

Arab American University Faculty of Graduate Studies

How Financial Performance of Palestine Exchange Firms is Affected by Capital Structure

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Signature 298

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Declaration

The work provided in this thesis, unless otherwise referenced, is the student's own work, and has not been submitted elsewhere for any other degree or qualification.

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Author

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Abstract

For an ideal capital structure, it's essential to select between the two financing forms, either equity or debt. The study conducted to examine how the Palestine exchange listed firms are affected by the capital structure in terms of financial performance, which directed its objective toward studying the influence of capital structure of the listed non-financial companies on Palestinian exchange (PEX) on their financial performance. Return on assets and return on equity indices were used as indicators of performance, while debt ratios to measure capital structure.

All the 35 non-financial out of 49 firms listed in the PEX was the sample of the study; securities exchange website and firm's publication were used as a source of data. Data analysis done using Correlation, descriptive analysis and multiple regression.

The study found that the financial performance of listed firms has affected negatively, where the study showed that return on assets and return on equity is reduced as a result of increased debt, where debt benefits are lower than their cost. In addition, the study observed that Palestinian non-financial companies are financed either by short-term liabilities, or equity, or mix of both as long-term liabilities are relatively low. The study recommended that non-financial firms and policy makers should rely less on short term debt, which formed the major part of their leverage and focus more on developing internal strategies that can help improve more on their financial performance.

Keywords: Capital structure, financial performance, return on assets, return on equity, debt ratios, Palestine, non-financial.

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CHAPTER ONE

INTRODUCTION

1.1 Overview

The primary objective of every profit-making firm is to maximize profits as well as, to minimize the operating costs. As such, when considering what financial resources to opt for when financing operations, activities, projects and investments, companies often take its main objective into consideration. As result, the concept of capital structure and its perceived implications on financial performance in firms has become an important focus and integral part in decision-making processes in various companies. The concept, and also the relationship is critical for the strategic planning purposes for any organization. With the idea of capital structure, the management of organizations can define its strategy and make decisions on how to allocate financial resources from the organization's capital funding in order to pursue its strategies for optimal financial performance. The capital structure is a term that has received a variety of definitions that center mostly on explaining the types of securities and proportionate amounts that comprise capitalization (Rajan & Zingales, 1995).

Capital structure is comprised of a combination of equity and debt a business corporation uses in funding its operations (Rajan & Zingales, 1995). Simply put, it is a combination of different long-term sources including bonds, equity shares, long-term loans, preference shares, and retained earnings. In line with this definition, Admassu (2016) further argues that capital structure is in essence, a concept that firms use to finance various real investments in the market. The modern business climate is characterized by intense competition, highly vibrant business environment, and the dynamic nature of the climate. This requires the company to come up with strategic decisions for purposes of coping up with the challenges faced in the market. Therefore, the concept of capital structure is necessary for decision-making activities of a company. Capital structure decisions are crucial as they, according to Umar et. al (2012), aid in the maximization of returns to different stakeholders of a firm. In addition, the overall market valuation of a business entity is significantly implicated by choices of capital structure, and it is for these reasons that enable corporates appropriately use capital structures in dealing with the competitive environment. The concept of capital structure and its role in a business corporation is a field that has widely been explored by a variety of researchers who look variedly into the phenomenon.

The concept of capital structure is an area of great interest for analysts in corporate finance. To this end, in recent years, several examinations have been conducted on the impacts of capital structure on company's performance with the key focus being given on the aspect of financial performance (Utami & Inanga, 2012). A variety of economic events such as the influence of the financial crisis on stock markets from a global perspective have raised concerns over how a mixture of long-term sources and financial performance in firms are related. Theoretical models from existing empirical literature on firms' capital structure reveal components such as costs like bankruptcy, agency, and transaction as well as tax savings and adverse selection as determining factors behind companies' choice for debts. These factors also influence the overall performance of a firm.

The practical conception of the idea of capital structure is rather interesting and slightly different from what theoretical frameworks regarding the matter holds. For instance, corporates are known to pursue different objectives with the main goal being to

substantially minimize costs and ultimately maximize returns (Önel & Gansuwan, 2012). Furthermore, in the capital markets, traders look more into just the idea of the capital structure of a company with investors, for example, interested in knowing how debt is likely to affect the financial performance of a company. Investors and creditors are also interested in the cost of financing capital, with a primary interest in determining financial performance of companies, they monitor firms listed at the stock exchange on a daily basis for purposes of knowing how attractive or unattractive a firm is in terms of its capital structure components.

