-to-equity ratio were the two independent variables that were used in order to conduct the analysis for the capital structure. On the other side, the dependent variables return on assets (ROA), return on equity (ROE), and earnings per share (EPS) acted as indicators of the financial performance and value of the organisation. The findings of this study showed that the capital structure had a positive but not significant effect on the enterprise value measure of EPS, as well as a significant effect on the performance measures ROA and ROE. In other words, capital structure had a significant and negative impact on ROA. Likewise, the latter had a substantial and beneficial impact on ROE.

Key Words: Capital Structure, Tunis Stock Exchange, Financial Performance, ROA, ROE, EPS.

ÖZET

Altmış yılı aşkın bir süredir, işletme finansmanı alanındaki araştırmaların birincil odak noktası, farklı finansal yapıların analizi olmuştur. Sermaye yapısını belirleyen faktörleri tanımlayan hipotezlerin oluşumu, bu şekilde gerçekleşmiştir. Buna rağmen, son yıllarda konuyla ilgili yapılan çok sayıda çalışmada görüldüğü gibi, şirketlerin finansal davranışları sorunu hâla tartışmalı bir konudur.

Bu doğrultuda bu çalışmanın amacı, Tunus'ta faaliyet gösteren gıda endüstrisindeki beş işletmenin, yıllık muhasebe verilerinin analizini yaparak sermaye yapısının belirleyicileri ile finansal performans ölçütleri arasında var olan ve olası ilişkinin niteliğini araştırmaktır. Bu işletmeler, Tunus borsasında işlem gören ve bu nedenle mali tablolarını düzenli olarak kamuya açıklayan işletmelerdir. İşletmelerin verileri, Tunus borsasının resmi internet sitesinden alınmıştır. Beş farklı işletmenin altı yıllık (2015-2020) verileri örneklem olarak ele alındığından toplam 30 gözlem kullanılmıştır. Araştırmanın veri analizi için IBM SPSS 29 programında çoklu regresyon modeli kullanılmıştır.

Borç ve borç/öz kaynak oranı, sermaye yapısı analizinin yapılmasında kullanılan iki bağımsız değişkendir. Çalışmadaki bağımlı değişkenler, işletmelerin finansal performansının ve değerinin göstergeleri olarak Aktif kârlılığı (ROA), Öz kaynak kârlılığı (ROE) ve hisse başına kazanç (EPS)'tır. Çalışma bulguları, sermaye yapısının, hisse başına kazanç (EPS) yönünden işletme değeri üzerinde olumlu ancak anlamlı olmayan bir etkisi olduğunu, Aktif kârlılığı ve Öz kaynak kârlılığı (ROA ve ROE) yönünden performans üzerinde önemli etkinin olduğunu göstermektedir. Araştırmanın sonuçlarına göre, ROA üzerinde sermaye yapısının dikkate değer olumsuz bir etkisi bulunmaktadır. Benzer şekilde, ROE üzerinde önemli ve olumlu bir etkiye sahiptir.

Anahtar Kelimeler: Sermaye Yapısı, Tunus Borsası, Finansal Performans, Aktif Karlılığı (ROA), Öz Kaynak Karlılığı (ROE), Hisse Başına Kazanç (EPS).

TABLE OF CONTENTS

ABBREVIATIONS

BVMT : Bourse des Valeurs Mobilières de Tunis

CFO: Chief Financial Officer

M.M: Modigliani & Miller

ROA: Return On Assets

ROE: Return On Equity

ROIC: Return On Invested Capital

SPSS: The Statistical Programme for The Social Sciences

STD: Short-Term Debt

TTD: Total Debt

UK: The United Kingdom

VIF: Variance Inflation Factor

WACC: Weighted Average Cost of Capital

LIST OF TABLES

LIST OF FIGURES

1. INTRODUCTION

Like many scientific and economic notions, the idea of business and the reason for it to exist has undergone major changes from the past to the present. Nowadays, company managers put a lot of focus on the value of the company, and one of the ways they do this is by working on financial policies that will ensure the company's sustainable performance. With the growing importance of the notion of corporate value for managers across all industries, scientific studies on the issue have increased in quantity and quality. This research has largely concentrated on factors that influence business value. Regarding the policies that businesses employ, it's critical to accurately disclose the variables that affect a company's value. The capital structure of a company is often cited as a significant factor in determining its worth.

The resource structure of a firm's capital can be thought of as its capital structure. This structure not only plays an important part in the execution of business activities but also emerges as a direct outcome of these actions. According to the literature, both country -specific and firm-specific factors contribute to the variation in capital structures of enterprises.

The ability of businesses to select the most suitable capital structure for their needs is a key decision pertaining to the management of their finances. Even though a decision regarding capital structure can have an impact on a business's financial performance and enterprise value, if that decision is appropriate, good, and healthy, it can lead to high profitability and a high enterprise value; however, if that decision is incorrect, it can lead to financial troubles and possibly even bankruptcy.

From Modigliani and Miller (1958) all the way up until today, there have been many different theories proposed on the capital structures of corporations. In other words,

there are many theories that have been created about the capital component that businesses should prioritise when designing their capital structure. The majority of these theories, some of which will be discussed in the following sections, have made an attempt to explain why capital structure is important and how preferences regarding capital configuration affect profitability and firm value in general. Therefore, these studies aimed to shed insight on the influence of a firm's capital structure on its value.

The relationship between a company's capital structure and its performance has been the focus of a substantial amount of research and discussion on a worldwide scale for a significant period of time now. The effect of capital structure on business value and performance is a topic of debate among economists. Many academics have contributed to this conversation by amassing a mountain of data from a wide range of countries, with the vast majority of these studies being carried out in economically advanced nations.

Numerous empirical studies have concentrated their attention on the capital structure and the performance of firms located in emerging countries. El-Sayed Ebaid (2009) in Egypt, Pratheepkanth (2011) in Sri Lanka, Pouraghajan, Malekian, Emamgholapou, Lotfollahpour & Bagheri (2012) in Terhan, Muritala (2012) in Nigeria, Goyal (2013) in India and Mireku, Mensah & Ogoe (2014) in Ghana, as well as several other researchers, who will be mentioned later in the literature review of this research, examined the connection between the overall of a business's performance and its capital structure across a variety of emerging nations, and analysed the effect that the capital structure has on the business's financial results. These investigations produced a variety of findings in their conclusions. While some academics have discovered that there is a negative correlation between a company's financial performance and its capital structure, others have found a positive correlation between these variables. In light of the fact that few studies on this topic have been undertaken in Tunisia, the researcher came to the conclusion that it would be beneficial to investigate the effect that the capital structure has on the overall performance of five food manufacturing firms that were traded on the Tunis Stock Exchange between the years of 2015 and 2020.

Although this topic is one of the most researched subjects in the world of finance, there is no consensus among scholars on the implications of the capital structure on the financial performance of the organisation. In this study, an investigation is being conducted to establish whether the financial performance of firms that are registered on the Tunis Stock Exchange correlates with their capital structures.

In addition, a company's output over a certain period of time is considered to be its performance, and the degree to which an organisational purpose or task is completed successfully is viewed as the result of this output. In accordance with this research, performance may be understood as the evaluation of all the efforts that were made to achieve the targets set for the firm. There are a few methodologies that are used to measure performance, however for the aim of this study, the variables of financial performance and market performance were employed to measure financial performance. Earnings per share (EPS) are utilised as market performance factors, whilst return on equity ratio (ROE) and return on assets ratio (ROA) are used as financial performance variables.

In order to accomplish this objective, the variables that determine the financial performance of the company served as the dependent variables, while the variables that determine the capital structure served as the independent variables.

In the field of scientific research on business value and the performance of capital structures, a variety of approaches have been taken up to this point. First, an attempt was made to determine whether or not there is a connection between the capital structures of companies and the many different metrics of value and performance that are based on cross-sectional data. Case studies are the focus of the second research approach, which is referred to as the case study method. In this study, the food sector in Tunisia will be investigated, and the results will be analysed and compared to the findings of other studies.

The two significant contributions this study will likely make to the field of finance are as follows. The research first concentrated on the food industry of a developing nation like Tunisia. Second, a comprehensive study was conducted on five companies that operate in a crucial industry and were registered on the Tunis Stock Exchange during the period of 2015 and 2020. This was done during a time when Tunisia was going through a

very difficult period due to the 2011 revolution, followed by the pandemic-related health crisis in 2019.

The study consists of four distinct sections. Within the first part, a general introduction, a problem introduction, the significance of the study, the hypotheses and the limitations are presented. A review of the literature is used to look at previous studies that focused on the relationship between financial performance and the capital structures of organisations before moving on to the following section. The notion of capital structure is described in the second section of this study, along with the approaches to capital structure, the various structural theories used over time, and the cost of capital. In the third part, the factors that determine the capital structure, otherwise known as the factors influencing financing decisions, are thoroughly explored. The notion of financial performance is also discussed, and significant data regarding the metrics used by the companies to measure their financial performance is provided.

Finally, in the fourth section, the correlation that exists between an organisation's capital structure and its overall financial performance is discussed, and the influence of financing decisions' quality on a firm's financial performance is described by providing statistical findings from the application on the Tunis Capital Market.

1.1 Introduction to The Problem

The food sector is a vital part of Tunisia's industrial fabric, accounting for the second highest level of production and added value. Since 2004, production in this industry has increased by more than 40%. Despite a growing trend, the rate of increase in added value has been nearly steady for the last five years, equal to a production of 27%.

While the food industry is the country's second-largest industry, its importance is sometimes overlooked. Even so, the COVID-19 issue has shown how important these industries are and how hard their people work.

Because of its importance, the food business has been subjected to stringent regulations in order to secure its long-term viability. Every citizen has the right to access high-quality food when public authorities have a duty to ensure the people’s food

sovereignty. The increased focus on innovation by some Tunisian food enterprises demonstrates that innovation is increasingly seen as the key to success in this sector. As a result, managers must examine their capital structure decisions in order to fulfil their expansion goals.

Examining the causes of a business's financing or capital structure decisions is crucial to understanding how it finances its activities. The capital structure of a business is among the most crucial choices made by a company's financial management. This allows the responsible to measure the firm's worth and profitability.

To put it another way, the capital structure of a company is the most significant component of its business activities. (ROA), (ROE), gross profit, and net profit are all indicators of a company's performance. Such variations could indicate a rise or fall in a company's financial success. In accordance with the theory, if a firm uses its capital structure effectively and efficiently, it can improve its performance to its maximum level.

Consequently, the purpose of this investigation is to explore the influence of capital structure on the financial performance of a selection of Tunis Stock Exchange listed food companies operating in Tunisia between the years 2015 and 2020.

1.2 Purpose of the Study

It is every company's responsibility to operate at the highest possible level of profitability and to work at minimising its capital value while analysing its capital structure. That’s why the primary objective of the study is to analyse the impact that a company's capital structure has on the financial performance of the business. The research aims to accomplish the following particular targets:

- Exposing the capital structures of Tunisian food enterprises as well as their overall financial performance.
- Investigating the correlation between the factors of capital structure and financial performance measurements.
- Evaluating the relationship between the structures of capital and an organization's overall financial performance.

In addition, very few investigations on the link relating capital structure to financial performance have been discovered in Tunisian literature. Therefore, it can be stated that there are insufficient theoretical and empirical research on the influence of capital structure on a company's financial performance in Tunisian literature. The results of this research, which examines how capital structure affects companies' performance in Tunisia's food sector, are likely to enrich the country's existing body of knowledge.

1.3 Significance of the Study

Students, instructors, and aspiring researchers interested in studying the impact of company's capital structure on operational efficiency may find this study useful.

On the other hand, it will be helpful for both companies and investors to explore the relationship between capital structure and company performance in light of current data. This will allow enterprises to make informed judgments regarding the financing structure, while also allowing investors to make informed investment decisions.

In other words, because the data that were used in this study are relatively recent, it provides the managers of businesses that operate in the Tunisian food sector with the opportunity to accurately assess their capital structure and, as a consequence, ensure that the structure is optimised to a greater degree. This is being done to improve the firm's overall performance from a financial standpoint.

In a similar vein, this research provides information on the effect of debt on the financial performance of Tunisian food manufacturing businesses. This information, which can be useful in decision-making and the implementation of strategies to maximise profits, can generate a rise in the worth of the enterprise in the stock market.

Because of this research, Chief Financial Officers have the chance to reduce the likelihood of suffering a loss while simultaneously increasing the amount of funds available to their companies and boosting their financial performance.

This study only makes a modest contribution to the previous empirical research on the influence of firm capital structure on performance, and this is due to the fact that its scope is restricted to the investigation and verification of the accuracy of the financial theories that are referenced in the research that focuses on the Tunisian context. This

question paves the way for an important line of inquiry that has the potential to become the focus of multiple follow-up studies and investigations.

1.4 Assumptions and Limitations

In this research, an application model was developed according to a review of the relevant literature. The following hypotheses were created in order to determine the relationship between the capital structure of food companies listed on the Tunis Stock Exchange and the financial performance of those companies:

- H1: The Debt ratio correlates positively with the financial performance (ROA) of enterprises.
- H2: The Debt-to-Equity ratio correlates positively with the financial performance (ROA) of enterprises.
- H3: There is a significant correlation between the capital structure and the financial performance (ROA) of companies.
- H4: The Debt ratio correlates positively with the financial performance (ROE) of enterprises.
- H5: The Debt-to-Equity ratio correlates positively with the financial performance (ROE) of enterprises.
- H6: There is a significant correlation between capital structure and corporate financial performance (ROE).
- H7: The Debt ratio correlates positively with the financial performance (EPS) of enterprises.
- H8: The Debt-to-Equity ratio correlates positively with the financial performance (EPS) of enterprises.
- H9: There is a significant correlation between the capital structure and the financial performance (EPS) of companies.

The sample could be larger to obtain more relevant results but given the lack of available information and the difficulties in accessing to financial information about

businesses in Tunisia's food industry in this paper, it will be worked on only 5 companies out of 1111 because they are listed on the stock exchange and have published their annual reports on a regular basis between 2015 and 2020.

Accessing the data of Food companies that have been operating for the required period of time for performance analysis is one of the primary limitations. At the same time, the level of reporting standards required for the preparation of financial reports, in which the financial data to be used as a decision variable in the research will be obtained, is another limitation.

In other words, only firm data for the six-year period was utilised in the study. In order to acquire precise and reliable results, it is possible that longer-term corporate data may be required.

In addition, the survey does not cover the full food manufacturing industry, but rather only five of the hundreds of companies working in the food industry due to a lack of data regarding other companies not included in this study.

Another restriction, the research was conducted on enterprises in Tunisia, a country with an emerging economy, so the findings may not be applicable to nations with diverse economic structures.

1.5 Literature Review: An Analysis of the Relationship Between Capital Structure and Financial Outcomes:

In their research, Modigliani & Miller (1958) developed a hypothesis that has since become a particularly important part of the world of economics. It is the foundation of contemporary capital structure thought. Modigliani Miller's theory is a capital theory method that advocates the theory of the capital structure's uselessness. This would seem to indicate that the capital structure of a corporation is irrelevant with regard to the valuation of a company. This paper inspired researchers to debate this subject.

A company's capital structure, in keeping with Modigliani and Miller, is how it finances its assets. A business can fund its operations with equity, debt, or a mix of the two. A company's capital structure can be largely debt, mostly equity, a mixture of equity

and debt. The latter conducted a study on the capital structure theory in the year 1958. They produced a capital structure recommendation based on their research.

Since Jensen & Meckling's (1976) thesis regarding the presence of a correlation between capital structure and the firm's performance, multiple early theorists have followed this line of reasoning and have carried out extensive literature review to explore the association between financial leverage and the profitability of corporations. However, the empirical evidence from then to date supporting this relationship is conflicting and ambiguous.

I. Mathur, L. K. Mathur, and Gleason's (2000) analysis of data from retail stores in fourteen European countries aimed to demonstrate the impact of national culture on corporation's capital structure. The second goal was to demonstrate how capital structure affects performance while using culture as an explanatory or controlling factor. The findings carried out of this study by Mathur et al. illustrated that store performance was unaffected by cultural effects, whereas capital structure influenced performance. Except for retailer size, indicators of financial performance were consistent with these findings and were unaffected by control factors. The results also show that retailers' high debt was caused by agency conflicts, which weakened the correlation between capital structure and business performance.

Phillips & Sipahioglu (2004) figured out that no meaningful association exists between the level of debt included in the capital structure and the company's overall financial performance based on data collected from 43 UK listed firms with an interest in owning and operating hotels. As the study clearly shows, the sample is likewise characterised by low returns on equity.

Researchers Al-Yahyee, Rao, and Syed (2007) reported that a group of publicly traded companies' financial leverage was inversely related to their performance in the Sultanate of Oman, contrary to widespread belief in the West. This could be due to Oman's excessive cost of bank debt, along with the absence of a sufficiently developed bond market, or it could be due to Oman's extremely low and uniform corporate tax rate, which means debt does not provide the same level of tax advantages as it does in Western

countries. Finally, they concluded that for Omani enterprises, relying heavily on debt to serve as a funding source might not be a wise approach.

El-Sayed Ebaid (2009) used three accounting measures representing the firm's profitability to analyse the connection between debt levels and financial performance of organisations that are publicly registered on the Egyptian Stock Exchange from 1997 to 2005: which are gross profit margin, return on equity, and return on assets (GPM, ROE and ROA respectively). El-Sayed Ebaid was able to draw various conclusions from this research. For example, while short-term debt (STD) and total debt (TTD) negatively affect the financial performance of a corporation as assessed by ROA, no significant association between long-term debt (LTD) and this variable representing the financial performance has been discovered. In conclusion, El-Sayed Ebaid stated that, based on these findings, the performance of the company in Egypt is barely influenced by the capital structure adopted.

Similarly, Pratheepkanth (2011) carried out research about the same topic in Sri Lankan listed commercial enterprises from fiscal years 2005 to 2009 in an effort to discover whether or not there was a correlation between the two factors. The latter, in turn, found that capital structure and financial performance had an inverse correlation, which can only be explained by Sri Lanka's insignificant level of commercial firms. To put it another way, businesses rely heavily on loan capital, which requires them to pay exorbitant interest rates.

Pouraghajan, Malekian, Emamgholipou, Lotfollahpour & Bagheri (2012), on the other side, investigated and analysed the effect of financing decisions on profitability using a sample of four hundred firm-years from Companies registered on the Stock Exchange of Tehran in the form of twelve industrial groupings during the period 2006-2010. This research discovered a huge positive correlation between financial turnover, firm size, asset tangibility ratio, and growth opportunities with financial performance indicators as well as a serious negative association between debt ratio and the profitability of business. Unlike the nonsignificant association between ROA and ROE measurements and the age of the firm. They likewise proved that by lowering the debt ratio, the

management may boost the company's profitability, therefore enhancing the financial performance of the organisation and increasing shareholder value.

Muritala (2012) performed an analysis on ten Nigerian non-financial corporations that were publicly traded during the years of 2006 and 2010 and discovered a strong and negative correlation between ROA, the performance indicator, and asset tangibility. The latter explained these results by the inefficiency of the use of the composition of the company's fixed assets within its total assets chosen in the sample to have a positive effect on their performance. Consequently, Muritala proposed that the tangibility of assets can be used to find the capital structure.

Using data from a sample of eleven listed businesses in Sri Lanka over a seven-year period, Nirajini & Priya (2013) established that there is a favourable correlation between the capital structure of a company and its overall financial performance contrary to previous research. They also suggested that each company's management make a healthy capital structure decision in order to generate profits and continue operating successfully, as the findings highlighted how crucial capital structure is to a company's overall profitability and worth.