The implications of capital structure decisions as indicated earlier and as revealed by various research studies are felt on the performance of a firm, more specifically, financial performance. As Orlitzky et. al (2003) asserted, financial performance refers to how well a firm generates optimum revenue from the use of its assets. More broadly, it refers to the indication of the manner in which, that is, how well or badly, a company puts its assets into proper use for purposes of accumulating revenues. Among the aspects, financial performance measures include, but not limited to, profitability, liquidity, and the overall financial health of the company over time. Financial performance information, especially of corporate business is used differently by a variety of stakeholders including investors, creditors, the government, competitors, other businesses and management among others. To this end, the direct relationship between capital structure and financial performance is a key consideration in the affairs of the companies.

The concept of capital structure has been an issue from a strategic management point of view since the time it was linked to the ability of firms to satisfy the expectations and needs of various stakeholders. As discussed earlier, the capital structure is comprised of

debt and equity – the two major classes of liabilities of a company (Deesomsak *et. al* 2004). Each of the components of the classes such as debentures, preference shares, long-term loans, and retained earnings among others bear certain levels of benefits, risks and control with holders of debt exerting lower levels of control but earn fixed rates of returns and also protected by contractual obligations of the firms in regards to their investments into the company. Equity holders, on the other hand, bear the most risks but have a greater level of control over the decisions taken by a corporation.

Appropriate capital structure, described as the optimal capital structure is, therefore, important for the decision-making processes of any corporation. This is because capital structure-centered decisions do not only have an impact on the profitability of a business enterprise but also influences its ability to maneuver through the competitive environment successfully. Owing to several studies conducted on the subject matter such as that of Berger *et. al* (1997), a growing number of scientific exploration have been conducted to determine the relationship of the two concepts. However, aside from theoretical suggestions from the studies, there is still difficulty faced in structuring capital funds in a way that ultimately impacts a business' performance from a practical point, especially from its survivability perspective.

1.2 Statement of the Problem

Graham and Harvey (2002) argued that the management team, especially chief financial officers, of enterprises, have plenty of opportunities, discretely make decisions regarding matters involving capital structure. Interestingly, they stated that certain components of the capital structure in a firm may not be meant for maximizing the value of the business but rather for protecting the interests of the managers. This

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happens mostly in companies that managers have significant powers to dictate the actions and direction of the organization. This can also happen in corporations with numerous shareholders who hold tiny shares of a firm; in such cases, a large number of the shareholders do not show the required interest into the matters of the organization, thus leaving managers to exercise their interests.

Findings from a series of past studies appear to suggest that capital structure significantly affects corporate performance from a dimension of the size, leverage, nonduality, growth, and development. These findings play a role towards influencing the ability of managers and investors with controlling interests in the company to make valuable decisions that impact an organization in the right manner (Rao et. al 2007). However, there is no adequate information from the previously conducted investigations that show an association between financial performance and capital structure in corporations on various stock market. As a matter of fact, there is very little known about the phenomenon in the context of nonfinancial firms listed at The Palestine Exchange (PEX). The study, therefore, sought to fill this gap by conducting an analysis on how financial performance in nonfinancial firms listed at PEX is impacted by capital structure. In other words, the study aimed to determine how managers of the nonfinancial companies listed in Palestine stock market combine the sources of their capital funding for their businesses and to discover if there is a connection between the variables under investigation with an extension of determining what kind of association exists between the identified variables.

1.3 Research Objectives

The main objective of the study is to examine the impact of capital structure of listed stocks at (PEX) on the their financial performance. Moreover, this study uses Return on Assets (ROA) and Return on Equity (ROE) as proxy of financial performance. In specific, this study seeks to:

- 1. Investigate the relationship between short term debt to total assets (STDTA) and financial performance in Palestine non-financial corporations.
- 2. Investigate the relationship between long term debt to total assets (LTDTA) and financial performance in Palestine non-financial corporations.

1.4 Hypothesis

In reference to the research problem, the study formulated one main null and subhypotheses:

H₀: there is no relationship between capital structure and financial performance for Palestine Exchange (PEX) listed companies.

- H0.1: there is no notable impact of STDTA on financial performance of listed companies at PEX
- HO.2: There is no notable impact of LTDTA on financial performance of listed companies at PEX

1.5 Significance of the Study

The analysis has a significant impact on firms' management through its findings, add valuable knowledge to the existing and future organizations on the relationship between capital structure and financial performance of nonfinancial firms listed on PEX. The outcome of the investigation will also be of value to current and future scholars interested in the phenomenon. As such, it will act as a source of reference for future studies into the topic and also be useful to other academicians partaking in the topic.

The findings of the study are valuable to managers and policymakers of firms in Palestine as the knowledge from the investigation would act as guidance to decisionmaking processes surrounding components of capital structure and financial performance of firms. Financial analysts and experts would also find information from the study useful in their activities involving analyzing Palestine firms. Also, the study is useful to all stakeholders and users of the subject matter under exploration such as the general public, government, other firms and so on.

1.6 Definitions of terms

Capital structure – a mix of both equity and debt financing a firm employ to fund its operations and investments.

Financial performance – the process of measuring a company's policies and objectives in monetary terms.

Equity – the difference between a company's value of assets and total liabilities.

Debt – amount a company owes to its creditors

Nonfinancial firms – firms that principally engage in the production of market goods and nonfinancial services and their financial transactions are wholly distinct from those of their owners.

Palestine Exchange- a stock exchange market based in Nablus in the Palestinian territories.

Short term debt to total assets – measurement representing the percentage of a firm's assets financed with loans or other debt obligations lasting less than a year.

Long term debt to total assets - measurement representing the percentage of a firm's assets financed with loans or other debt obligations lasting more than a year.

Total debt to total assets - measurement representing the percentage of a firm's assets financed with a summation of all loans or other debt obligations.

Source: Investopedia website

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

The chapter comprehensively examines past and existing literature relevant to the topic under investigation. It covers theoretical frameworks, conceptual framework and empirical reviews tied to the phenomenon of determining the relationship between capital structure and financial performance.

2.2 Theoretical Framework

The theory of capital structure as it applies to financial management is focused on a systematic approach of funding various business operations via a mix of debts and equities, that is, components of the capital structure. It is, therefore, important for any individual or entity interested in the idea of capital structure, especially when it applies to manage a company, to adequately understand different theories explaining the relationship between market value and debt and equity financing. According to Harris and Raviv (1991), the field of the capital structure of corporate performance has attracted growing number of explorations that has led to various interesting discoveries and interesting theories proposed by various academic and scholars. As such, due to several theories into the topic, the concept of capital structure is variedly approached depending on a specific theory.

2.2.1 Modigliani and Miller (M&M)

Proposed by Merton Miller and Franco Modigliani in the 1950s, the M&M theoretical orientation of the concept of capital structure has widely influenced the modern

understanding and interpretation of the concept in the context of management of business enterprises. The theorists deviated from the conventional conception of understanding of capital structure to suggest that, in a perfect market, the absence of agency, taxes, and bankruptcy costs as well as asymmetric information, the manner in which a business entity is financed does not have an impact on its overall market value. (Zivin and Small, 2005)

The theorists' analysis that initially hypothesized the capital structure a business uses to finance its operations and activities does not count in an efficient market. The theory goes further to assume that the value of an enterprise is influenced by the risks underlying its assets and its earning power, which is not determined by the way a company chooses to fund its investments and operations from its debt and equity mix.

Theoretically, the views of Miller and Modigliani make significant sense until it is analyzed from a practical point of view. In a real world, the assumptions of the theory do not apply, but instead, things like costs in transaction, taxes, bankruptcy, and borrowing exist with impacts of liabilities on earnings being felt and symmetric information also exists. At this point, Zivin and Small (2005) argues, serve as a limitation to the provisions of the theorem.

A deeper analysis into the theory, however, reveals relevant aspects that apply to the modern conception of capital structure. Most importantly, the theory was developed at a time when there were no taxes, to this end, it assumes the absence of taxes and costs involved in the bankruptcy. With this view, a firm's WACC remains constant regardless of the alterations of its capital structure. This view is termed by the theorists as capital structure irrelevance proposition (Brusov et. al 2011). From a practical illustration using this view, regardless of how heavily a business corporation borrows, the WACC will

remain constant since there will be no tax benefits from payments of the interests. In addition to this, lack of benefits or changes from the grown debt, capital structure is irrelevant to stock price since it does not have an effect on the price of a company's stock.

2.2.2 Agency Theory

The agency theory as described by Rahul Kochhair (1996) is developed on the assumption that the management team of a firm do not, at all times, fulfill the wishes of the shareholders of the firm. Further analysis of the theory reveals two main types of conflicts, that of between shareholders and managers and that of between creditors and shareholders. Under managers versus shareholders' conflict, often times, managers seek to pursue profitability objective of a company to their own benefits while at the same time, at the cost of the owners of the company.