Doğan (2013) was able to conclude in Turkey, using data from the Istanbul Stock Exchange on active insurance companies from 2005 to 2011, that the loss ratio as well as the financial leverage ratio, and the rise in liquid assets have a negative influence on insurance company profitability, but increasing the size of assets has a positive effect. The findings of his research also led to an important discovery: Age and insurance company profitability are negatively correlated and statistically significant.

Goyal (2013) attempted in his paper to investigate of capital structure on earnings at Indian PSU banks traded on the stock market between 2008 and 2012. The findings of Goyal's research confirmed a substantial positive association between short-term debt on capital and all profitability indicators (ROA, ROE, and EPS), as well as a favourable relationship between asset growth and ROA, ROE, and EPS.

Taani (2013), in his research from 2007 to 2011, concentrated on twelve financial institutions traded on the Stock Exchange of Amman (ASE). He used net profit, ROIC,

and net interest margin to assess the bank's performance, all of which were discovered to be strongly and favourably correlated with total debt, whereas total debt was discovered to be irrelevant in predicting return on equity in the Jordanian banking sector.

Mireku, Mensah & Ogoe (2014) used fifteen firms listed on the Ghana Stock Exchange (GSE) to study this effect in the financial institutions during a 6-year period (2002–2007). This research came to the following conclusions: organisations rely on short-term debt more than long-term debt, which can be justified by the adverse correlation between financial performance measures, particularly profitability and financial leverage. As a result, Mireku et al. find that enterprises in Ghana with lower leverage have higher profit margins and better financial performance.

Mujahid and Akhtar (2014) did a regression analysis on data from 2006 to 2011 from the textile sector as a whole, which included 155 Pakistani companies. They discovered that a company's capital structure significantly affects both its financial results and the shareholders' wealth.

However, Khanam, Nasreen & Pirzada (2014) discovered the existence of a significant negative influence of capital structure on the financial results of business while studying the relationship between these two variables in the Pakistani food industry utilising quantitative data extracted from the financial statements of forty-nine businesses that were traded on the Stock Exchange of Karachi in Pakistan between the years of 2007 and 2012.

Kosimbei, Mwangi & Makau (2014), according to the findings of their study, suggest to the managers of listed non-financial companies to move away from long-term debt when financing them. This is due to the fact that they were able to demonstrate through their research of fourty-two different non-financial companies registered on the Nairobi Securities Exchange in Kenya that the use of leverage in financial transactions demonstrated a statistically significant inverse association between financing decisions and profitability as assessed by (ROA) and (ROE).

In agreement with Kosimbei et al. (2014), Akeem, Terer, Kiyanju & Kayode (2014) reinforce the idea of employing more equity than debt to fund their operations, as

long as using loan capital can boost a company's worth. This conclusion comes from the study of ten Nigerian factories over the period of 2003 to 2012. The results of this investigation revealed that capital structure indicators (total debt and debt ratio) were associated to the company's performance negatively.

Vatavu (2015) examined the level to which the capital structure of 196 manufacturing firms operating in Romania that were listed on the Bucharest Stock Exchange between the years 2003 and 2010 was related to the companies' levels of financial performance in order to derive that businesses in Romania operate more efficiently when they avoid indebtedness and function on the basis of equity. According to Vatavu, when these organisations are in financial trouble and face large business risks, their managers tend to get indebted, which can be explained by risky behaviour in manufacturing enterprises.

Regarding the consolidation of banking institutions in Nigeria, which entails boosting the bank's equity against its debt, J.B. Adesina, O.O. Adesina & Nwidobie (2015) decided to explore the influence of the capital structure following consolidation on financial performance using a sample of 10 Nigerian banks over an eight-year period. The findings of this investigation indicate that it exists a strong correlation between the two variables. This means that managers of financial performance use debt and equity capital to increase earnings.

In the course of their research on businesses registered on the Nairobi Stock Exchange throughout the years 2008-2013, financial performance was positively and significantly impacted by equity and long-term debt, according to Githire & Muturi's (2015) research. Short-term debt, in contrast, has a severe and negative impact. In other words, financing a business through the use of equity and long-term debt is more effective than financing through the employment of short-term debt, which ultimately results in a worsening of the company's financial performance.

Gharaibeh (2015) used a sample of seventeen non-financial corporate entities registered on the Bahrain Stock Exchange in his research. Gharaibeh's findings showed that the ratio of total liabilities to total assets in the capital structure had an impact on the

financial performance variable ROE that is both favourable and statically relevant, but not on other performance measures like ROA and EPS.

Memon, Bhutto & Abbas (2015) conducted a study whose conclusions demonstrate each factor's weight in establishing the enterprises' capital structure in Pakistan's textile industry, implying that this sector operated below optimal capital structure, which can be explained by these companies' failure to use the economy of scale method. Memon et al., identified an optimal capital structure as a single point where the tax benefits supplied by a certain level of debt are equal to the bankruptcy costs associated with that level of debt. In this study, 141 textile companies in Pakistan were examined, along with their capital structures and financial results, from 2004 to 2009.

Birru (2016) used in his study eight financial banks functioning in Ethiopia between 2011 and 2015 during a five-year period in Ethiopia. The findings of this research's analysis elucidate that the capital structure was related strongly and unfavourably to profitability as assessed by ROA and ROE.

According to the findings of Kakanda, Bello & Abba (2016), organisations should use a combination of equity and debt as there was a favourable and strong association between the capital structure of the company and its financial performance. According to the research's results, short-term debt had a considerable but unfavourable impact on ROE. Long-term debt, in contrast, had a considerable and beneficial effect on ROE.

Nassar (2016), on the other hand, demonstrated in his study of industrial sector firms registered in the Istanbul Stock Exchange (ISE) between 2005 and 2012 that financial firm profitability, as measured by (EPS, ROE, and ROA), was inversely correlated to the capital structure of the company.

In their research, Mauwa, Namusongeand, and Onyango (2016) tried to Determine how the various forms of capitalization of the six firms that were traded on the Rwanda Stock Exchange affected the overall financial performance of those companies. As a result, they discovered an inverse correlation between capital structure and both ROA and ROE. According to the findings of this investigation, they suggested that these companies focus more on changing their capital structure by using new strategies that lead to a lower

liquidity ratio while keeping their level of debt the same. This would help them get the better financial performance they wanted.

Nwude & Anyalechi (2018), using ten commercial banks between 2000 and 2013, they looked at how funding mix affected organisational performance, or how efficiently Nigeria's commercial banks functioned. According to the findings, the return on assets was negatively impacted by employing debt as a means of obtaining financing, whereas the return on equity was positively impacted by the debt-equity ratio. Both of these outcomes are significant.

Following their investigation on the influence of total debt on financial performance, Kamau, Mogwambo, & Muya (2018) discovered that it had a significant negative influence on the indicators ROA and ROE using a sample of oil firms operating in the energy and oil industries and traded on the Nairobi Stock Exchange.

Joshua, Gbenedio, Falola, Oluwagbemi, Lofinmakin & Tams-Alasia (2018) used a representative sample of 10 publically traded manufacturers active over the period of 2013 to 2017 to look into the decisions that Nigerian manufacturing companies make regarding their capital structures. They decided that organisations that use a mix of debt and equity to fund themselves are more efficient and relevant than those that only use equity.

By evaluating data from eight small financial banks in India over a two-year period between 2017 and 2018, Vishnu Prasad (2019) was able to demonstrate that capital structure has a major impact on the profitability of small financial institutions.

In the course of their research, which spanned 14 years, from 2004 to 2017, Mehmood, Hunjra, & Chani (2019) questioned 520 manufacturing companies in South Asian nations. They concluded that the dividend payout and overall capital structure of the corporation had a significant influence on its financial results.

For the purpose of studying the factors that affect capital structure and how well it functions economically, Ramli, Latan & Solovida (2019) find that the indebtedness of firms representing the capital structure functioned as a mediator in Malaysia but did not do so in Indonesia, and it existed a significant favourable correlation between the

indebtedness of businesses and their profitability, which is comprehensible given the usage of external rather than internal funding. Ramli et al. drew these conclusions from a study of Malaysian and Indonesian enterprises conducted between 1990 and 2010, proving that capital structure factors had a direct impact on company's profitability.

According to Jadah, Adel Hassan, Hameed, and Al-Husainy (2020), the equity-to-assets ratio, liabilities-to-assets ratio, as well as the size of banks all had a positive and important effect on the ROA, which stands for financial performance. While factors that influence the capital structure of a company including the ratio of long-term debt to assets, the ratio of short-term debt to assets, and the ratio of total debt to assets had significantly and inversely affected the profitability of Iraqi banks studied by Jadah et al. during their analysis of eighteen banks in Iraq listed between 2009 and 2018.

Güngör & Dilmaç (2020) used a sample of twelve deposit banks from 2002 to 2015 in order to research how capital structure affects Turkish banks' financial performance during the global monetary crisis of 2008, called the subprime crisis as well. Under the influence of the crisis, the results revealed that compared to other capital-structure measures, the equity-to-total-liabilities ratio had a greater detrimental influence on financial performance, although the 2008 crisis had a beneficial impact on Turkish commercial banks' profitability. As a result, Güngör & Dılmaç recommended using less equity and more long-term liabilities when financing banks in order to maximise profits.

Knežević, Petković & Pavlović (2020) studied in their paper the effectiveness of French wine businesses' intellectual capital and its constituents by examining its effect on the profitability of 548 large French wine companies over 5 years from 2015 to 2019. According to the results of their analysis, it appears that while value-added intellectual capital had a beneficial effect on financial performance globally, capital structural efficiency had a negative impact.

Tretiakova, Shalneva & Lvov (2021) in order to study a company's capital structure and its financial performance parameters, such as ROA, price-to-book ratio, and ROIC, the researchers looked at a selection of 85 pharmaceutical businesses operating in the UK between the years 2009 and 2019. They arrived at the verdict that in spite of the

fact that equity had a negative impact on both the price-to-book ratio and the return on investment, it had a favourable impact on market capitalization change. They also discovered that long-term debt had a favorable influence on the price-to-book ratio and market capitalization change, but the effect of these companies' short-term debt on their overall profitability was detrimental.

Bousbaa (2021) selected to work on a sample of 72 Algerian enterprises over a period of six years. Unlike Tretiakova et al. (2021), Bousbaa demonstrated in his research that in contrast to the total debt ratio, which had an inverse correlation with ROA, the short-term debt ratio had a strong and positive correlation with ROA. Bousbaa concluded that the long-term debt ratio and the financial leverage had no association with return on assets in accordance with these findings. Bousbaa also advocated using short-term debt in financing to avoid a reduction in financial performance, given that Algerian enterprises normally function under the optimal level of capital structure.

Finally, Yahaya & Andow (2022) insisted on the importance of employing equity financing rather than debt instruments to boost a firm's financial performance. This recommendation was made in their paper after they examined the possible correlation that exists between corporate capital structure and its level of financial performance of six Nigerian conglomerates registered on the Stock Exchange of Nigeria between the years of 2009 and 2013. Their findings included a systematic rejection of debt capital's possible relationship with a company's financial performance, a favourable correlation between equity and financial performance, and a favourable impact of size on these companies' performance.

2.
THE ORIGINS AND EVOLUTION OF THE NOTION CAPITAL STRUCTURE

Capital structure is a topic that frequently piques readers' interest in financial literature. In financial terms, the capital structure describes how a company funds its equity with debt securities, stock ownership, or a combination of the two. The structure of resources that plays a significant role in conducting business activities and also evolves as a result of these actions is referred to as the capital structure. In other words, a firm's capital structure is a characteristic that directly influences an enterprise's value and is equally one of the most crucial indicators of financial performance. (Yahaya & Andow ,2019, p.1)

Therefore, the firm's worth and performance are a function of the capital structure because they can be influenced by the capital structure and can also influence the company's capital structure decisions. For years, numerous scientists and financial academics have debated the correlation between a corporate's capital structure and its performance. As a consequence, understanding the concept of capital structure will be beneficial when analysing the factors that influence the value and profitability of a company.

Companies need a strong capital structure to safeguard and consolidate their financial position, as well as to continue operating as efficiently as possible. It also figures out whether a company succeeds or fails. Therefore, the decision-making process regarding capital structure ranks among the most contentious issues in financial management. (Al-Yahyee et al. ,2007, p.1).

In this sense, a company's capital structure can be defined as a grouping of external resources represented by debt and internal resources in the format of equity that are in the liabilities section of the balance sheet of a business and that it uses to fund long-term business and growth as well as to achieve a stated marginal goal of maximising market value and profits (Nirajini & Priya ,2013, p.2). Bonds and loans are common types of debt, whereas stocks and obligations are common types of equity. The company's overall financial plan is represented by the capital structure. Equities and debts are the two cornerstones of the capital structure. Decisions involving these two pillars are challenging and crucial for businesses. Companies balance their capital structures by deciding whether to increase debt or issue equity to fund their operations. The capital structure also outlines how the firm will be rewarded for the assets it acquires (Mireku et al. ,2014, p.151).

To summarise, through optimal capital structure and target capital structure research, every company in the market seeks to make the most appropriate capital composition selections. Companies look closely at every choice that affects the capital structure to get the best capital structure they can and improve their financial performance.

2.1 Optimum Capital Structure and Target Capital Structure

In practice, corporations seek to expand their capital by utilising the capital structure, preferred stock, and common stock while pursuing an optimal capital structure. However, whether such a structure exists, or even just a target capital structure, remains a mystery in the literature (Baker and Martin ,2011, p.129). When developing the firm's capital structure policy, the company must consider a number of factors that, while important in identifying the target capital structure, might cause the current structure to diverge from the ideal one (Muritala ,2014, p.117).

2.1.1 Optimum Capital Structure

Any manager is responsible for ensuring the smooth continuation of his company's operations, as well as its efficiency and financial stability. As a result, it has a primary goal of achieving the maximum market value of the firm by utilising the optimal

combination of foreign resources and equity when making capital structure decisions. This combination, also known as optimal capital, lessens the firm's overall cost of capital to the lowest level possible (Mireku et al. ,2014, p.152). However, according to studies conducted to date, there is still disagreement among experts as to whether there is such a possible option as an optimal or targeted capital structure. (Phillips & Sipahioglu ,2004, p.34). The optimal capital structure can then be characterised as the utilisation of ressources required to support the company's effective functioning, as well as managers' investment decisions based on an optimal combination of debt and equity. Simply put, optimal capital structure determines the best mixture of debt and equity to maximise the value of an enterprise while lowering its WACC (Goyal, 2013).

Despite extensive research into optimal capital structures, no formula or theory exists in the literature that consistently provides an optimal capital structure for a corporation (Goyal, 2013, p.36). As a result, CFOs must study company-specific elements, general economic conditions in the country, and the state of the industry in which they operate before determining appropriate policies for the company based on the findings (Muritala ,2014, p.117).

To summarise, the optimum capital structure is not fixed, and it differs from one company to another and from one industry to another. Every company strives to improve its debt ratios as well as its equity ratios to find the best capital structure and adjust the debt ratio (Brigham & Houston ,2016, p.483).

2.1.2 Target Capital Structure

The target capital structure is the proposed mix of debt, common shares, and preferred shares that a company plans to acquire in order to finance its operations and raise its capital. (Eugene & Houston, 2016, p.343). It also refers to the type of finance that a firm employs as it adjusts its capital structure over time (Baker and Martin, 2011, p.129). Target capital structures alter as circumstances change, and when a deviation occurs, they swiftly adjust to a target ratio, but firm management typically considers a specific structure (Phillips & Sipahioglu ,2004, p.34). The optimal capital structure policy should seek to

strike a cautious and well-informed balance between risk and expected return because it implies a strategic trade-off between the two. The company should consider its potential losses in terms of risk, tax situation, financial flexibility, and the conservatism or aggression of its management. (Ogbonnaya & Chimara ,2016, p.8).

According to Baker & Martin (2011), the trade-offs between marginally increasing tax advantages and marginally decreasing distress costs, agency costs, and transaction costs, should be addressed while selecting the appropriate structure of capital. If the marginal cost of issuing shares of stock is less than the marginal cost of issuing bonds, firms with debt below the target rate can nevertheless issue equity (Baker & Martin ,2011, p.163).

2.2 Cost of Capital

In making business decisions, the cost of capital is a critical consideration. It is involved in determining the company's competitive position. It has a considerable impact on the size and location of investments as well. Modigliani and Miller's papers titled "Cost of Capital, Firm Finance, and Investment Theory" in the late 1950s were the first to address what the cost of capital is. Under normal market conditions, the cost of capital is unaffected by debt ratios, according to Modigliani and Miller (1958) (Modigliani & Miller ,1958, p.262).

The cost of capital is an indicator of the degree to which the capital structure is built in the most efficient way possible. The corporation bears various costs as a result of the decisions regarding capital structure taken by the shareholders (authorities). Companies have the freedom to arrange their capital in whatever way they want after their costs have been approved. In this sense, cost is a factor that plays a key role in determining the most efficient elements that make up the most profitable optimal capital structure. As a result, calculating the correct cost of capital is a requirement for obtaining the necessary financing for new investments (Modigliani & Miller ,1958, p.264).

The cost of capital can also be defined as a discount rate used in the valuation of an investment, or the lowest rate of return that the company should offer, as well as the cost

of appropriateness of the funds utilised by the company (Sharfman & Fernando ,2008, p.572).

To summarise, the cost of capital refers to the cost of the parts that make up a firm's capital structure or financial resources. The cost of capital is also a cost that depends on how capital is structured and influences the business's overall performance and worth. It is therefore critical to assess the cost of capital appropriately for both the corporations that invest and the country's economy (Garnier, Mahieu & Villetelle ,2015, p.6).

According to the liability body's arrangement, the cost of capital is made up of the cost of equity as well as the cost of debt. The WACC is found by adding up the costs of these two sources of capital (Sharpman & Fernando, 2008, p.572).

2.2.1 Interest (Cost of Debt)

Borrowed funds account for a part of the company's funds. The cost of debt, also known as the cost of interest, is a measurement of the amount of interest that must be paid to lenders on the capital borrowed. However, the borrower must also repay the principal, or the amount borrowed, according to the terms agreed upon by the lenders. Debt service includes both interest and principal payments (Shad, Lai, Shamim & McShane ,2020, p. 22515).

Any additional fees, such as application fees, issue fees, financial promotion, etc., are included in the debt cost. As a result, the amount is determined by the loan's period and total amount. The debt's cost must then be viewed as an opportunity cost rather than being evaluated just on an accounting basis. The cost of capital depends on the risk associated with the economic asset, and the financing structure cannot change it; it can only change how it is distributed between the lender and the shareholder (Garnier et al. ,2015, p.10).

2.2.2 Dividends (Cost of Equity)

The cost of equity is defined as the cost of resources provided by shareholders or the profit demanded by shareholders, whether from outside contributions or self-financing. This required profitability must be equal to the compensation they forgo, whether they

bring capital into the company (external contributions) or accept a fraction of the net profit to be kept in the company (self-financing). Due to a lack of accounting data on these costs, they are assessed as an opportunity cost, or the remuneration that shareholders (partners) renounce when they bring capital into the company (external contributions) or accept the company's maintenance of a fraction of the net result (self-financing) (Sharfman & Fernando ,2006, p.572).

2.3 Capital Structure Approaches

Each company's major goal is to reduce resource costs and increase financial performance, and the notion of the optimal capital structure was developed to meet this demand. Because of this, discussions and theories about the capital structure that helps achieve this goal have become more common in financial literature.

To define capital structure theory, it can be stated that it expresses what source of money supply it is, how the company should adjust its strategy for acquiring the necessary resources to buy its assets or invest in, and how debt-to-equity ratios should be preferred (Mostafa & Boregowda ,2014, p.113).

According to the literature, the primary purpose of businesses is to maximise their market value. Different theories have been established to figure out the optimal capital structure to keep the cost of capital at a minimum and hence sustain the highest level of business value. The discussion on the optimal form of capitalization, as well as the fact that the optimal capital structure differs from enterprise to enterprise and sector to sector, is one of the reasons why opinions on capital structures differ. (Naz, M. Khan, Q. Khan, W. Khan & Ahmad ,2013, p:289).

The business’s debt structure and equity structure, as well as the variables with which they interact, are determined by capital structure theories. It is possible to separate capital structure approaches into two distinct groupings: modern and traditional. The classic approach focuses on the debt-to-equity ratio to explain if changes in the capital structure is going to affect the enterprise's worth. Modern approaches, on the other hand, are theories set up on capital structure issues, or factors affecting this ratio. To summarize,

traditional theories seek to identify what mix of debt and equity will maximise firm value, whereas modern theories seek to determine the components that affect capital structure and their consequences on firm's performance (Joshua, Gbenedio, Falola, Oluwagbemi, Lofinmakin & Tams-Alasia ,2018, p. 68).

The fundamental approaches outlined below are predicated on a set of assumptions. These hypotheses can be listed as follows (Mostafa & Boregowda ,2014, p.114):

- Only equity and debt can be used to fund businesses.
- Profits are not subject to taxation. To put it another way, there is no tax of income charged on the profit. However, it is worth noting that this notion is eventually disproved.
- The firm's capital structure can be adjusted with no additional transaction costs.All earnings made by the company are paid to the partners as dividends.
- Profitability is expected to stay the same for the firm in the future, which means that the business will not grow.
- Each investor or business partner should have the same vision for the business's development.
- The operating risk of the company is expected to be stable throughout time and unaffected by capital structure or financial risk.

Companies are interested in three ratios based on the assumptions above. The cost of debt, cost of equity, and total cost of capital are the three ratios discussed below:

K_d: Cost of Debt = $\frac{Total\ Interest\ Cost\ Incurred}{Total\ Debt}$

K_e: Cost of Equity = $\frac{Dividends\ per\ Share\ for\ Next\ Year}{Current\ Maarket\ Value\ of\ Stock} + Growth\ Rate\ of\ Dividends$

K_o: Total Cost of Capital = $\frac{Earnings\ Before\ Interest\ and\ Taxes}{Company's\ Market\ Value}$

The classical capital structure theories that arose in response to these assumptions are detailed below:

2.3.1 Net Income Approach

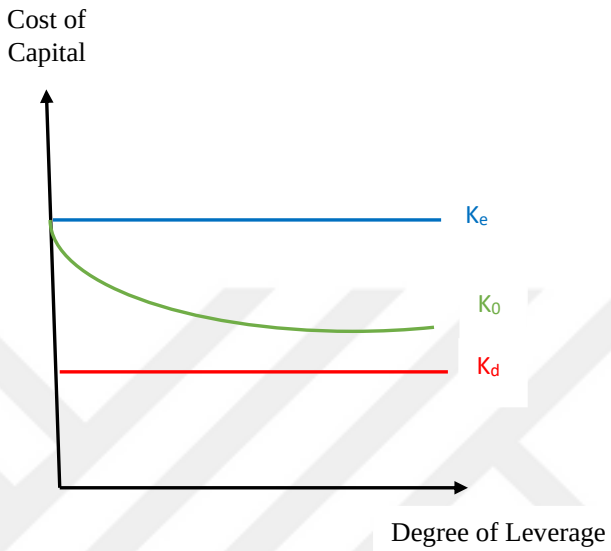
David Durand introduced the net income approach for the first time in 1952. According to the latter, financial results can be impacted by how a company organises its capital and the way it adjusts its structure. (Durand ,1952, p.227). Along these lines, changing the structure of a company's capital can help them enhance their financial performance. He contends that changing the capital structure of a firm will decrease the WACC while increasing its worth. According to this approach, companies can reduce their WACC by choosing low-cost debt over high-cost equity (Öztürk & Şahin,2013, p. 3). As a result, it is predicted that the company's market value would increase. In other words, this strategy can be characterised as the one that takes the leverage element into account the greatest when establishing a company's value. Companies are often encouraged to take on more debt in the hopes of lowering their cost of capital and boosting their stock price. I.e., financial performance follows the same path as financial leverage. On the other hand, because a reduction in the leverage ratio will lead to a rise in the cost of capital, the business's market value will be negatively affected. In other words, the net income approach assumes that foreign resources and restricted equity will provide the optimal capital structure (Yılgör & Yücel ,2007, p.2).

Some assumptions are considered while using the net income approach:

To begin with, in accordance with the net income approach, A rise in the interest rate on loans has no effect on investor confidence. In other words, it has been asserted that there is no connection between the debt ratio and the risk perception of investors. In fact, the "net operating income method" contends that raising a company's financial leverage implies a higher level of risk, that shareholders expect larger returns to compensate for this risk, and that, consequently, the cost of equity increases. Another assumption of the approach is founded on the thesis that the cost of debt and equity is not affected by the debt-to-equity ratio and remains constant (Uyanık ,2021, p.6-7).

Figure 1 depicts the association between the perception of leverage and the cost of capital under the net income approach.

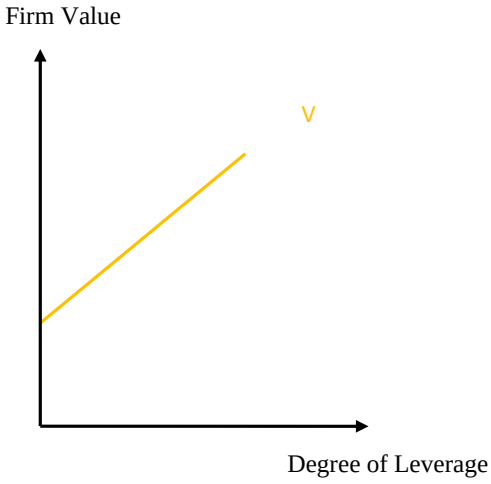
Figure 1: The Graphic Presentation of Cost of Capital and Leverage by Net Income Approach



Source: Akay ,2021, p.8

Figure 2 illustrates the link that exists between the level of a company's leverage and its value according to the net income valuation methodology.

Figure 2: The Graphic Presentation of Firm Value by Net Income Approach



Source: Mercimek ,2020, p. 35

In accordance with the net income approach, a higher proportion of debt in a company's capital structure increases its value. This strategy is predicated on the assumption that the capital structure does not influence the costs of debt and equity and that it remains unchanged, as seen in the graph above. The WACC (K_a) is falling as the amount of debt increases. When there is no debt outstanding, the cost of equity is equal to the WACC. (K_a).

The cost of the capital structure, which is assumed to be fixed in the net income approach, has been called into question for not taking into account the risks that may disrupt the liquidity balance of the enterprise due to the increase in debts, the difficulties in obtaining an operating result due to the increase in debts; and the failure to take into account the possibility that the enterprise will be drawn into an insolvency situation. In addition, creditors whose risk level is increasing due to the company's deteriorated cash balance will provide funds to the company at a higher cost, while shareholders will demand higher returns to reduce the risk of their investments in the company. Furthermore, at all levels of leverage, the cost of capital is presumed to remain the same throughout the entire process. Nevertheless, it is well recognised that this position will not be acceptable in real markets. This approach has also been criticised for failing to account for the negative consequences of debt cash outflows on future net cash flows as well as the financial risk impact of debts, which lowers the company's credit rating and raises the cost of capital (Akay ,2021, p.8).

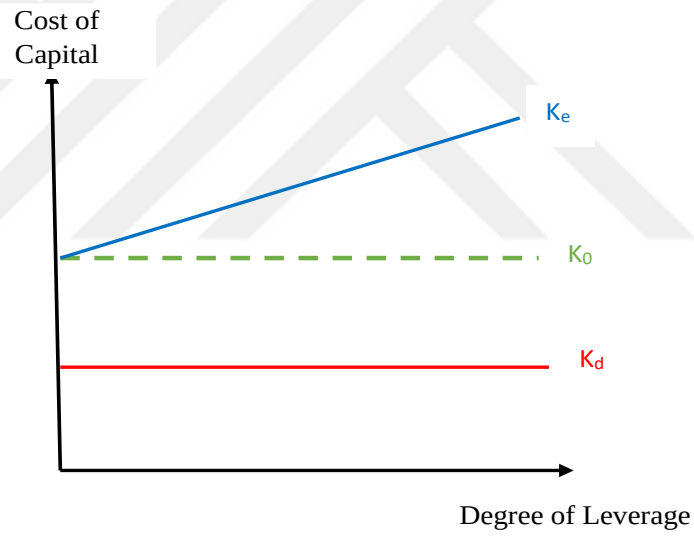
2.3.2 Net Operating Income Approach

Net operating income theory, developed by David Duran, claims that a company's market value and WACC are unaffected by its capital structure, i.e., the decisions relating to the capital structure are not important according to said approach. The latter makes the assumption that the average cost of capital and the value of the company will remain unchanged regardless of the leverage value of the firm. However, as the company's debt level increases, the cost of equity also increases. Similarly, as the company's debt ratio rises, the company's risk also increases, so the desire of shareholders for a prominent level

of risk and a high rate of return for the capital they invest in forms the basis of this approach. This method assumes that the rise in the cost of equity will be offset by the decrease in the cost of debt capital, resulting in a constant WACC. (Darmawan & Nafhanti ,2019, p.4).

Figure 3 displays the correlation between Leverage and the cost of capital using the net income operating method.

Figure 3: The Graphic Presentation of Cost of Capital and Leverage by Net Operating Income Approach

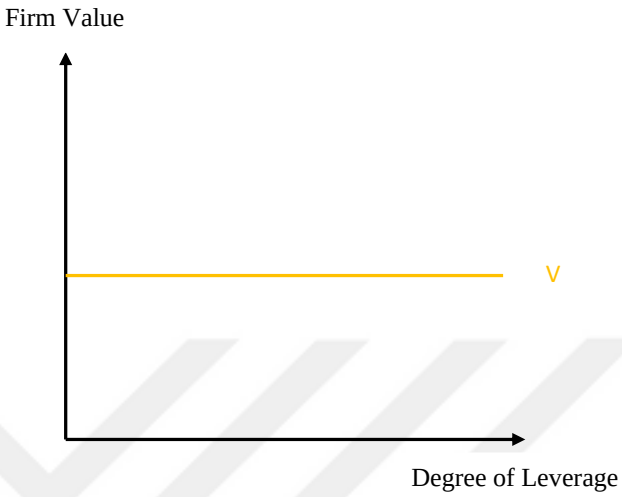


Source: Uyanık ,2021, p.9

Figure 3 illustrates that there is a linear relationship between the leverage ratio and the cost of equity (ke), which is used in the net operating income approach, whereas the cost of debt (kd) remains constant throughout the analysis. As a direct consequence of this, the value of the company has not altered. To phrase it another way, the organisational structure is unaffected by the capital structure.

Figure 4 illustrates the correlation between leverage and value of the firm using the net operating income approach.

Figure 4: The Graphic Presentation of Firm Value by Net Operating Income Approach



Source: Uyanık ,2021, p.9

The firm's value remains constant, as illustrated in the graph. Based on this approach, there is no one capital structure that is always going to be the best for a corporation. It is impossible to modify the capital structure, lower the average cost of capital, or increase the market value of the company. Simply put, all capital structures are optimal for the organisation.

This approach has been criticised since it forecasts that the cost of debt will remain unchanged despite increased borrowing. The level of financial risk, according to the latter, will remain constant. When the degree of borrowing of an organisation that continues to operate in real market conditions increases, creditors' margin of safety shrinks, and borrowing can then be done at a higher interest rate. As a result, the cost of debt should increase in lockstep with the cost of equity. Another issue with this strategy is the assumption that if the borrowing rate rises, the cost of equity will increase in lockstep with the increase in financial risk (Mercimek ,2020, p. 37).

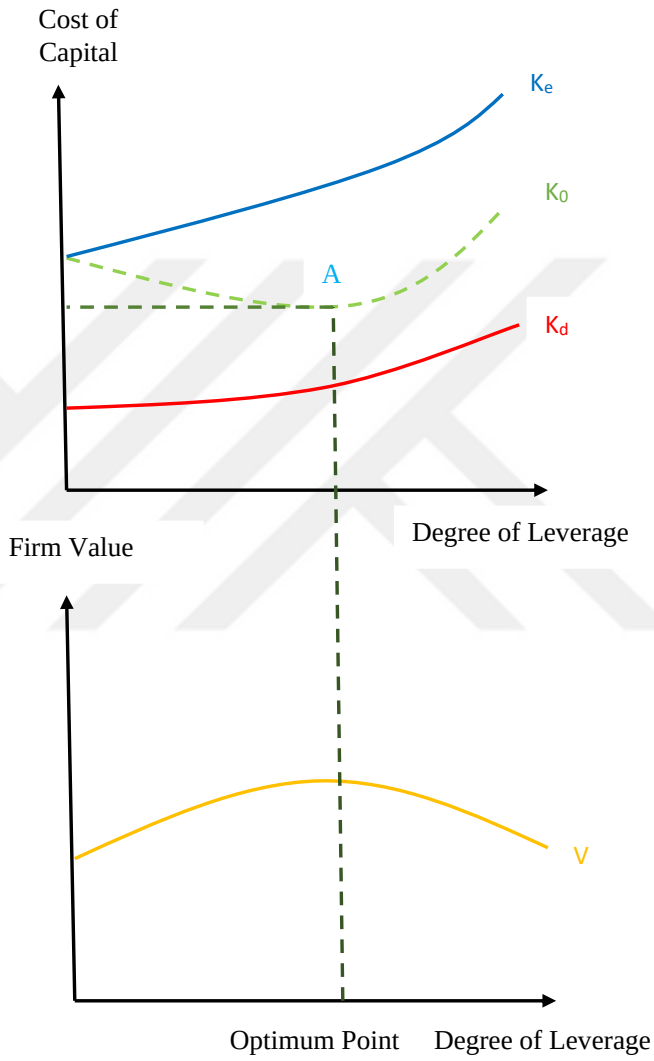
2.3.3 Traditional Approach

The Traditional Approach, also known as the Solomon Approach, was developed by Ezra Solomon in 1963. It is expressed as the approach that most effectively explains

the optimal composition of capital and the cost of capital. The latter presumes that, for optimal firms, there is a single optimal capital structure, and that increasing financial leverage increases firm value. (Solomon ,1963, p. 279).

According to the theory of the traditional approach, by utilising foreign resources, the business can lower its WACC in the process before achieving the optimal goal of capital structure. If the enterprise increases the use of foreign resources after reaching the optimal capital structure, the costs of debt and equity increase, and consequently, the enterprise's market value decreases. As a result, the traditional approach holds that the most important task of the CFO is to pick out the capital components that contribute most to the overall value of the company (Kiracı ,2017, p.64-65). The use of foreign resources at the level where the capital structure is considered optimal will reduce the average cost of capital. Indeed, when the market value of the organisation has increased to its maximum potential as a consequence of a rise in the degree of debt (foreign resource) within the capital structure of the company, that point reached by the capital structure is considered to be optimal; if the debt level continues to increase after this point, the market value of the enterprise begins to decrease. Furthermore, the cost of equity (K_e) exceeds the cost of debt (K_d). In addition, as the debt ratio increases to a particular level of indebtedness (K_d), the cost of equity (K_e) rises, resulting in a decrease in the WACC (k_o) until the optimal capital structure is reached. In other words, a rise in the level of debt (foreign resources) in a business's capital structure raises its market value (V) up to a point, and the optimum capital structure is located at (A), where the company's market value is highest, and the average cost of capital is at its lowest. When the optimal point (A) is exceeded, however, the funding risk rises, as do the costs of equity and debt. In this circumstance, the average cost of capital also increases. Therefore, it is projected that the corporation's market value (V) will decrease (Geçili ,2014, p.51-52).

Figure 5: The Graphic Presentation of Cost of Capital, Financial Leverage, and Firm Value by Traditional Approach of Capital Structure.



Source: Brigham & Houston ,2019, p.495

A: Optimal Capital Structure

As shown in the figure, once the equality between the marginal cost of debt and the marginal cost of equity is achieved, the average cost of capital will start to rise since the continuous borrowing of enterprises will similarly increase the cost of both equity and

debt. Along with this situation, the value of the company will decrease (Brigham & Houston, 2019, p.494). In accordance with this method, the average cost of capital for businesses would rise in response to an increase in the financial risk of the company and the degree of risk perception among creditors and partners. That is to say, since the average cost of capital tends to decrease before increasing, the cost will be at a minimum for a given loan if the approach is followed. The optimal capital structure is the name given to this level. This situation is summarised in the figure above (Geçili ,2014, p.55).

Another way to put it is, although debt costs are lower than the cost of equity in the traditional approach, it is suggested that the ongoing expansion in the ratio of debt after the capital structure that minimises the weighted average cost will increase the business's financial risk. In this instance, the cost of equity will increase proportionately alongside the increased demand from shareholders for a higher rate of return in compensation for the increased level of risk the company is willing to take. (Brigham & Houston, 2019, p. 622-624). The traditional approach as well as the net operating income approach share the same vision in this regard. Increases in debt will cause the company to depart from its optimal capital structure, thereby causing a rise in the WACC. This circumstance will eventually have a negative impact on the market value of the business and on its financial performance. As a result, while the traditional approach, like the net income approach, argues that financial leverage should be increased to a level that minimises firms' average cost of capital due to low foreign resource costs relative to equity costs, however, proponents of the net operating income approach maintain that borrowing should continue even after the optimum level has been reached. It claims that this will raise resource expenses, negatively impacting the company's financial performance (Küçük Özer ,2019, p.12).

2.4 Capital Structure Theories

The capital structure choice is a fundamental issue in financial theory. In fact, figuring out this structure is one of the hardest decisions that the company's leaders have to make.

Since 1958, several researchers have been interested in this topic, with Modigliani and Miller being the pioneers in this field. These two authors created a perfect environment and demonstrated that the value of a company is unrelated to its capital structure. In 1963, they introduced the corporate tax and proved that the enterprise's value is proportional to its rising debt level. More recently, starting in the nineties, a new logic for choosing sources of financing in particular circumstances has supplanted the old one, which was based on the principle of trying to find the best possible capital structure. Theories like these are usually based on the idea that a preference can be established under certain conditions. (Bourdieu & Colin-Sédillot, 1993, p.88).

2.4.1 Franco Modigliani & Merton Miller (M.M) Theorem Model (Irrelevance Theory)

The first to undertake a theoretical examination of the capital structure was Modigliani and Miller (1958) in their seminal article. Modigliani and Miller were two professors who devoted their time to the study of capital structure theory and worked together to develop the proposition of the capital structure's non-relevance. To put it another way, these two authors provide evidence that, subject to certain stipulations, the capital structure has no effect whatsoever on the worth of the business. In other words, if there are perfect financial markets available, then there is no difference between the various forms of financing.