Under creditors versus shareholder's conflict, the purpose of liabilities (debt) is to enable owners of a firm to optimally invest. As such, Jensen and Meckling (1976) argue, in the event an investment brings a return that supersedes the debt's face value, the gains accrue to the owners of the company. However, in situations where investment does not bring as much return or fails in entirety, owners are, in this case, due to limited liability, are forced walk away as a way of exercising their right. In such incidences, the firm is left, to a certain degree, to the holders of the debt (liabilities) at a debt face value higher than the company's market value.

According to Pinegar and Wilbitcht (1989) another ideal example of the cost of debt associated with when a firm is in bankruptcy. Pinegar and Wilbitcht (1989) point out that when a firm is declared bankrupt, shareholders are not motivated to partake in investment options using a company's equity capital regardless of how rewarding an available project is. The logic behind this is that value from such projects will accrue to the debt holders and this has an adverse implication of high rates of rejection of valueincreasing projects.

Lemma Senbet and Robert Haugen (1988), however, look at the theory from a rather interesting perspective. In their observation, they argue that settlement of debt can both positively and negatively affect a company. In a positive way, when a firm settles its debts, they consequentially settle interests linked to such liabilities, and this reduces the problem of overinvestment significantly. However, on the flip side, not paying out debts results in accumulating interests and when this happens, even the most profitable projects are rejected resulting in a problem of underinvestment.

While trying to test the agency theory with respect to capital structure, Harris and Raviv (1991) developed a profit efficient indicator as an evaluation of the performance of a listed firm. The test confirmed the suggestions of the theory that profit efficiency is positively implicated with higher firm's leverage. A number of similar investigations reveal consistent findings are owing to the theory thus leading to the conclusion that agency theory is an important approach to capital structure issues and an instrument that can appropriately be used in making company's decisions that favor optimal performance.

2.2.3 The Trade-Off theory

Owing to limitations of the initial approaches of Modigliani and Miller (1950s) that was mainly based on a set of assumptions. These views were then challenged on the grounds that if the proposition would remain the same in the absence of the assumptions. Due to the limitations that stemmed from the assumptions of the M&M theory, the trade-off theory was then proposed. The theorem holds that firms choose the amount of debt and equity necessary to finance investments and operations by obtaining a balance between benefits and costs. In other words, as Campbell and Kelly (1994) put it, a company's managers try to balance the benefits of interest tax against the present value of possible costs of financial distress. The theory originates from Kraus and Litzenberger who took account a balance between dead-weight costs of bankruptcy and the tax saving benefits of the debt.

According to Campbell and Kelly (1994) for firms to maximize their value, managers need to choose the target debt-to-equity ratio that optimizes the value by increasing the costs of prevailing market imperfections like agency, bankruptcy, and taxes. This view disregards the views of M&M theory that suggests the existence of efficient markets and argues that perfect markets are of inexistence and that costs stemming from bankruptcy, taxes, agency, and asymmetric information exist.

The purpose of the theory as suggested by Hackbarth et. al (2007) is to acknowledge that companies are financed by both debt and equity. The theory goes further to suggest explain the advantages associated with funding operations with the exceptions of the tax benefits, financial distress and also the costs associated with funding operations, investments, and organizational activities with debts. With the approach proposed by the theory, businesses substantial assets that are tangible are expected to make more of the borrowing largely because they are immune to the risks stemming from financial distress and vice versa also applies for companies with more assets that are intangible. This prediction has been confirmed by a number of studies aimed to test the applicability of the theory. Another prediction of the theory is that companies have the desired debt ratio that also differs from one company to the next. A study by Hackbarth et. al (2007) confirmed this prediction wherein their survey, a majority of managers of a company, indicated that they follow a certain desired debt ratio. In addition to this, the theory also predicts higher marginal tax rates are linked to high leverage levels. The logic behind this prediction is the deductibility of tax from the interest.

Finally, the theory also suggests that companies with low non-debt tax shields and more taxable income like depreciation and investment tax are motivated to make more of borrowings (Hovakimian et. al 2011). This is because, in such situations, firms take advantage of the interest tax shields by borrowing more given the fewer non-debt tax shields. On the other hand, companies with more non-debt tax shields have lower debt in their capital structure as the theory holds.