Their model is premised on the following assumptions: in a perfect financial market, the costs of bankruptcy do not exist, no taxation, symmetric information among agents, unlimited access to credit, fixed interest rates on loans as well as borrowings, and managerial staff that prioritises shareholder returns. Furthermore, this methodology suggests that businesses can't find an "optimum" capital structure. Because the capital costs of businesses that share a similar risk profile across enterprises categorised according to their risk status will be equal, the enterprise valuations will be equal as well. Nevertheless, as these assumptions were gradually called into question after focusing on

plenty of capital structure 's determinants, it became possible to abandon the idea of the irrelevance of the capital structure (Abeywardhana ,2017, p.134).

To conclude, Modigliani and Miller's methodology is founded on the assumptions that markets and companies are in the same risk category, that there are no taxes, bankruptcy fees, transfer fees, or asymmetric information. However, various arguments have been made that the theory is insufficient due to factors such as the fact that rational investors work in efficient markets, which is far from reality, and the tax component influences borrowing strategies (Modigliani & Miller ,1958, p.292-293).

In their 1963 paper, Modigliani and Miller attempted to correct the flaws in their 1958 work by including the debt tax benefit.

The following assumptions underpin the M.M approach (Öztürk & Şahin ,2013, p. 5-6).

- The conditions of perfect competition continue to be valid in the capital markets. More precisely, investors and those in management positions know as much as anyone else about the company's prospects for future investment. In other words, there is no asymmetric information.
- Investors act rationally.
- The model does not include income taxes (later, this condition was removed).
- The borrowing costs of companies and investors are the same.
- There are no bankruptcy fees.
- There is no arbitration opportunity. In this case, the investor can make money by selling or buying securities without having to pay any extra fees.
- Companies do not have financial risk costs.
- The securities have no transaction fees and can be bought and sold at any time.
- There are only two types of security that a company has the ability to issue: risk of equity and risk of free debt.

Modigliani-Miller claim in their proposals that there are efficient markets, that there is no tax (the tax was considered in their subsequent studies), that enterprise investment

and financing decisions are irrelevant, and that their capital structures are independent of cost of capital and market value (Ogebe, Patrick, & Alewi, 2017). The following are the three key recommendations advanced by the Modigliani-Miller approach:

2.4.1.1 First Proposition: "Irrelevance of Debt"

It is acknowledged in Modigliani-original Miller's suggestion that the tax is not taken into consideration. The markets are perfect and efficient based on this approach.

"*The market value of any firm is independent of its capital structure and is given by capitalising its expected return at the rate Pk appropriate to its class* " (Modigliani & Miller ,1958, p. 268).

In the capital market, the value of an enterprise whose capital structure consists only of its own funds and that of an enterprise that has debts in its capital structure are considered identical. According to this first proposal, it is stated that changes in the borrowing rate will not have an effect on the total cash flows to be obtained by the enterprise, and therefore, the WACC, will not change regardless of the different types of borrowing that are included in the capital structure. Furthermore, Modigliani and Miller believe that, regardless of debt status, enterprise market values in the same risk group and with the same operating result are equal (Geçili, 2014, p.57).

To summarise, an enterprise's market worth and cost of capital are unaffected by the business's capital structure. The market value of a company is found by doing transactions with the right discount rate for the risk class, which includes the expected operating outcome.

2.4.1.2 Second Proposition: "Rate of Return on Equity"

Unlike M.M 's other proposal, which concerns the cost of capital, this one concerns the projected rate of return on investment for shareholders. In accordance with this concept, when the use of debt rises, the company's financial risk increases, and as a result, investors' expectations rise in tandem with the risk increase. This second approach tries to illustrate the debt's hidden cost. This proportional relationship can be explained as follows:

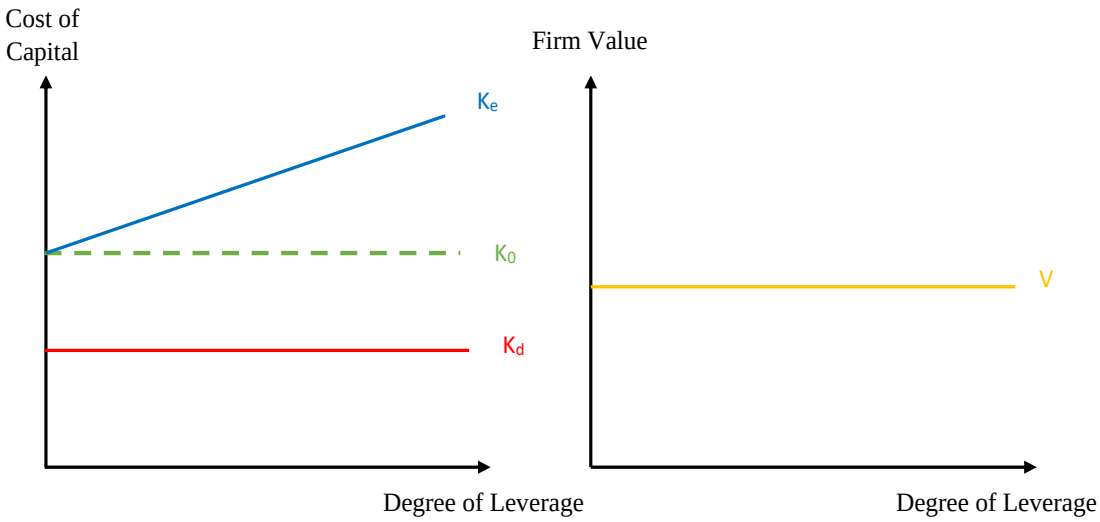
when the leverage ratio rises, the WACC should fall as the borrowing's cost decreases. However, the following is the predicted rise in shareholder or investor returns: The invisible cost is created as a result of this, although the WACC remains stable (Darmawan & Nafhanti ,2019, p.4).

To summarise, when an enterprise's capital is restructured in favour of debt, its financial risk rises, while the cost of equity rises in tandem. Because of the increased financial risk, business partners will seek a bigger profit share. In other words, when the cost of equity rises, the positive effect of debt financing on the average cost of capital will vanish (Uyanık ,2021, p.13).

In this second proposition it exists two main assumptions:

The Second Proposition in the absence of taxation: Modigliani and Miller (1958) claim that the expected return on equity (K_e) is exactly proportionate to the rise in financial leverage under the premise that investors are rational. In addition, the WACC (k0) remains unchanged since the cost of equity (Ke) is offset by the benefits of a cheaper loan (Akay ,2021, p.15).

Figure 6: The Cost of Capital and Value of the Firm under M&M Theorem (in the case of absence of taxes)

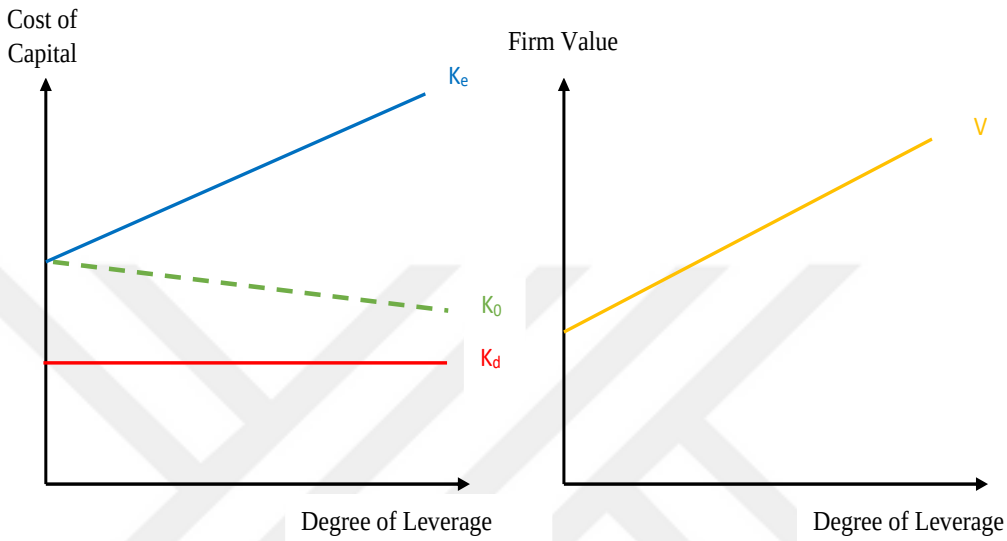


Source: Ahmeti & Prenaj ,2015, p.918

As can be seen in the figure above, there is no impact of the capital structure on the cost of capital (k_0). Similarly, if the model does not account for corporate taxes, then the capital structure has no bearing on the value of the company. That is, the managers of the enterprise can resort to any composition of capital structure without touching the value of the enterprise. As a result, when it comes to the company's worth or equity, managers no longer attach importance to financial decisions (Kaplan Financial Knowledge Bank, 2022).

And The Second Proposition due to the impact of taxation: By adding tax to their work in 1963, Modigliani-Miller proved that expenses made when calculating income tax are tax deductible. They demonstrated that the value of businesses that benefit from the debt tax benefit increases in tandem with the tax benefit. While any alterations to the company's capital structure would be completely irrelevant to its worth in the tax-free proposal, which is the second proposal without taxes, the value of businesses rises as a result of the tax shield created by increasing debt levels in their capital structures as much as the tax benefit. To summarise, there is a close relationship between the capital structure and the enterprise value according to this model (Darmawan & Nafhanti ,2019, p.4).

Figure 7: The Cost of Capital and the Firm's Value Under the M&M Theorem (with the presence of taxes)



Source: Ahmeti & Prenaj ,2015, p.919

As can be seen in the figure above, when tax is added to this model, the percentage of debt in the firms' capital structure grows because of the financial shield, yet the WACC (k_0) drops since the benefit of cheaper debt financing is not compensated by the increase in the cost of equity (k_e). In contrast, it can be observed that the company's value (V) has been steadily rising benefiting from this tax advantage (Pan ,2012, p.15).

Modigliani and Miller used Proposition II to demonstrate that the perception of Proposition I was incorrect. Furthermore, regardless of the business's degree of debt, shareholders' future payout from the company is unaffected. According to Breuer and Gürtler (2008), tax regulations vary by country or market, hence not all marketplaces have the same conditions. If a country's legislation or tax laws change, for example, the entire idea will lose its legitimacy (Do Hoang ,2018, p.20).

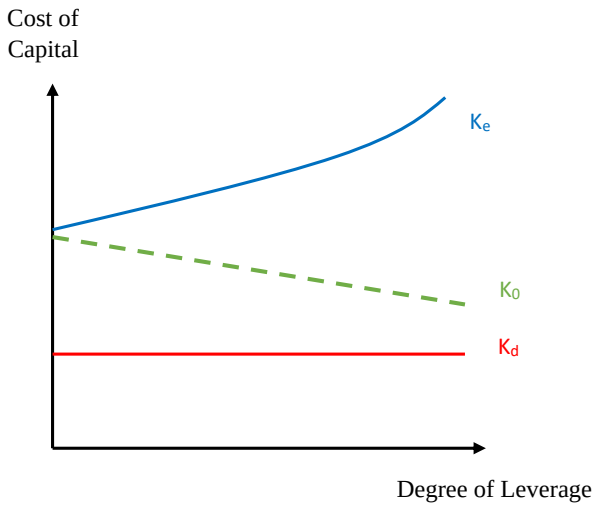
2.4.1.3 Third Proposition: Modigliani-Miller's third proposal

"*The cut-off point for investment in the firm will in all cases be P_k and will be completely unaffected by the type of security used to finance the investment*" (Modigliani & Miller ,1958, p. 288).

The low rate of return that is to be anticipated when making investments, according to Modigliani-Miller, is completely separate from investment financing, and how an investment project is financed has no bearing on the investment decision, because investment and financing decisions are completely independent of one another (Akay ,2021, p.15-16).

It is also argued that the dividend policy has no bearing on the market value of a company and is thus irrelevant in determining the value of a business. This Modigliani-Miller proposal contends that, in a perfect market, the dividend policy of a company would have no effect on its market value because the latter is determined solely by the earning potential and risk of the company's principal assets. (Ahmeti et Prenaj ,2015, p.920).

Figure 8: The Optimal Capital Structure According to the Modigliani Miller Approach



Source: Akay ,2021, p.16

While the average cost of capital (k_o) decreases, the benefit is nullified by the increase in the cost of equity (ke) due to increased financial risk, as shown in the graph.

Capital market arbitrage underpins M.M' s suggestions. Because the ability of investors to buy more advantageous shares by selling shares in their portfolio prevents market values of companies in the same risk group and with the same net operating income from differing significantly. According to M.M, there is no optimal capital composition for businesses (Ersoy ,2019, p.15).

2.4.1.4 Modigliani-Miller Theory Criticism

The biggest objection raised against the M.M approach is that its assumptions are far from reality. The following is a summary of the evidence presented by the critics of M.M (Abeywardhana ,2017, p.134):

- Because capital markets are inefficient, large corporations' borrowing costs are greater, ensuring that a company that employs financial leverage has a higher value than a company that does not or underuses financial leverage.
- In the capital market, there are institutional forces that push arbitrage to the back burner and limit it. Organisations that provide considerable resources to the stock market are not eligible to go to arbitration right away, as M.M allows. There are a variety of factors that cause these institutions' portfolios to be restricted or arbitration deals to be delayed.
- The increased probability of a company going bankrupt increases the costs and losses in value that will be incurred because of bankruptcy. As a result of this accumulation, owners' willingness to invest in enterprises with excessive debt levels decreases. This is due to the expectation of increased potential losses, which will result in bankruptcy, increased debt, and a detrimental influence on the enterprise's value and cost of capital.
- The cost of purchasing and selling shares has a transaction cost, which limits arbitrage. An arbitration deal can only be made if the return to be given is more than the cost.

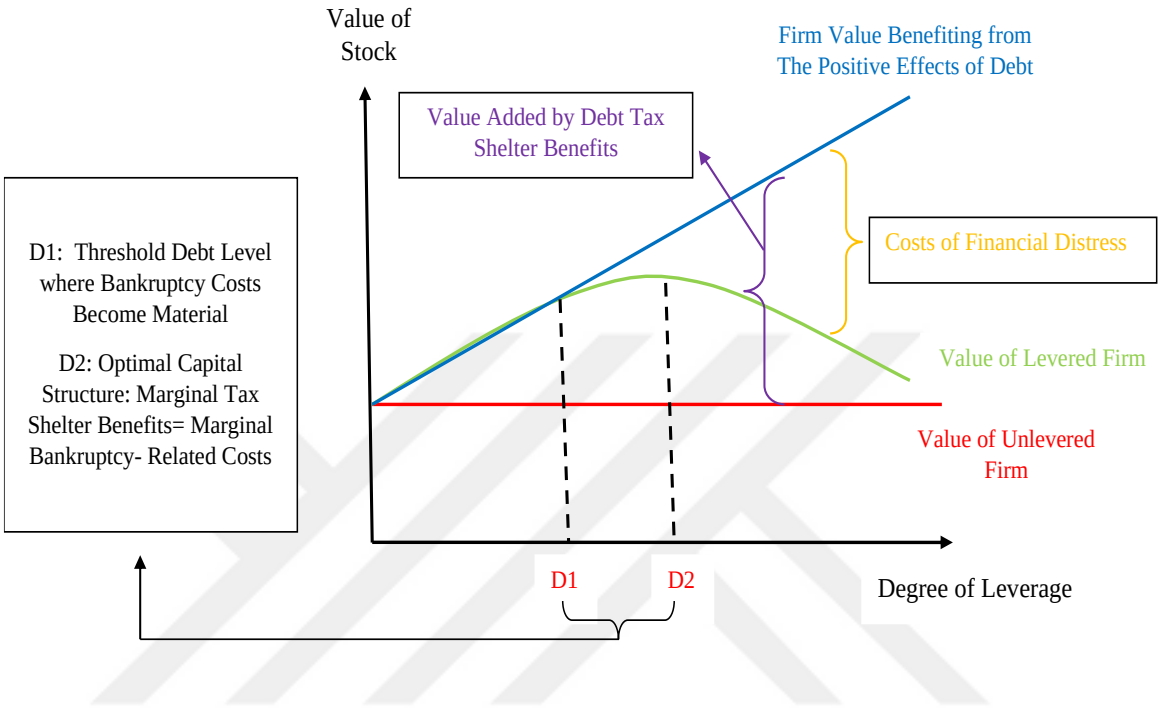
2.4.2 Trade-Off Theory

This theory is based on two opposing yet compensable considerations. On the one hand, debt has tax advantages. On the other hand, there are the costs of bankruptcy and economic agency conflicts of interest (Yılgör & Yücel ,2007, p.2).

The first hypothesis to be abandoned was that of the fiscal impact. In their 1963 paper, Modigliani and Miller accounted for the fact that interest paid on debt can be deducted from taxable income. As long as the business generates an operating profit, they demonstrated that the value of a debt-laden company is equivalent to the value of a debt-free company plus the present value of tax savings attributable to debt. Then the optimal capital structure becomes that of a company with maximum debt. In contrast to the benefits of debt, such as the ability to deduct interest payments from taxable income, the costs associated with carrying too much debt can increase financial stress and even lead to bankruptcy. (Kamau, Mogwambo & Muya ,2018, p.286).

One of the central tenets of the trade-off theory is that every business has an "optimal point" in its capital structure. The optimum capital structure is formed to the point where the borrowing's tax savings and the costs of financial distress that it creates are equalized. The latter is then the result of setting a target level of indebtedness, which allows arbitrating between of the benefits of debts, including tax savings on debt charges and the reduction in the costs of equity agency, and the drawbacks of debts, such as the costs associated with filing for bankruptcy and the increased agency costs of financial debts. The graph on the opposite page depicts the optimal capital structure based on the optimal debt ratio approach (The Trade-Off Theory) (Nirajini & Priya ,2013, p.3).

Figure 9: The Optimal Capital Structure Based on the Trade-off Theory



Source: Brigham & Houston ,2019, p.499

Based on the trade-off theory, increasing the leverage ratio increases the costs of bankruptcy and agency, which causes the business's value to decline. Thus, the optimal capital structure can be achieved by balancing the tax advantages of debt with the costs associated with debt (Khanam, Nasreen & Pirzada ,2014, p. 95).

The market value of enterprises that do not use debt remains constant, as shown in the graph above. The tax benefit afforded by debt, according to Modigliani-second Miller's second proposition, boosts the company's market value. However, after a certain point, a rise in the interest rate on loans will heighten the danger of bankruptcy and certain charges. Although the level of borrowing at point D1 has no effect on the enterprise's worth, from point D2 onwards, the enterprise's market value will begin to decline. In the figure, it is observed that the leverage ratio as well as the market value of the enterprise (V) increase together at the beginning, but it is also noticed that the market value of the enterprise decreases as the costs of financial difficulties occur. As can be seen in the graph, beyond

point D1, the expenses of bankruptcy increase while the benefit of the debt-related tax benefit declines. With the growth in bankruptcy expenses after point D2, the tax benefit of borrowing rapidly diminishes. If a corporation continues to employ debt after this time, the enterprise's market value will probably fall. As a result, point D2 depicts the optimal capital structure for businesses. Finding the optimal capital structure entails balancing the present value of tax benefits from increased borrowing against the rise in the present value of financial distress expenses. (Akay ,2021, p.21-22).

This condition, which will increase the cost of capital, will have a detrimental effect on the enterprise's value. The value of the firm will remain constant if the company does not desire to fund itself through borrowing (Brigham & Houston ,2019, p.500).

2.4.3 Pecking Order Theory

Myers and Majluf (1984) established the Pecking Order Theory (hierarchical financing theory), which questions the existence of an ideal target debt ratio modelled by the trade-off theory. In accordance with this view, the company's capital structure is chosen as a compromise between the debt's tax benefit and the risk of bankruptcy that this debt can cause. The hierarchical financing theory, on the other hand, believes that the asymmetry of information between the company's internal actors (owners, managers) and external actors (donors) influences the financial structure decision, as well as signalling issues[1] (Abeywardhana ,2017, p.136).

Myers and Majluf (1984) proposed a hierarchical model of resources by taking these two variables into account in financial logic. In order to reduce the negative effects of information asymmetry and to reduce the costs associated with it, in accordance with this hypothesis, managers will presumably opt for internal financing over external financing

[1] The signalling theory assumes that there is an asymmetry of information between the various people who are influenced by the company's operations. To put it another way, this hypothesis is predicated on the assumption that a company's managers own more information than its financiers. Ross (1977) was the first to apply this theory to the field of corporate finance. According to him, a company's capital structure can send a signal to creditors. Furthermore, he demonstrated that each change in financial policy alters creditors' perceptions of the company and thus serves as a market signal. As a result, the investor is always on the lookout for a signal from the leaders that will inform him of the company's financial situation (Kebewar ,2021, p.18).

as part of their overall financial strategy. According to the authors, the corporation builds a hierarchical financial order depending on resource availability, as evidenced by the adverse selection theory. They rank their preferences in the order listed below. First and foremost, the company is self-funded (i.e., retained earnings). Second, if internal finances are insufficient, the corporation chooses to take on non-risky debt rather than risky debt. In the event of a need for additional funds, it will eventually issue shares to cover the remaining capital requirements (Brigham & Houston ,2019, p.501).

The benefits of adhering to this hierarchy include avoiding a drop in the company's stock price, limiting dividend payout to boost self-financing, and lowering the cost of capital by minimising the use of loans as much as feasible. As a result, profitable companies have more access to internal financing (Akeem ,2014, p.43-44).

2.4.4 Agency Theory

The concept of the absence of conflicts between the company's many actors prompted the development of the agency theory. It is founded on the concept that every individual acts in his or her own best interests before the collective good. The goal of this theory, as stated by Jensen and Meckling (1976), is to characterise the features of optimal contractual arrangements between the agents and the principal (Zerriaa & Noubbigh ,2015, p.122).

On the one hand, the control which the shareholders must exercise over managers in order for the latter to reduce their opportunistic behaviour generates agency equity-related costs between owners and managers. On the other hand, agency expenses relating to financial debts between shareholders and creditors are incurred as a result of the creditors' authority over shareholders and management. Indebtedness appears to shareholders as a tool to decrease equity agency expenses, and shareholders postpone management control in the debt market. However, this recourse to debt results in debt agency costs, which cancel out the preceding benefits (Mostafa & Boregowda ,2014, p.117; Zerriaa & Noubbigh ,2015, p.122-123).

2.4.5 Market Timing Theory

Baker and Wurgler's study was the first to present the theory of market timing (2002). According to this theory, corporations will issue stock during times of high stock prices and optimistic stock market conditions and will do the opposite, issue debt and repurchase shares, during times of low stock prices and negative stock market sentiment. (Ogbonnaya & Chimara ,2016, p.9).

According to Baker and Wurgler (2002), corporations take on less debt during periods of high market valuation, particularly when the growth opportunity (measured by Market to Book “MTB”) is significant. Their findings indicate that the capital structure is the consequence of an accumulation of past decisions based on the stock market backdrop, rather than a conscious choice of an optimal ratio (Abeywardhana ,2017, p.136).

Despite the extensive study that has been done since Modigliani and Miller's groundbreaking research in 1958, a thorough comprehension of the factors that determine a business's capital structure (CS) is still difficult to grasp (Daidai & Tamnine ,2022, p.174).

M.M 's paper's underlying assumptions were largely extended in this research, and these extensions took into account aspects including profitability, tangibility, size, growth prospects, liquidity, non-debt tax shields, and asset structure (Zerriaa & Noubbigh ,2015, p.125).

3.
CAPITAL STRUCTURE AND FINANCIAL PERFORMANCE: A THEORETICAL PERSPECTIVE

This section will describe the factors that determine the capital structure of the company. The subsequent discussion will focus on the drawbacks associated with taking out an excessive amount of debt. Finally, an in-depth analysis of the overall performance as well as the financial results, along with the indicators that were utilised to determine this, is presented.

3.1 Determinants of Capital Structure

Considering the various estimated trajectory coefficients between countries for factors influencing the capital structure and the financial performance of enterprieses, it is possible to draw the conclusion that the financial determinants as well as the capital structure of companies can vary from one country to another (Ramli, Latan & Solovida ,2019, p.149).

Put it differently, the absence of a comprehensive structural theoretical model characterises earlier empirical studies. They do, however, offer a series of theories and corresponding hypotheses. This results in a multitude of potential factors, the impact of which on indebtedness may differ between theories (Kebewar ,2021, p.21).

This paragraph is not intended to list every variable that has an effect on the capital structure. However, the presentation of the main variables identified by the empirical literature, namely: profitability, size, asset structure, growth opportunities, non-debt tax shields, liquidity, and tangibility takes up a larger portion of its focus (Zerriaa & Noubbigh ,2015, p.125).

3.1.1 Profitability

Profitability serves two master functions as a performance metric in establishing the capital structure of a business: Creditors can use it to assess the value of the firm, and business leaders can use it to guide their fiscal decision-making. Its impact on indebtedness can, however, occasionally be conflicting. According to the theory of hierarchical financing (Pecking order) and information asymmetry, in order to invest, the most successful companies rely primarily on internal resources, followed by indebtedness, and finally, the issuing of new shares. Consequently, it can be anticipated that profitability will negatively affect debt (Rajan & Zingales ,1995, p.1457-1458).

On the other hand, a corporation will favour debt more as it becomes more lucrative in order to benefit from the tax deductibility of loan costs, according to the approach of the optimal debt ratio (Trade-Off). High profitability also acts as an additional guarantee in the eyes of the firm's debt holders because it suggests a higher likelihood of debt repayment. According to the signal hypothesis, a thriving business that employs debt also conveys to creditors that its finances are strong. As a result, a correlation that is favourable between a firm's profitability and its level of debt should be anticipated (Arslan and Boz ,2017, p.214).

However, while enterprises repay their debt through self-financing, Fischer, Heinkel & Zechner (1989) and Leland (1998) demonstrate using dynamic theoretical models that there are adjustment costs to shift upwards to the desired ratio. In other words, within the framework of an ideal debt ratio, businesses adopt a form of short-term hierarchical financing behaviour (Fischer et al. ,1989, p.38-39; Leland ,1998, p.1237).

3.1.2 Firm risk

The cash flow volatility and company risk are both impacted by the company's growth options. According to several scholars, the degree of debt is a diminishing function of earnings fluctuation. For example, trade-off theory, hierarchical financing theory, as well as agency theory all foresee an unfavourable correlation between profit fluctuation and debt (Arslan & Boz ,2017, p.214).

Debt does, in fact, make net income more volatile, thus it should be inversely connected with operational risk. Numerous studies empirically validate this negative association (Castanias ,1983, p.1629). However, this link between risk and debt could be advantageous because of the issue caused by asset substitution. The temptation for shareholders to take on more risk will be reduced the riskier the company is, which will reduce potential agency costs.

In some studies, risk was measured by the variance of earnings, while in others, it was measured by the volatility of stock returns. Shane (1995) disputes these measurements, arguing that since highly technological enterprises frequently report negative profitability, the most relevant metric to use is the volatility of stock returns rather than earnings (Shane ,1995, p.33).

3.1.3 Size

One of the differentiating variables in choosing a business capital structure is thought to be size. Nevertheless, Rajan and Zingales (1995) claim that its impact is still unclear. In fact, on the one hand, huge businesses are diversified and less hazardous as a result, which allows them easy access to debt, however, wide scale is associated with information accessibility. This aspect ought to support managers' preference for equity investments over debt (Ramli et al. ,2019, p.149).

According to Ang, Chua, and McConnel (1982), a substantial portion of a firm's depreciating value comprises the direct costs of bankruptcy. They confirm that the costs of bankruptcy are higher for small enterprises than for large ones, which would suggest that small businesses have a low debt ratio. In other words, the control that outside analysts have over big businesses reduces the agency costs associated with issues like information asymmetry and asset substitution (Ang, Chua & McConnell ,1982, p.224-225).

Because the diversification of businesses lowers the unpredictability of cash flows, Warner (1977) and Ang et al. (1982) emphasise the existence of economies of scale in terms of bankruptcy costs that are inversely proportional to the size of the business. Therefore, huge companies must have higher levels of debt (Warner ,1977, p.345-355).

According to Ferri and Jones, large corporations, which are frequently traded on the stock market, have easier access to capital markets to obtain the necessary financial resources (Ferri & Jones ,1979, p.642).

Numerous research supports the idea that size and debt have a positive association. Nevertheless, an approach that is founded on the asymmetry of information may lead to the incorrect assumption that there is an inverse relationship between size and debt. Small businesses are, in fact, more susceptible to information asymmetry. Other studies reveal weak or minor associations and hesitate to draw conclusions (Zerriaa & Noubbigh ,2015, p.125). Heshmati develops a capital structure model that is dynamic in 2001 for a sample of businesses and reveals a conflict between size and leverage (Heshmati ,2001, p.215)

3.1.4 Growth Opportunities

The debt ratio is impacted in two opposing ways by growth opportunities. On the one hand, a positive effect is predicted by the signal theory according to Ross (1977), which demonstrates that growth is a reliable indicator of a company's good financial health. As a result, this type of company (having robust growth) experiences an increase in its need for external financing (Leland & Pyle ,1977, p.384).

On the other hand, a negative correlation is expected according to Jensen and Meckling (1976) and Myers (1977), as it will be an increase in the agency costs that both shareholders and creditors have to pay if the value of potential future growth opportunities is higher than the current value of the assets that are already in place. This implies that creditors adopt a tougher attitude toward this type of company. Because of this inconsistency, the impact of growth opportunities on debt is ambiguous. (Zerriaa & Noubbigh ,2015, p.125).

3.1.5 Liquidity

Businesses that have a healthy cash flow are better able to pay off their debts. The ability to pay debts is the primary factor considered in the business to which the funds will be given in terms of creditors. Companies that have enough liquidity to pay their debts

can borrow money at lower rates and with more lenient conditions. It is envisioned that liquidity adequacy will have a positive correlation with financial leverage as a result of this circumstance, which lowers the cost of debt. This viewpoint is backed up by the trade-off theory (Arslan & Boz ,2017, p.214).

According to the financial hierarchy hypothesis (pecking-order theory), businesses with a strong structure in terms of liquidity balance are hesitant to borrow money. The aforementioned theory contends that a large amount of liquid assets is a sign of a strong internal resource base for the business. According to the financial hierarchy hypothesis, organisations with adequate liquidity levels will have minimal borrowing needs since they will primarily be able to meet those demands through internal resources. As a result, this theory proposes a negative correlation between financial leverage and liquidity balance (Lipson & Mortal ,2009, p.641-642).

3.1.6 Non-Debt Tax Shields (NDTS)

Contrary to widespread belief, having an interest tax shield is not necessary to reduce the burden of corporation taxes. One of numerous strategies for reducing income taxes is the existence of non-debt tax shields. Depreciation, tax breaks on investments, lower corporate and personal tax rates all fall under the umbrella of non-debt tax shelters, according to DeAngelo and Paulis (1980) (Titman & Wessels ,1988, p.3-4).

3.1.7 Asset Structure

According to theories on capital structure, a company's choice of financing structure is affected by the kind of assets it owns. Lenders will be more inclined to grant credit if there are a lot of physical assets that can be pledged as collateral for the company. As far as they affect the level of debt, creditor protection is increased by tangible assets because they are less volatile than intangible ones and suffer less value loss upon liquidation. (Akman, E. Gokbulut, Temel Nalin & R.I. Gokbulut ,2015, 643).

Jensen and Meckling (1976) showed that when a considerable proportion of a company's assets are composed of tangible fixed assets, the issue of overinvestment poses

less of a challenge within the framework of shareholder and creditor disagreements. These latter ones do in fact serve as creditor guarantees. The papers of Rajin and Zingales (1995) indicate favourable and substantial connections between guarantees and the degree of indebtedness, much like Titmans and Wessels (1988). Regardless of the chosen theoretical model, there appears to be consensus regarding this variable and its positive impact on the level of debt (Margaritis & Psillaki ,2010, p.625).

3.2 Disadvantages of Using Debt in Business

The fact that debt financing gives businesses a tax shield is one of its most significant benefits. Tax benefits for using debt assume that businesses are fully financed with debt. The utilisation of debt finance, however, comes with a lot of drawbacks. These drawbacks include bankruptcy and financial distress. A larger enterprise's debt ratio will enhance the likelihood that it will go bankrupt (Ramli et al. ,2019, p.150).

3.2.1 Financial Problems

When a business decides to uphold its legal responsibilities to creditors under pressure, it is said to be in financial trouble. Financial troubles are more likely to occur with increased debt funding. A corporation with more debt in its capital structure has a higher risk of being unable to pay its debts if operating profits decline (Drake & Fabozzi ,2010, p.171).

There are two types of financial distress: direct and indirect. Legal fees, restructuring expenditures, and loan costs are some examples of the direct costs of financial issues. Contrarily, indirect financial distress costs include diminished customer confidence and potential employee layoffs (Drake & Fabozzi ,2010, p.179).

3.2.2 Bankruptcy

The cost of bankruptcy rises when debt financing is used. If a corporation's perceived likelihood of defaulting is more than zero, bankruptcy costs are the expenses the company will pay out of its own pocket, or in other words, the costs incurred directly by the enterprise (Ahmadpour Kasgari, Salehnezhad & Ebadi ,2013, p.274-275). Because

there is more concern that the business will not be able to turn a profit large enough to pay back loans and interest, increasing the proportion of debt held by an organisation within its capital structure also raises the chance of bankruptcy. Lenders may order a company to file for bankruptcy through a court order, or the owners may formally file for bankruptcy. In the event of a business's bankruptcy, the company will sell its assets and divide the proceeds of the sale among its creditors (White ,2016, p.318).

There are two costs associated with bankruptcy. Otherwise stated, bankruptcy's costs might either be direct or indirect. The fees paid to attorneys, liquidators, and other agents related to the sale of assets and the transfer of corporate profits are among the direct costs of bankruptcy. However, indirect costs are charged while the company is still in operation, and these costs are caused by the stakeholders' lack of confidence. (Miglo ,2016, p.29).

3.2.3 Financial Flexibility

Debt financing limits the financial options of a company. An organisation has the option to issue extra debt if the debt-to-equity ratio of its capital structure is below the desired level. However, if an organization's debt-to-equity ratio rises above the targeted level, it will have limited opportunities to issue new debt (Malshe & Agarwal ,2015, p.23). The term for this is financial flexibility. When a lucrative opportunity presents itself, managers should take into account the company's enhanced lending flexibility. Financial flexibility is crucial because it enables businesses to take on profitable new projects as they come up (Malshe & Agarwal ,2015, p.26).

3.3 Financial Performance

Long ago, performance was reduced to its monetary aspect. This performance consisted of achieving shareholder-desired profitability with sufficient turnover and market share to preserve the company's sustainability. In recent years, however, it has been shifted from a financial representation of performance to one that incorporates social

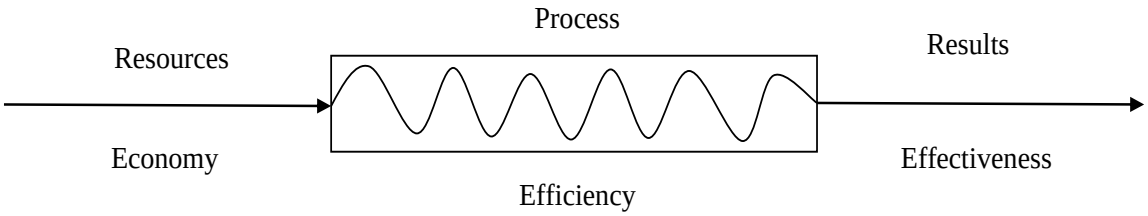
and environmental dimensions. Other actors (called stakeholders) have emerged, and the concept of performance has regained popularity (Dohou & Berland ,2010, p.3).

3.3.1 Performance Definition

If performance is to be defined in the simplest terms, it is the degree to which personnel in an organisation exert quality-based and quantity-based efforts in their work. According to Eraslan and Algün (2005), performance is a qualitative or quantitative evaluation of the results obtained from an activity that businesses have prepared and planned in accordance with their predetermined objectives. When viewed from the perspective of organisational behavior, performance can be defined as the output that personnel in an enterprise have achieved as a result of their activities related to their responsibilities in order to accomplish the aims and purposes of the organisation for which they work (Eraslan & Algün ,2005, p.95). This output may be a service, a product, or a thought. Pugh created a second definition related to this concept (1991). According to Pugh, performance is defined as the provision of services, goods, or thoughts in accordance with the completion of tasks and the attainment of predetermined objectives, in accordance with previously established criteria for the given task (Özen ,2019, p.160).

During the middle of the 19th century, the French language also adopted the term performance for the first time. Historically, it signified both the performance of a racehorse and the outcome of a race. Then he mentioned an athlete's results and athletic achievement (Dohou & Berland ,2010, p.3). Its meaning changed throughout the 20th century. It represented numerically the capabilities of a machine and, by extension, an exceptional output. Consequently, performance in the French sense is the consequence of an action; see success or feat. Contrary to its French connotation, "performance" in English includes both the action and its result, and possibly its extraordinary success (Bourguignon ,1997, p.90-91).

Figure 10: Graphical Representation of Performance



Source: Dohou & Berland ,2010, p.4

Performance is also defined as being at the centre of three important concepts, which are: efficiency, effectiveness, and relevance, which in turn define objectives, means, and results:

3.3.1.1 Effectiveness

Effectiveness is the degree to which a program's goals are accomplished. It is characterised by its efficiency. In other words, it is the capacity to achieve the desired or anticipated outcome, to reach the predetermined objective. The objectives may be rejected based on one or more of the following factors: deadline, quantity, cost, quality, profitability, etc. (Petro & Gardiner ,2015, p.1719).

Effectiveness is also the characteristic of a person who performs a task efficiently and accomplishes his assigned goals. In the company, effectiveness is one of the criteria for evaluating an employee by his manager. Not to be confused with efficiency, which is the capacity to achieve maximum results with minimal resources. A course of action may be effective but not efficient if it employs disproportionate means (Mouzas ,2006, p.1125).

3.3.1.2 Efficiency

Efficiency is an important term in business, as it is typically what enables a company to generate profits by ensuring a good or even excellent level of service. Simply put, efficiency is the optimization of the resources used to produce a result. This results in the implementation of a process that maximises the use of the company's resources while

ensuring an excellent outcome. Efficiency is the achievement of a satisfactory result with the least amount of effort possible (Mouzas ,2006, p.1125).

To sum up, it is the ratio between what is accomplished, and the resources used to accomplish it. In other words, it is the one that achieves its objectives with the fewest resources possible.

3.3.1.3 Relevance

Relevance is the capacity to satisfy the needs of key stakeholders. Relevance is the character, the quality of what is relevant: it must be perfectly appropriate, adapted to what it is about. It is the adequacy between something and its context (Karğın ,2013, p.71).

3.3.2 Definition of Financial Performance

The importance of the company's financial success was emphasised more than any other factor when attempting to determine how the capital structure impacted on the organisation. To evaluate this performance, a large number of indicators have emerged, the majority of which have become standards, but there is no agreement on their definitions and methods of calculation. institutionalised in the sense that they correspond to rules deemed sustainable by the financial community. However, profitability was the most crucial factor, and various ratios were adopted to measure financial performance (Copestake ,2007, p. 1723-1724).

From the past to the present, companies' methods for measuring performance are undergoing a continuous process of change and development. Indicators of financial performance consist of accounting-based performance measures, which have been utilised for a long time, and market-based and value-based performance measures, which have emerged as a result of contemporary financial management. Moreover, these criteria are systems that assess whether or not the company's management is correctly and effectively implementing the strategies that form the basis of the company's activities. The financial measurement indicators that the company uses within its structures include approaches that summarise the company's past and present state as well as its potential future

measurable economic results and which prioritise the value for stakeholders. Financial performance measures, which have been utilised for decades, are solely concerned with financial outcomes (Dilmaç ,2015, p.78).

For many years, conventional methods of measuring financial performance have been utilised. These performance measures place greater emphasis on the company's profitability as a result of accounting activities than on measuring the value of stakeholders and their level of well-being. Due to the characteristics of the system in which they currently exist, businesses should receive feedback and should do so in a healthy manner. Traditional financial performance indicators provide historical data, but their contribution to the business is insufficient. These measurement indicators are insufficient to provide answers to the firm's most pressing problems and situations. For these reasons, it has become imperative to identify new performance indicators in order to more accurately evaluate the financial performance of businesses (Ghalayini & Noble ,1996, p.77-78).

To fulfil this requirement, value-based financial performance measures have been implemented. The primary function of value-based performance measures is to organise the economic performance results of enterprises as a result of traditional financial performance indicators by transforming them into results that reflect the actual performance situation and adding new information to these conventional measurement results. There are value-based performance indicators to assess the value of the firm and measure the performance revealed by the management of this value in order to effectively implement these value-based financial performance measures throughout the company. (Sabancı Özer ,2012, p.78).

A poorly chosen and implemented performance measure sends false information to both the company's units and the market, causing managers and stakeholders to make erroneous decisions and the company to achieve unanticipated results. An incorrect selection of these performance measures may also result in a decline in the welfare of stakeholders, excessive investment, and, contrary to expectations, disappointing business combinations. (Kyule ,2015, p.4-5)

Due to the company's structure, which incorporates both short-term and long-term targets, the cost of capital, and the risk factor, the value-based indicators used today attempt to reflect the company's worth in the most accurate ways possible. In other words, measures of financial performance based on traditional revenues include revenue per share, net profit margin, operating profit, and similar metrics (Özen ,2019, p.169).

In a broader sense, financial performance is the degree to which a company's financial objectives are met, as well as an indication of its overall financial health over time. It can be measured with a variety of metrics that permit comparisons between businesses in the same industry and between industries. Several studies back up the idea that financial indicators can be used to report on business performance and help make strategic decisions (Ahmed & Ahmed, 2014, p. 694).

3.3.3 The Importance of Financial Performance Ratios

Eventually, the majority of businesses request a straightforward yet comprehensive analysis of their financial structure. Taking a close look at financial ratios is one way to assess financial well-being and find places for growth. (Satryo, Rokhmania & Diptyana ,2016, p.56).

According to Alain Grémillet's definition, ratios are reasonable, significant ratios of the value of various elements characteristic of a company's management or operation (Randriamiandrisoa ,2018, p.17).

Ratios are a useful tool for assessing the company's performance and identifying potential issues. Ratios enable the measurement of company factors such as profitability, solvency, efficiency, and debt. They are used to evaluate the relationship between two or more financial statement components. When the results are compared to the sectoral standards applicable to companies of the same size and with similar activities, their full significance is revealed (Satryo et al. ,2016, p.56).

When the results of the current fiscal year are compared with those of one or more prior fiscal years, ratios become useful performance indicators. The value of this ratio might shift depending on factors such as the sector in which the firm operates, the nature

of its business, and even the organization's physical location. Regional variations in labour costs or transport expenses can significantly alter the value of a ratio. Therefore, a healthy financial analysis will always include an examination of the data used in the calculation of ratios and all the factors that contributed to the results (Arkan ,2016, p.15).

The calculation of the principal ratios provides insight into the enterprise's financial health and operating results. In general, the trends that emerge from a multi-year analysis are quite significant and can be compared to the performance of enterprises operating in the same sector of activity. As a method of evaluating a company, ratio-based financial analysis is of sufficient importance not to be ignored, but it has some limitations (Barnes ,1987, p. 457).

3.3.4 Financial Performance Measurements

In the literature, numerous appropriate indicators for determining the financial performance of a company are highlighted. The informative content of every indicator varies based on the user and recipient. In this case, there are two families of indicators: Accounting and Market Based Measurements. Thus, performance measures must serve as an indicator of economic value, value creation, and future earnings potential. Among the accounting indicators that may contain performance-revealing information, it can be cited, for example and not exhaustively, profitability metrics such as economic and financial profitability, ROE, ROA, Debt to Equity, as well as liquidity and solvency ratios (Conyon & He ,2012, p.659-660).

Several market value indicators are used to reveal information on the results of the company's finances of a publicly traded company. EPS and Tobin's Q are examples (Bidhari, Salim & Aisjah ,2013, p.39).

3.3.4.1 Profitability Ratios

It refers to the ratio between the amount invested by a company and the return on investment realized. Indeed, it is widespread practise in any business to evaluate the results of monetary outflows in order to determine their effectiveness. This indicator is

therefore what facilitates this process for human resource professionals. It is offered in two tiers, namely (Andrianantoandro ,2011, p.39):

- Economic profitability relates to the calculation of funds withdrawn from a company's cash register and is recorded in the balance sheet's assets column.
- Financial profitability is materialised by the capital that belongs to the manager, i.e., the profitability that goes to the company by right as a shareholder return on investment.

This indicator facilitates the evaluation of the company's entire performance and sheds light on its profitability. In reality, it is a matter of recognising the company's economic efficiency, measuring its success, and ensuring its survival and growth using this metric (Almumani ,2018, p.40).

When the ratio is favourable, it can assist the manager who, like the majority of position managers, struggles to comprehend the significance and meaning of such a percentage. In addition to fostering the manager's knowledge of percentage concepts, this indicator is essential for enhancing the financial structure. In fact, it enables a business to have a global view of its incoming revenue and to determine the optimal distribution of income to cover expenses (Phillips & Sipahioglu ,2004, p.47).

In the event of underperformance, the ratio enables the reduction of investments and, consequently, the maximal restriction of lenders and debts (Denis & Wang, 2014, p.361).

3.3.4.2 Return On Equity

Return on equity is also known as an alternate name for “Return on Shareholder's Equity" in certain scholarly circles. Considered as an important ratio, the return on equity ratio illustrates the relationship between the return ratio and the capital that has been invested by the company’s owners. This ratio also demonstrates how well the company's management manages the funds contributed by the company's shareholders. It expresses the profitability of the shareholder-invested resource, but it is obtained by dividing the earnings after taxes by equity. When the rate of return on equity is evaluated on the basis

of the return on capital invested by stakeholders, i.e., capital maximisation, increasing the enterprise's value is the primary objective, and the return on an equity unit within the company is a crucial criterion for stakeholders. The corresponding rate is computed using the following formula (Ertuğrul & Karakaşoğlu ,2009, p. 703):

$$\text{Return On Equity} = \frac{Net\ Profit\ after\ Tax}{Total\ Equity}$$

Return on equity measures the profit received by shareholders from the capital they invest in the company, i.e., the return's development over the course of the year. This indicator is taken into consideration as a performance criterion when looking at things from a financial standpoint because it is intended to generate a profit for stakeholders (Cenger, 2006, p.575).

3.3.4.3 Return On Assets

Among the many metrics used to assess a business's performance, asset profitability ranks high, as it demonstrates how effectively the company uses all its assets (Kaufman & Watstein ,2008, p. 227-228).

Return on assets is a measure of how effectively a business makes use of the resources it already possesses. Calculating the ROA is as follows:

$$\text{Return On Assets} = \frac{Net\ Profit}{Total\ Assets}$$

The Return on Assets is an indicator that assesses the degree to which a corporation makes a profit on its investments relative to the assets it owns within its structure over a specific time period. Companies seek to maximise the return on every investment in their assets. It should be noted that neither equity nor liabilities are realised by the number of investments made (Akdogan & Acar Boyacioglu, 2014, p. 195).

Shortly, the Return on Assets Ratio (ROA) compares an enterprise’s net income to its total assets and calculates the ratio. As a consequence of the conclusion that was reached, financial analysts have the ability to calculate an estimate of the rate of return on an invested asset (and thus determine whether an enterprise's profitability is sufficient

relative to its resources). It expresses, briefly, an enterprise's ability to generate income from its resources. (Oloyede & Sulaiman ,2013, p. 67).

3.3.4.4 Solvency Ratios

Financial leverage ratios, which are among the most essential solvency ratios, provide insight into a company's ability to remain solvent over the long term and reveal the extent to which it uses long-term borrowing to finance its operations. Bankers use debt ratios to determine whether an asset is financed by creditors or investments (Abdul Rahman ,2017, p. 86).

3.3.4.5 Debt-to-Equity Ratio

Based on this ratio, the operation of comparing assets to own funds is carried out. Therefore, this ratio is regarded as a method for measuring profit and risk. The result of this ratio is a multiple of a number. This ratio is impacted by provisions for doubtful debts (The standard practise is to remove these loans from the balance sheets as soon as possible using the write-off method. This method reduces the ratio while compensating for doubtful debts). The calculation is as follows:

$$\text{Leverage Ratio or Debt to Equity Ratio} = \frac{Total\ Liabilities}{Total\ Equity}$$

It should be noted that the decline in this ratio justifies the equity's strength and inspires greater confidence among depositors (Senouci, Guerriche & Douch ,2022, p. 565).

3.3.4.6 Liquidity Ratios

The liquidity ratio evaluates a company's capacity to satisfy its short-term commitments using cash on hand. Computed by dividing current assets (such as cash, inventory, and accounts receivable) by current liabilities, it is also known as the quick ratio as well as the working capital ratio. This liquidity ratio measures the availability of liquid assets to meet immediate needs. A relatively low ratio may indicate that the firm is

having difficulty satisfying its commitments. and may be unable to capitalise on opportunities requiring rapid access to liquidity (Ertuğrul & Karakaşoğlu ,2009, p. 703). A greater percentage may imply underutilisation of capital, which could encourage a greater proportion of capital to be invested in growth-promoting projects, like innovation, product development, as well as international marketing (Kyule ,2015, p.2-3).

The liquidity ratio demonstrates the significance of working capital to an organisation. A ratio that is too low exposes the company to financial difficulties, while a ratio that is too high detracts from the company's profitability by immobilising capital. This ratio is highly reliant on the company's activity (Bawa & Chattha ,2013, p. 46).

3.3.4.6.1 Quick Ratio

The Quick Ratio allows one to analyse the ability to pay suppliers, creditors, and transitional liabilities within a year. The ratio may be computed using the following formula:

$$\text{Quick Ratio} = \frac{Cash\ \&\ Eq + Accounts\ Receivable}{Current\ Liabilities}$$

It should be noted that rapidly maturing debts should be covered by cash and short-term receivables. (Oloyede & Sulaiman ,2013, p. 68).

3.3.4.6.2 Current Ratio

The Current Ratio allows one to analyse the ability to pay suppliers, creditors, and transients within a year by incorporating the stock of goods. It corresponds to the operating cycle of the enterprise. The corresponding ratio is calculated using the formula below:

$$\text{Current Ratio} = \frac{Current\ Assets}{Current\ Liabilities}$$

In conclusion, it describes a firm's capacity to create sufficient cash flow to meet its commitments. (Ertuğrul & Karakaşoğlu ,2009, p. 703).

3.3.4.7 Earnings Per Share (EPS)

The EPS ratio is required to be disclosed by IFRS[2] listed companies. Calculated quarterly or annually, this ratio represents the earnings per outstanding share of a public company. This ratio can be calculated as follows:

$$\text{EPS} = \frac{Net\ Income}{Number\ of\ Shares}$$

An Earnings per share (EPS) ratio is obtained by dividing net income by the number of shares outstanding. Several researchers have confirmed the significance of earnings per share to the stock price (Atidhira & Yustina ,2017, p.131).

3.3.4.8 Tobin's Q

Tobin's Q, defined as the discounted ratio of investment-earning profits to the investment price, is used as a basic indicator of a sector's long-term profitability and profit. Businesses with a high Tobin's Q value will choose to finance investments with a positive net present value with the cash they have, or they will choose to increase the amount of cash they have to avoid financial difficulties in terms of the investments' sustainability. As one of the financial performance indicators, the Tobin's Q ratio measures the real value created by business management (Blose & Shieh ,1997, p.450). Using the following formula, the corresponding rate is determined.

$$\text{Tobin's Q} = \frac{Total\ Market\ Value\ of\ Firm}{Total\ Asset\ Value\ of\ Firm}$$

Or:

$$\text{Tobin's Q} = \frac{Equity\ Market\ Value}{Equity\ Book\ Value}$$

A higher Tobin's Q value corresponds directly with a greater operating value. If the average Tobin's Q of a company is less than 1, its marginal return on investment will be lower than its cost of capital. A company with optimal investments should have a

[2] IFRS: International Financial Reporting Standards

Tobin’s Q ratio that is greater than 1. According to the literature, in some research findings, an investor with a Tobin’s Q greater than 1 is considered an optimal investor, whereas an investor with a Tobin’s Q less than 1 is deemed a suboptimal investor. In addition, the average Tobin’s Q ratio of an optimally investing company is greater than 1. Investing in a company with a Tobin’s Q greater than 1 in this context is equivalent to investing in a company that makes optimal investments. (Canbaş, Doğukanlı, Düzakın & İskenderoğlu ,2005, p.25).

4.
AN APPLICATION ON THE EFFECT OF CAPITAL STRUCTURE ON COMPANIES' FINANCIAL PERFORMANCE OPERATING IN THE FOOD INDUSTRY ON THE TUNIS STOCK EXCHANGE

This chapter presents the application created to investigate the effect of five companies' capital structures on their performance in Tunisia's food industry. The analysis of the influence of capital structure decisions on the financial results of companies whose shares are registered on the Tunis Stock Exchange, along with the findings and recommendations made by the researcher as a result of these analyses, are described in the study's application section.

4.1 Research Methodology

This section presents both an overview of the Tunis Stock Exchange (TSE) and the sample that was analysed for this particular research project. Detailed explanations are provided regarding the research approach, analytical methods, and operational metrics that were utilised in the course of conducting this research.

4.1.1 Introduction: Tunis Stock Exchange

In 1969, the Tunis Stock Exchange known as BVMT (Bourse des Valeurs Mobilières de Tunis), was founded. Despite its seniority, its role in financing the economy has remained limited due to the dominance of banks and the state. In 1986, market capitalization accounted for only 1% of GDP (Gross domestic product). The stock exchange was not representative of the nation's economy and did not participate in the financing of businesses. In 1988, reforms were initiated to establish a modern legal framework permitting the financial market to contribute to the financing of the economy as part of a structural adjustment plan designed to modernise the financing of the economy

by enhancing the role of the financial market. In 1994, a significant reorganisation of the financial market was implemented in order to meet the highest international standards. Thus, the Financial Market Council (CMF) as the administrative authority responsible for the protection of savings invested in securities and other financial products listed on the Stock Exchange, as well as the organisation and supervision of the Stock Exchange's markets.

Table 1: Food companies listed on the Tunis Stock Exchange

No.	Company Name	First Transaction Date on the Stock Exchange
1	Société Frigorifique et Brasserie de Tunis -SFBT	03 /10/1990
2	Poulina Group Holding - PGH	23/07/2008
3	Société « LAND'OR »	07/03/2013
4	Société Délice Holding	16/10/2014
5	Cerealis Sa	25/12/2014

Source: BVMT

The table that is located above presents both the names of five different companies that are active in the food industry and are registered on the stock exchange as well as the dates on which these companies were first listed.

4.1.2 Methodology:

The purpose of this study was to analyse, using the data that was acquired from the financial statements of the companies, how the capital structure of certain food companies in Tunisia has impacted their financial performance over the course of the past six (6) years, from 2015 to 2020. The data was next evaluated quantitatively using multiple regression models, as this is the most effective method for assessing a theory or explanation.

Only firms with at least six years of experience submitting annual financial reports were considered. Only five companies in the Food industry have released yearly reports on a regular basis. The handbook of listed firms that is issued by the Tunis stock exchange as well as the annual reports of each individual company are used to obtain the necessary data.

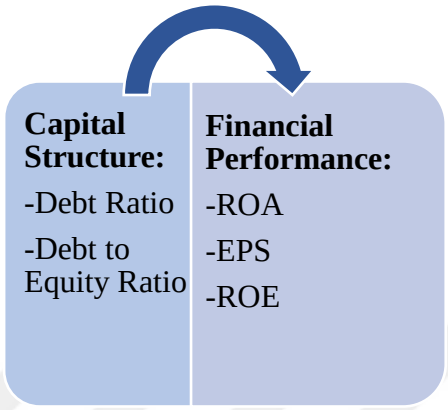
The intention of this research is to gather the information required to draw broad conclusions regarding how the capital structure of certain companies operating in Tunisia's food industry affects their financial performance.

4.1.2.1 Data Analysis

The collected information was validated, coded, and inspected for errors or omissions. The data were subsequently analysed using Microsoft Excel Tabulation Program and the Statistical Programme for the Social Sciences (SPSS). The objective was attained by calculating the variables' regression analysis. Descriptive statistics, regression analysis, and correlation analysis were utilised as methods of analysis. The study's data set was examined for normality, covariance, and multicollinearity to determine the validity of the regression model results. The effect that the capital structure has on the company's overall performance measures was determined using the table of coefficients and its significance was found out using ANOVA tables.

Figure 11 depicts the conceptual framework of the capital structure of the enterprises and its effects on financial performance within the scope of this study.

Figure 11: Capital Structure and Financial Performance: A Conceptual Framework



In the same way, the correlation between capital structure and financial performance can be expressed mathematically as:

Financial Performance = f (Debt Ratio, Debt to Equity Ratio)

In order to establish a correlation between the independent variable and the dependent variable, a linear regression model was applied, as will be shown in the following:

$Y_z=\beta_0+\beta_1 X_i+ e$

Where:

Y_z= Financial performance

X_i= Capital structure

β_0 = constant

β_1= are regression coefficients to be estimated

e= stochastic term

Within the scope of this study, how the capital structure of food industry companies affects their overall financial performance is explored. Therefore, the study has developed standard models so that the correlation between the independent variables expressing

capital structure and the dependent variable representing the financial performance of companies can be tested. Standard operating models can be mathematically represented in the order of their respective assumptions as follows:

→ ROA =$\beta_0 + \beta_1$(Debt Ratio) + β_2(Debt to Equity Ratio) + e
→ EPS = $\beta_0 + \beta_1$(Debt Ratio) + β_2(Debt to Equity Ratio) + e
→ ROE = $\beta_0 + \beta_1$(Debt Ratio) + β_2(Debt to Equity Ratio) + e

With:

ROA: A company's ability to generate a profit from its assets.
EPS: The net income of the business apportioned to the total number of shares of common stock that are currently in circulation.
ROE: It demonstrates a company's capacity to convert equity capital into net profit.
Debt Ratio: The proportion between the value of a company's real assets and its financial leverage.
Debt to Equity Ratio: It is a measure of leverage that compares total debt and financial liabilities to total shareholders' equity.

4.1.2.2 Operational Measures:

In the study, food companies registered on the Tunis Stock Exchange's capital structures and financial performance were examined. To accomplish this, two variables were established. The independent variable is the businesses' capital structure, while their financial performance is the dependent variable. It was determined by the debt ratio and the debt-to-equity ratio, two independent variables. The calculated return on assets ratio, earnings per share, and return on equity were dependent variables. After reviewing the literature, the variables that will be employed were developed.

ROA = (Net Income)/ (Total Assets)
EPS= (Net Income)/ (Number of Shares)
ROE = (Net Income)/ (Total Equity)
Debt Ratio: Long Term Debt / (Shareholders’ Equity + Long Term Debt)

Debt to Equity Ratio= (Total liabilities)/ (Total Equity)

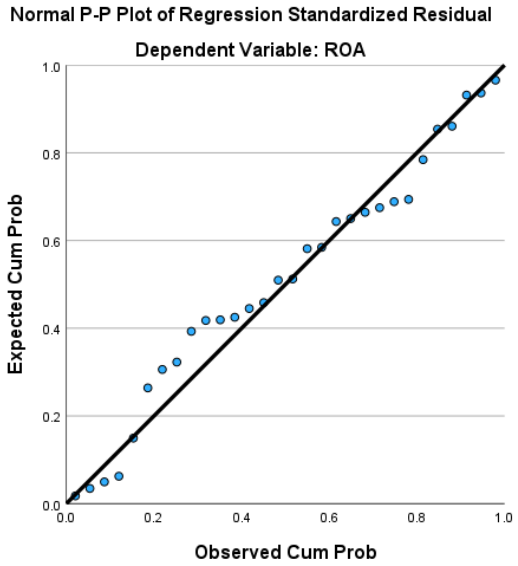
4.2 Data Analysis, Findings and Discussions

The study dataset was examined for normality, covariance, and multicollinearity to explore the validity of the regression model results. This objective was accomplished after entering all of the information collected from the accounting books of Tunisian food companies into the SPSS application.

4.2.1 Normality Test

To make sure the regression findings are accurate, the residuals should follow a normal distribution. The residuals represent the error terms or differences between the values that were actually collected and the values that were projected for the dependent variables. Using the normal predicted probability (P-P) plot, the normal distribution of residuals can be determined.

Figure 12: Return On Assets and Capital Structure Normality Test Results

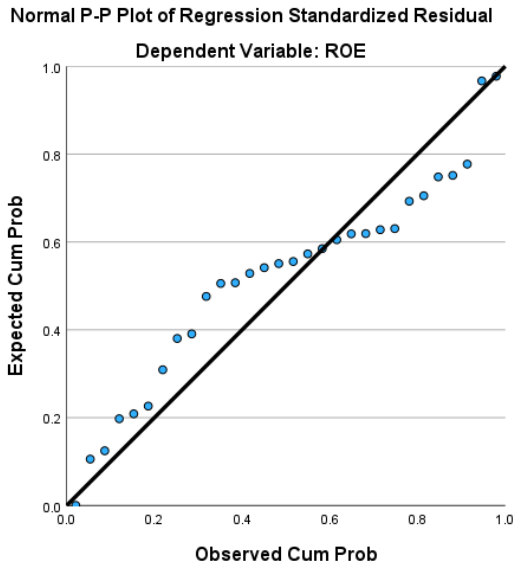


Source: IBM SPSS Statistics

The figure above depicts the cumulative frequency of the distribution of the standardised residuals produced from the model that shows the link between ROA and

debt ratios in terms of the residuals associated with the normal probability graph scale. The figure has no significant outliers and follows a straight line, demonstrating that the assumptions of normality are met.

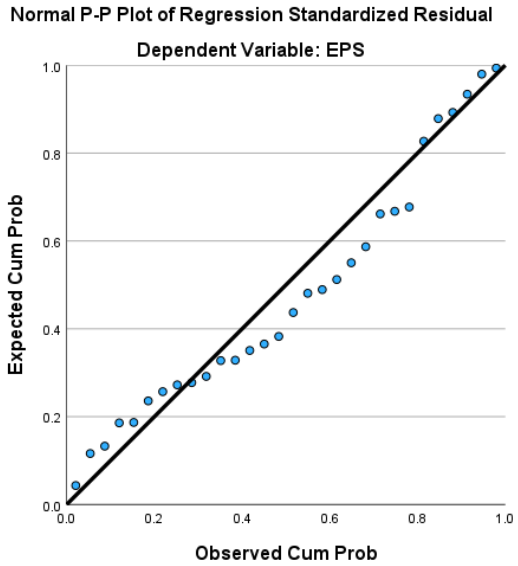
Figure 13: Return On Equity and Capital Structure Normality Test Results



Source: IBM SPSS Statistics

The theoretical distribution that was picked corresponds closely to the data series that was observed in the illustration above. As can be observed, the points are in close proximity to a straight line, which supports the multiple regression model's assumption of normality in describing the correlation between ROE and debt ratios.

Figure 14: Earnings per Share and Capital Structure Normality Test Results



Source: IBM SPSS Statistics

In a similar manner, the points observed in the image for the model illustrating the association between EPS and debt ratios are dispersed in the shape of a wave, forming a straight line, supporting the notion that the correlation between the theoretical percentiles and the percentiles of the sample is roughly linear. As a consequence, the normal probability plot of the residuals provides support for the conclusion that the error terms do, in fact, follow a normal distribution.

According to what was stated previously, the empirical distribution is considered to be closer to normal when the data (points) are located in closer proximity to the line. The data set was determined to have close points, despite the fact that the normal P-P plot of standardised residues is not perfectly straight. The residues were discovered to have a normal distribution. This is demonstrated in figures 12, 13, and 14.

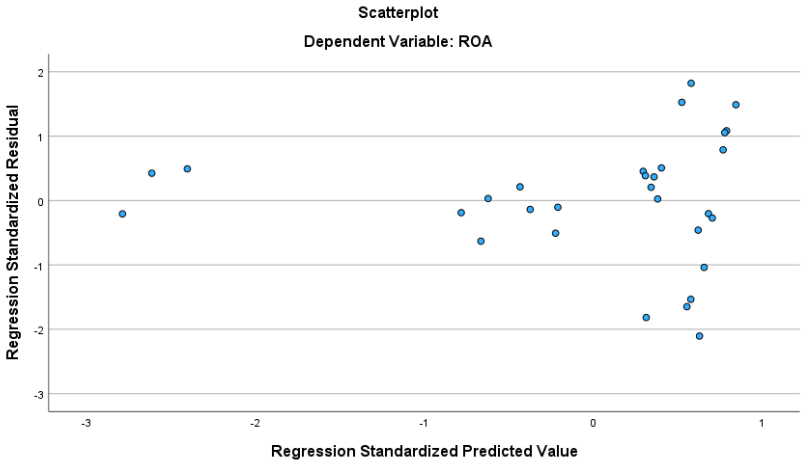
4.2.2 Covariance Test

Additionally, the validity of results from multiple regression models is evaluated using covariance. In order to determine the type of connection that exists between the dependent variables and the capital structure, this study employed the SPSS programme

to generate scatterplot graphs. The variable on the vertical axis is always labelled as the dependent variable in this graph, whereas the variable on the horizontal axis is always classified as an independent variable. Variable relationships can be explained in a variety of ways. It's possible for them to be either positive or negative, powerful, or weak, linear or non-linear, or even non-existent altogether. This can be deduced from the pattern that the points take as they are scattered throughout the board.

According to this test, the data in the graph must be distributed at random to prove non-collinearity between dependent and independent variables.

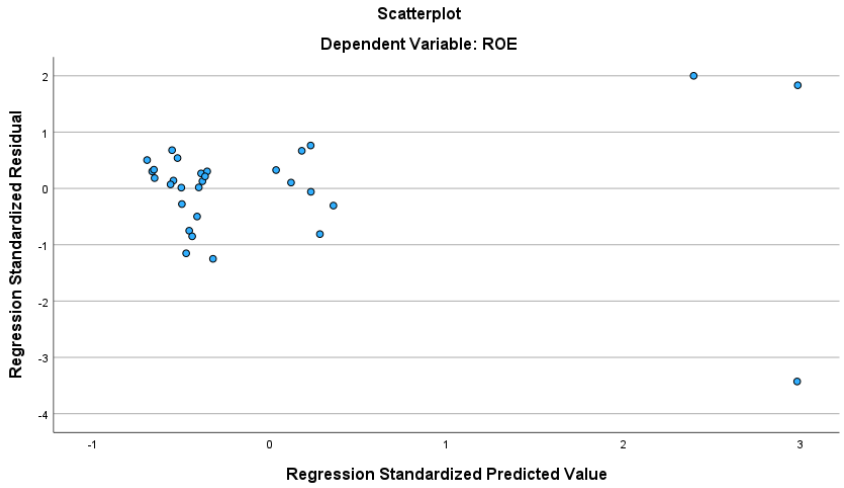
Figure 15: Covariance Test of Return On Assets and Capital Structure



Source: IBM SPSS Statistics

As can be observed in the graphic that is located above, the points are scattered in a way that can only be described as being random. This demonstrates that there is no correlation between the ROA and the independent variables.

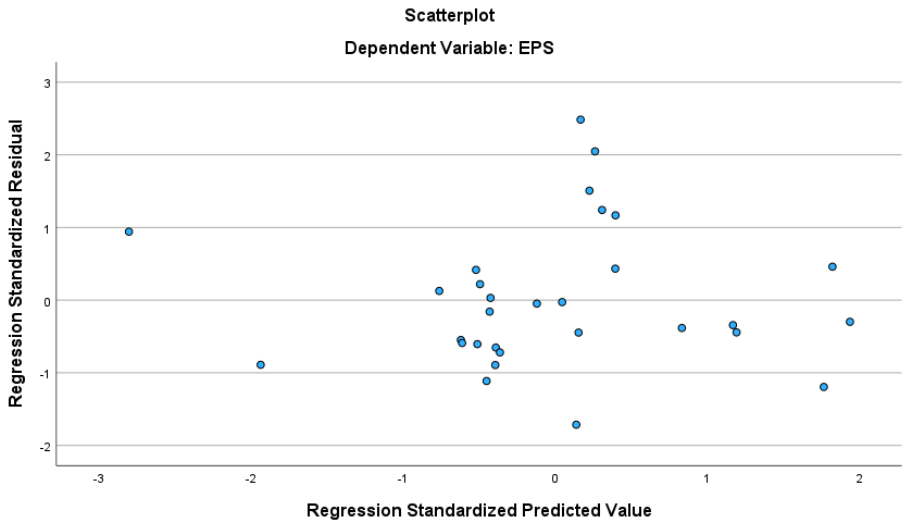
Figure 16: Covariance Test of Return On Equity and Capital Structure



Source: IBM SPSS Statistics

As was previously mentioned, there is no association between the two variables when the position of the points is truly random. It is clearly the case with regard to the ROE and the capital structure shown in figure 16.

Figure 17: Covariance Test of Earnings Per Share and Capital Structure



Source: IBM SPSS Statistics

Figure 17 illustrates that the connection, also known as the correlation, between the two variables, EPS and the capital structure, does not exist, as seen by the pattern of points on a cloud of points spread in all directions.

The study's data set is distributed randomly depending on the test's findings. These findings can be concluded from graphs 15,16, and 17.

4.2.3 Multicollinearity Test

Multicollinearity correlation tests are used to test whether variables are strongly correlated with each other. If there is multicollinearity, the regression model associates the variance of the outcome variable with the correct predictor variable. As a consequence, the regression model's findings will be unreliable.

In the study, Variance Inflation Factor (VIF) values were considered to measure multicollinearity. During the process of regression analysis, VIF determines whether or not the various components are associated with one another (multi-collinearity), which could influence the other factors and reduce the reliability of the model. If a VIF is greater than 10, it means that there is high multi-collinearity: The variation will appear to be larger, and the element will look like it has a greater influence than it actually does. If the VIF is closer to 1, then the model is significantly more reliable since the components are not impacted by correlation with any other factors.

Using the SPSS programme, tests to determine if the dataset conforms to the multicollinearity assumption were performed for each independent variable and showed that multicollinearity is not a problem since the values of the VIF for all three variables were lower than 5. In other words, there is no multicollinearity between the variables. This can be concluded from the tables of coefficients 3, 6, and 9.

These tests then showed that using the data set collected is suitable for regression analysis. In addition, the result obtained from the analysis was determined to be valid.

4.2.4 Findings of the Study

The results of the research concerning the effect of the business's capital structure on the overall of its financial performance of the Tunisian food businesses mentioned above are tabulated and discussed below. Table 2 displays descriptive statistical results in regard to the dependent as well as the independent variables of the study:

Table 2: Descriptive Statistics of the Variables

Descriptive Statistics

	N	Minimum	Maximum	Mean		Std. Deviation	Variance
	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Statistic
EPS	30	.1478	1.4181	.670683	.0570775	.3126265	.098
ROA	30	.0124	.1923	.103243	.0088132	.0482718	.002
ROE	30	.0726	.6401	.215170	.0223421	.1223730	.015
Debt Ratio	30	.0353	.7383	.225120	.0366922	.2009717	.040
Debt To Equity Ratio	30	.0568	14.0671	2.079603	.6786879	3.7173270	13.819
Valid N (listwise)	30						

Source: IBM SPSS Statistics

Using data from the Tunis Stock Exchange between 2015 and 2020, the average return on corporate assets (ROA) was calculated to be 10.32%, as shown in the second table. However, the average earnings per share (EPS) with the other dependent variables is 67.06%. This value is extremely high, reflecting the higher theoretical value of food companies operating in Tunisia.

The mean ROE was determined to be 21.51%. The average return on capital for food business companies in 2020 was 18% (Lalonde, 2021). This allows us to conclude that managers in Tunisian food businesses use equity in an efficient way. In other words, these companies have a good ability to generate profits.

For the independent variables, the average debt ratio and average debt-to-equity ratio are 73.83% and 207.96%, respectively. This demonstrated the extent to which listed companies utilise leverage. According to the debt ratio, this indicates that debt finances 73.83% of a company's total assets. Moreover, the ratio of debt to equity is 207.96%. This ratio indicates that these businesses rely heavily on debt to fund their expansion.

4.2.4.1 Regression Analysis

The aim of this study is to explore the association between the capital structure of food businesses that are traded on the Tunis Stock Exchange and the financial performance of those companies. To achieve the study's objectives, a multiple regression model with three dependent variables and two independent variables was developed. Return on assets, earnings per share, and return on equity were used to gauge financial performance. When evaluating the capital structure of corporations, both the debt-to-equity ratio and the debt ratio were utilised as evaluation tools.

4.2.4.1.1 The Relationship Between Return on Assets and Capital Structure

In this study, the hypotheses that were established were put to the test with the use of three different multiple regression models. Tables 3, 4, and 5 display the findings of the first multiple linear regression analysis model developed as part of the analysis.

Table 3: Coefficients of Regression for ROA and Debt Ratios

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	.132	.013		10.415	<.001		
	Debt Ratio	-.105	.076	-.437	-1.384	.178	.231	4.333
	Debt To Equity Ratio	-.003	.004	-.194	-.614	.545	.231	4.333

a. Dependent Variable: ROA

Source: IBM SPSS Statistics

The following equation for multiple linear regression can be derived from table 3:

ROA =0.132 -0.105(Debt Ratio) -0.03 (Debt to Equity Ratio)

The association between the independent factors and the dependent variable is illustrated in Table 3. Debt is used to assess the capital structure of a firm. The debt ratio was determined by dividing long-term debt by both shareholder equity and long-term debt. The ratio of debt-to-equity was determined by dividing total liabilities by total equity. In accordance with the table, it can be seen that the debt ratio, as well as the rate of debt to equity, have a negative association with ROA.

This indicates that both the first hypothesis and the second hypothesis cannot be supported. The financial performance indicator of ROA is impacted negatively by the capital structure, which is mostly reliant on debt.

In other words, the research demonstrated an adverse relationship between the leverage ratio and the return on assets (β=-0.105). Similarly, a negative relationship (β=-0.003) was found between return on assets and debt equity. This situation creates a negative effect of 10.5% on the annual return on assets of companies on the use of financial and operational leverage, and the use of leverage also has a detrimental effect on the business at the rate of 0.3%.

Table 4: Correlation Coefficient for Return On Assets and Capital Structure

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.615[a]	.378	.332	.0394665

a. Predictors: (Constant), Debt To Equity Ratio, Debt Ratio
b. Dependent Variable: ROA

Source: IBM SPSS Statistics

Table 4 displays the R^2 value associated with the regression model. In contrast to the correlation (R), which assesses the degree of correlation between two variables, the R squared indicates the variation in the data that can be attributed to the correlation between an independent variable and a dependent variable. The R^2 value is expressed as a percentage between 0 and 1. When the value is approaching 1, it means that the independent and dependent variables are adequately explained. However, when the value approaches 0, the dependent variables are not adequately explained. In this study, a significant correlation (R = 0.623) was found between the variables, indicating the strength of the relationship between the dependent variable ROA and the predictors. R^2 was determined to be 0.378. This supports the conclusion that variations in debt and leverage ratios account for 38% of the variations in ROA. The remaining 62% is attributable to other factors, such as the size of the company. In other words, independent variables can explain 37.8% of the capital structure of food companies listed on the Tunis Stock Exchange.

Table 5: ANOVA Test Results for Return On Assets and Capital Structure

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.026	2	.013	8.192	.002[b]
	Residual	.042	27	.002		
	Total	.068	29			

a. Dependent Variable: ROA

b. Predictors: (Constant), Debt Ratio, Debt To Equity Ratio

Source: IBM SPSS Statistics

Table 5 displays the ANOVA results. By examining the significance value, it is possible to identify whether the correlation between the dependent variables and the independent variables is meaningful or insignificant. There is no statistically significant correlation between capital structure and financial performance if the p-value is greater than 5 percent. However, if the p-value is less than 5%, the first condition will be rejected. When the first model was analysed, the first outcome was discarded because its p-value was less than 5% (p=0.002). This indicates that the regression model is significant at the 0.002% level, i.e., the dependent variable is significantly impacted by the independent factors, and the model is therefore valid. In other words, there is a significant association between the capital structure and financial performance of firms registered on the Tunis Stock Exchange. This confirms the third hypothesis of the significance of this study.

4.2.4.1.2 The Relationship Between Return on Equity and Capital Structure

The results of the second model multiple linear regression analysis of the study are presented in Tables 6, 7, and 8.

Table 6: Coefficients of Regression for ROE and Debt Ratios

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	.148	.028		5.252	<.001		
	Debt Ratio	.147	.168	.242	.877	.388	.231	4.333
	Debt To Equity Ratio	.017	.009	.503	1.822	.080	.231	4.333

a. Dependent Variable: ROE

Source: IBM SPSS Statistics

From table 6, the following equation for multiple linear regression can be established:

ROE = 0.148 + 0.147 (Debt Ratio) + 0.017(Debt to Equity Ratio)

Table 3 illustrates the correlation that exists between the dependent variable, ROE, and the two independent variables, the debt ratio and the debt-to-equity ratio. The research's conclusions displayed a favourable correlation between the debt ratio and the ROE. The debt ratio (β=0.147) indicates that for every one percentage point rise in debt ratio, the ROE rose by 0.147%, as shown in the coefficient table. Similarly, it was found that the debt-to-equity ratio (β= 0.017) had a favourable impact. This explains the 1.7% positive impact on the company, which is primarily attributable to the use of leverage. These results strongly support the 4th and 5th hypotheses suggested by the researcher.

Table 7: Correlation coefficient for Return On Equity and Capital Structure

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.725[a]	.525	.490	.0873989

a. Predictors: (Constant), Debt To Equity Ratio, Debt Ratio

b. Dependent Variable: ROE

Source: IBM SPSS Statistics

Table 7 reveals that R^2 is 0.525. This demonstrates that 53% of changes in ROE are attributable to variations in debt and leverage ratios. Other factors, including company size, account for the remaining 47%.

Table 8: ANOVA Test Results for Return On Equity and Capital Structure

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.228	2	.114	14.927	<.001[b]
	Residual	.206	27	.008		
	Total	.434	29			

a. Dependent Variable: ROE

b. Predictors: (Constant), Debt Ratio, Debt To Equity Ratio

Source: IBM SPSS Statistics

According to the findings of the ANOVA, Table 8 illustrates the link between the dependent variables and the independent factors. The results of this study reveal a value of p<.001 and therefore less than 5%, which means the validity of the 6th hypothesis of the significance of the correlation between ROE and debt ratios. This shows that there is a significant association between the businesses' financial performance and the indicators of capital structure.

4.2.4.1.3 The Relationship Between Earnings Per Share and Capital Structure

The findings of a multiple regression investigation of the association between earnings per share and indicators of the company's capital structure are presented in Table 9.

Table 9: Coefficients of Regression for EPS and Debt Ratios

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	.564	.094		6.015	<.001		
	Debt Ratio	1.176	.561	.756	2.096	.046	.231	4.333
	Debt To Equity Ratio	-.076	.030	-.903	-2.505	.019	.231	4.333

a. Dependent Variable: EPS

Source: IBM SPSS Statistics

Table 9 can be used to create the following equation for multiple linear regression:

EPS = 0.564 + 1.176 (Debt Ratio) -0.076 (Debt to Equity Ratio)

As mentioned previously, table 9 illustrates how the dependent and independent variables are correlated. This table displays the two beta coefficients of the independent variables, which are used to determine the dependent variable's value. In other words, the association between earnings per share and capital structure is illustrated. It is clear from this table that it exists a positive association between EPS and the debt ratio. The seventh hypothesis tested in the research backs up this assertion. In a similar manner, the explanation for the inverse link that exists between EPS and the debt-to-equity ratio is provided by the fact that the coefficient β_2 for the second independent variable in the regression model is negative. Therefore, the 8th hypothesis, which postulated a favourable correlation between these two variables, cannot be supported.

On the Tunis Stock Exchange, between 2015 and 2020, the increase in leverage, which causes an increase in corporate borrowing levels, will increase earnings per share by 1.176 units per year, resulting in a decrease of 1 unit for each rise in the proportion of debt to equity.

Table 10: Correlation coefficient Earnings Per Share and Capital Structure

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.435[a]	.190	.130	.2916662

a. Predictors: (Constant), Debt To Equity Ratio, Debt Ratio
b. Dependent Variable: EPS

Source: IBM SPSS Statistics

As shown in Table 10, R^2 was found to be 0.190. This shows that Leverage and debt ratio fluctuations account for 19% of variations in earnings per share. However, other aspects, such company size, can be responsible for the remaining 81%.

Table 11: ANOVA Test Results for Earnings Per Share and Capital Structure

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.537	2	.269	3.159	.059[b]
	Residual	2.297	27	.085		
	Total	2.834	29			

a. Dependent Variable: EPS
b. Predictors: (Constant), Debt Ratio, Debt To Equity Ratio

Source: IBM SPSS Statistics

According to table 11, the 5% significance level analysis of the regression model reveals no significance (sig=0.059). The significant association hypothesis is thus disproved, whereas the opposing hypothesis is accepted. There is a nonsignificant association between the capital structure and this financial performance measure. Debt ratios were found to be insignificant in determining Earnings Per Share in the Tunisian food sector.

To conclude, based on the findings of the investigation, the relationship between the two factors being studied does not suffer from any sort of correlational issue. In addition to this, it was established that the variance inflation factor's value was lower than 5 for all

three models. The data used in the study shows that there are no issues with multicollinearity connections. Additionally, the findings of the normality and covariance tests determined the reliability of the multiple regression. In general, a significant relationship was found, according to the findings of the regression analysis, between the dependent and independent variables, except for EPS. To put it another way, the capital structure of organisations trading on the Tunis Stock Exchange has a considerable effect on the ratios of ROA and ROE, but it does not have a sizeable impact on earnings per share (EPS).

4.2.4.2 Correlation Analysis

Within the scope of the research, correlation analysis is used to illustrate the connections that exist between the various variables. The correlation analysis's findings are shown in Table 12, which indicates how the capital structure and financial market performance indicators are related.

Table 12: Results of Correlation Analysis Between Variables

Correlations

		ROA	EPS	ROE	Debt Ratio	Debt To Equity Ratio
ROA	Pearson Correlation	1	.251	-.156	-.607**	-.578**
	Sig. (2-tailed)		.181	.409	<.001	<.001
	N	30	30	30	30	30
EPS	Pearson Correlation	.251	1	.059	-.036	-.240
	Sig. (2-tailed)	.181		.756	.848	.201
	N	30	30	30	30	30
ROE	Pearson Correlation	-.156	.059	1	.683**	.715**
	Sig. (2-tailed)	.409	.756		<.001	<.001
	N	30	30	30	30	30
Debt Ratio	Pearson Correlation	-.607**	-.036	.683**	1	.877**
	Sig. (2-tailed)	<.001	.848	<.001		<.001
	N	30	30	30	30	30
Debt To Equity Ratio	Pearson Correlation	-.578**	-.240	.715**	.877**	1
	Sig. (2-tailed)	<.001	.201	<.001	<.001	
	N	30	30	30	30	30

**. Correlation is significant at the 0.01 level (2-tailed).

Source: IBM SPSS Statistics

The Pearson correlation was used in this study. The correlation value ranges from -1 to 1. An absolute value of 1 for the Pearson correlation implies a perfectly linear relationship. A correlation value that is close to 0 suggests that the relationship between the two variables does not follow a linear pattern. The correlation (r) between EPS and ROA was determined to be 0.25. This demonstrated the presence of a correlation between the two variables. Between 2015 and 2020, when the return on assets of companies

increased on the Tunis Stock Exchange, earnings per share also increased. When the correlation value is less than 0.5, however, it indicates that the association between the variables is weak.

The correlation analysis revealed a negative association between the debt ratio variable, the ROA variable, and the EPS variable. This indicates a movement in the opposite direction between the variables. In other words, if a company's debt ratio has increased, both the return on assets and earnings per share will decrease by the same amount. The correlation value (r) between leverage ratio and ROA was -0.61, while the correlation between leverage ratio and EPS was -0.36. The association between the debt ratio and ROA is strong, whereas there is just a moderate relationship between the debt ratio and EPS. In addition, the ratio of debt to equity, return on assets, return on equity, and ratio of debt all correlate with one another. Although the variable debt-to-equity ratio and EPS and ROA are negatively correlated, the debt-to-equity ratio, ROE, and the percentage of indebtedness are positively correlated.

As companies increased their leverage on the Tunis Stock Exchange between 2015 and 2020, their earnings per share decreased. Given that the correlation value is -0.24, which is less than 0.5, this indicates that there isn't much of a correlation between the factors.

CONCLUSIONS AND RECOMMENDATIONS

One of the most essential decisions that must be taken by a company's financial managers is the combination of debt and equity that will be utilised by the business to finance its day-to-day operations and its investments. These capital structure decisions influence the company's financial performance and value. Analysing the financial performance of companies provides crucial information for comparing the performance of companies across multiple time periods, identifying their most profitable areas, determining whether they are meeting their goals, and estimating their future cash flow.

Between 2015 and 2020, the correlation between the composition of a company's capitalization and its level of financial performance among the companies traded on the Tunis Stock Exchange was investigated. The funding of the company has a significant role in determining the capital structure. Each company raises capital either through owner and partner contributions or by issuing debt. These funding decisions are crucial because they have an impact on the way a firm performs financially.

Using data collected from the Tunis Stock Exchange for the years 2015, 2016, 2017, 2018, 2019, and 2020, the aim of this research was to examine whether there is a correlation between the various indicators used to assess a company's financial performance and its capital structure.

The first chapter introduced the topic, purpose, significance, hypotheses, limitations, and literature review, which summarises the findings of prior investigations.

In the following section, information regarding the evolution of the term "corporate capital structure" over the course of time has been presented.

In the third chapter, information regarding the subject's theoretical methods is presented. Theoretical perspectives regarding the factors that determine the capital

structure and the variables evaluating the financial performance and the value of the company were elucidated.

In the fourth phase of the research, an application was conducted on five Tunisian firms operating in food industry and registered on the Tunis stock exchange throughout the years 2015 until 2020 to determine the impact of their financial decisions in terms of capital structure on the market value of the company and its performance. That is, research has been conducted to determine whether a statistical connection exists between the capital structures of the companies that are the focus of the investigation and the performance valuations of the enterprises.

To sum up, the fundamental objective of this research was to ascertain if there is a meaningful association between the capital structure and the financial results of the five food enterprises that are registered on the Tunis Stock Exchange.

The selection of this sector was justified by the significance of this industry during this period, particularly at the beginning of the pandemic towards the end of 2019. Also, a big part of this decision was that accounting data from most of the traded companies in the food industry was available, which made it possible to do this analysis. This was different from other industries, where the necessary data wasn't available.

In this study, accounting books obtained from the Tunis Stock Exchange's official website were utilised. After analysing the yearly financial statements of five firms, the Microsoft Excel tabulation programme was used to determine their financial performance and capital structure between the period of 2015-2020 based on the return on assets, earnings per share, return on equity, and debt ratios. The obtained data were analysed with IBM SPSS software using multiple regression analysis.

In this study that took place between 2015 and 2020, the dependent variables that were examined were (ROA), (ROE), and (EPS). The independent variables were the debt ratio and the debt-to-equity ratio. The examination of the data consisted of using three different tests to determine the validity of the regression models: the test of normality, the test of covariance, and the multicollinearity test. Using the graphs generated by the IBM SPSS Statistics 29 programme, it was possible to conclude that there was no correlation

issue. In addition, investigations were conducted to interpret the significance of the correlations that exist between the variables that are dependent and those that are independent using the regression model results.

According to what has been discussed thus far, the empirical distribution is more likely to be normal if and only if the data (points) are clustered closely around the normal distribution's center line. Even though the conventional P-P plot of standardised residues was not exactly straight, it was discovered that the data set contained close coordinates. It was revealed that the residues had a normal distribution.

According to the Covariance test, the data in the graph must be randomly distributed to demonstrate that the dependent and independent variables are non-collinear. The investigation's data set was randomly distributed depending on the test outcomes.

The multicollinearity correlation tests, in their turn, were utilised in order to determine whether or not the variables are strongly associated with one another. If the multicollinearity hypothesis is confirmed, the findings of the regression model will be unreliable. Variance Inflation Factor values were employed to examine the multicollinearity that exists within this investigation. If the VIF is larger than 10, there is a high degree of multi-collinearity; if the VIF is less than 5, the model is considerably more reliable because the components are not influenced by correlation with other factors. Multicollinearity was not a concern, according to the research findings, as the values of the VIF statistic for all three variables were lower than 5. As a result, it was found that the analysis's outcome was valid.

As a second step, a multiple regression model with three dependent variables and two independent variables was created to determine the relationship between food manufacturers' capital structure and their financial results.

As indicated in the investigation 's findings, considering the information provided by the Tunis Stock Exchange between 2015 and 2020, the average return on corporate assets (ROA) was calculated to be 10.32%. However, the average EPS with the remaining dependent variables is 67.06%. This number reflects the increased theoretical value of food enterprises operating in Tunisia.

The average ROE was calculated at 21.51%. The average return on capital for enterprises in the food category in 2020 was 18%. This leads to the conclusion that managers of Tunisian food companies utilise equity well. In other words, these businesses have an excellent capacity for profit generation.

Both the average debt ratio and the average debt-to-equity ratio for the independent variables were, respectively, 73.83 percent and 207.96 percent. This illustrated the extent to which publicly traded corporations employ leverage. This means that debt financed 73.83% of the total assets of the business, as indicated by the debt ratio. Moreover, the debt-to-equity ratio was 207.96%. This percentage implies that these businesses relied heavily on debt financing in order to support their expansion.

Taking into account the findings of the regression coefficients for the ROA and the debts ratios, the first hypothesis as well as the second hypothesis were rejected. Essentially dependent on debt, the capital structure negatively affects the ROA. This circumstance resulted in a harmful impact of 10.5% on the yearly return on assets of enterprises that utilised financial and operational leverage, while the utilisation of leverage itself had a detrimental impact on the company at the rate of 0.3%.

R and R^2 were estimated by the SPSS model summary. Variation in the data attributable to the correlation between an independent variable and a dependent variable is represented by R squared. In this investigation, R^2 was found to be 0.378. This provided support for the notion that fluctuations in debt and leverage ratios account for 38% of return on assets variability. In conclusion, 37.8 percent of the capital structure of food enterprises registred on the Tunis Stock Exchange may be explained by independent factors.

The results of the ANOVA allowed for an investigation into the type of correlation that exists between the dependent variable and the independent variables. If the p-value doesn't exceed 5%, it indicates that financial performance and capital structure are significantly correlated. When analysing the first model, the regression model was significant at the 0.002% level, indicating the presence of a significant correlation between

the capital structure and the ROA. These conclusions confirmed the third research hypothesis.

ROE and EPS were both subjected to the same kinds of analyses, which were carried out in the same manner. According to the findings of this research, it existed a positive connection between ROE and the two debt ratios that describe the capital structure. This supports the fourth and fifth hypotheses that the research was based on. The value of R squared was 0.525, which demonstrates a significant impact that debts had on this ratio. In other words, the effects of debt were responsible for 52% of the variations in this ratio. The significance of the association between ROE and the independent variables representing the capital structure was further validated using ANOVA's statistical analysis.

The regression coefficients indicate that the dependent variable, EPS, had a positive correlation with the debt ratio but a negative association with the debt-to-equity ratio. As a direct consequence of this finding, hypothesis 7 of this research has been shown to be correct, however hypothesis 8 has been shown to be incorrect. The findings of the analysis suggest that, between 2015 and 2020, on the Tunis Stock Exchange, an increase in leverage inevitably resulted in an increase in the levels of corporate debts, which in turn caused an increase in earnings per share by 1.176 units annually, resulting in a decrease of 1 unit for each increase in the proportion of debt to equity.

The findings from the ANOVA table point to the fact that the correlation between capital structure and this indicator of financial performance, EPS, is not statistically significant. Therefore, it has been demonstrated in the Tunisian food industry that debt ratios play no important role in determining EPS.

In overview, it was proved that it existed a significant correlation between the ROA and the leverage ratios, which is reflected by the capital structure, and the latter had a negative effect on the ROA. This study’s findings substantiate the outcomes of El-Sayed Ebaid' s previous survey (2009).

On the other hand, the ROE performance indicator was positively impacted when the capital structure was taken into consideration. In addition to that, the findings indicate

that the significance of this effect cannot be denied. The findings of the research also revealed that the capital structure did not have a substantial impact on the enterprise value that is indicated by EPS. This result substantiates the conclusion that Gharaibeh came to (2015).

To summarise, this research produced results that indicated a positive but not significant influence of capital structure on the key performance indicator of enterprise value EPS, as well as a substantial effect on the performance measures ROA and ROE. According to what was discovered in the research, the capital structure had a substantial negative effect on ROA. Similar to how equity financing also had a favourable impact on ROE, debt financing contributed to a healthy return on equity.

These findings, which indicated a mixed influence of capital structure, were consistent with the findings of study carried out by Ahmad, Mohd Hasan Abdullah, and Roslan (2012), as well as by Joshua, Gbenedio, Falola, Oluwagbemi, Lofinmakin, and Tams-Alasia (2018), and finally by El-Sayed Ebaid (2009).

According to the findings of the study the influence of capital structure on the organisational performance of food enterprises in Tunisia is highly contingent on the level of debt financing, but only up to the optimal level of capital structure. When the capital structure is increased through the application of a larger leverage ratio, performance that is measured in terms of return on assets is likely to decline as a result.

Taking into consideration these findings and the examinations that were carried out on the data, the researcher made the following suggestions for a better performance of the Tunisian food companies:

- The conclusions reached by the research that was carried out on the food business in Tunisia revealed that there is a negative and significant association between the capital structure and the ROA. When leverage is increased, performance tends to suffer as a result. Therefore, the researcher suggests to financial directors that, for the purpose of enhancing the profitability of an organisation as determined by its return on assets, they should pursue a prudent strategy that consists primarily of financing assets by means of current liabilities rather than long-term debts.

Because the majority of the capital structures of enterprises that operate in the Tunisian food sector are based on long-term borrowing, this study encourages the government to adjust its tax policy and advises cutting the interest rate on borrowing. (The high cost of financing that Tunisian businesses must contend with is a major obstacle to their expansion.)

- It is the responsibility of the shareholders of Tunisian food firms to guarantee that an appropriate capital structure is developed to mitigate the potential risks of the businesses' operations. In order to accomplish this goal, the debt ratio might shift at regular intervals so that the organisation can compare and contrast the various financial arrangements at its disposal.
- Companies' managers should carry out additional research on this subject in order to discover the genuine causes and conditions that contribute to a negative influence on the performance of Tunisian food enterprises through the capital structure.
- The management of Tunisian enterprises needs to find a way to achieve a balance between the resources that are available and the use that is made of these resources in order to keep the consistent increase of their profits from one year to the next.
- A company that is overly leveraged (has an excessive amount of debt in comparison to its equity) may find that its creditors end up limiting its freedom of action, or it may see a decline in profitability due to the payment of high interest charges. Both of these outcomes are possible for the company. In addition, when the economy is in a state of decline, it may be challenging for a business to fulfil its operational commitments and pay off its debts. As a result of this, it is recommended that the capital structure strike a balance between the amount of debt and equity.
- Each company ought to conduct regular reviews and analyses of financing strategies for food businesses in order to obtain the optimum combination of optimal capital structure and the lowest cost of financing possible. This goal should be the focus of the reviews and analyses.

After making this observation, it seems as though it would be fair to provide some recommendations in order to remedy these defects. In particular, the following points are proposed for further investigation in the scientific community:

- An improvement of the information base on financial companies with accurate data, particularly those that are not registered on the stock exchange. This will allow researchers to deal with questions related to the structure of financing with more precision, and it will also ensure that the researchers do not waste their effort, time, or even money while conducting their research.
- Give the relationship between performance and capital structure a greater amount of weight by doing more empirical studies. This is especially important considering the fact that Tunisian literature hardly touches on this topic at all.
- Development of the study by making use of a variety of analysis methodologies (such as dynamic analysis of panel data), covering longer periods of time, or integrating a variety of internal factors (such as average maturity spread, cash conversion cycle, etc.) in templates.
- Conducting more research on the same topic using a different method for the assessment of variables, focusing on different areas of activity, and following participants for longer periods of time to provide outcomes that are of greater relevance.

To conclude, following these recommendations can ensure added value, whether for business leaders and potential investors or on the theoretical level for researchers and academics.

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