2.2.4 Signaling Theory

Historically, the idea of signaling theory was introduced by Arrow and Akerlof while applying the concept in a product and job markets. Its propositions to this end were then turned into a theory by Spence in 1973. The theory holds that a company has the ability to separate itself from bad companies by credibly signaling the capital markets about its quality (Myers, 1984). The model is, therefore, based on the idea that managers of a firm with inner information, have the incentive of sending such information to investors for purposes of influencing their stock prices positively. In this case, a signal sent to the external investors is deemed credible only if the perceived bad corporations do not mimic the good corporations by sending similar signals. According to Deesomask et. al (2004), the model arises from the asymmetry of information between shareholders and management in the sense that if managers believe a company is overvalued, they first issue equity and then debt. Conversely, when they believe a corporation is undervalued, they first issue debt. Practically, the management cannot simply announce good inside information to investors (internal and external) this decision might be approached with suspicion from the investors. As such, for the undervalued firms, sending signals to external containing this knowledge through a financial policy is a way of overcoming the shortcoming.

In theory, the model makes a lot of sense but in reality, according to Richard Morris (1987) any other company, including the overvalued, can send signals to the investors in the capital markets. Therefore, to differentiate such types of signals, it is important to determine the cost of the information sent. This leads to the signals identified as costly and costless signals. This is because, some companies may mimic good companies for invalid reasons (Michaelas et. al 1999). Often times, managers of a company use the changes in capital structure in transferring information on the grounds of risk and profitability of the corporation to external users. According to the theory, internal stakeholders (including investors) are believed to have all the information regarding a company and its performance as opposed to external stakeholders. As such, the external investors become the targets of such information.

A costly signal is characterized by its consumption resource or its association to lose in welfare that occurs as a result of deviating from distribution or allocation of claims in an efficient market. While testing the theory, Donald Bergh and Patrick Gibbons (2011) discovered that corporates that announced offerings of equity to the market experienced a reduction of about 3% in the prices of stock. On the other hand, however, there was no

price reduction when an announcement on debt issue was made. Conversely, with debt increases, there also came an increase in prices of a share of close to 14% in debt for equity substitutions.

The theory has an influencing element on corporate governance where it helps the management in attempting, on the basis of assessment of the stock market, (Michaelas et. al 1999) decide on the best time to issue shares. This is because historical market values are correlated with financing decisions thus making the capital structure a reflective of past decisions of a corporates management team.

2.2.5 Pecking Order Theory

As an improvement of the Signaling theory, pecking order theory is considered one of the most influencing theories in corporate leverage. The theory was developed in 1984 by Myers, and it suggests, companies tend to prefer internal sources of financing. The model proposed that information costs are enough incentive for the issuance of security by the management with the least possible information costs. As pointed out by Frank and Goyal (2003), the model takes into account information asymmetries, concerning investment opportunities and assets, between capital markets and companies. According to the model, firms tend to use internal funds since they are less costly as compared to external sources of funds.

As initially assumed by Myers and Majluf (1984) while studying the theory, issuance of shares into the market is generally negatively perceived by investors. This is because issuance gives the impression that managers of a firm offer such shares at an overpriced level. This explains why firms, with respect to the theory, prefer internal sources of funds as opposed to external. In the event a firm has to externally source finances, that

is, when external funds are deemed necessary, they tend to prefer debt over equity largely because of information costs associated with issuing equity.

In essence, the theory suggests the management or directors of a firm are likely to take on the direction that is characterized by the least possible resistance, especially from investors thus being forced to settle for and offering financing option that is considered the cheapest owing to the pecking order. In the following order, financing is usually done through retained earnings, and when this source of financing is insufficient, issuance of debt is opted for external funding. However, when further issuance of debt is exhausted, that is when a company can result in issuing debt. To this end, offering equity is not restricted, but it usually comes last after exhausting the options of internal funding and debt selection – it is usually the last resort.

As suggested by the theory companies with low free cash flow with high growth are characterized by high debt ratio whereas businesses with minimal opportunities in investments but, at the same time, feature optimal cash flows, are characterized by low debt ratios. This suggestion has widely been confirmed by a number of studies centered on testing the existence of pecking order theory in organizations. A study by Frank and Goyal (2003) that focused on testing the theory discovered interesting evidence of the model in organizations where there was a negative association between profitability and leverage of a company. Although similar results have proved the confirmation, there is a question of sample firms used in a majority of the surveys which questions the aspect of generalization of the findings to all companies across the globe.

To this end, in their analysis, Frank and Goyal (2003) question the broad applicability of the theory. In their investigations that featured four times as much sample companies incorporated in previous studies and found out that, in regards to whether the theory can broadly be applied, the pecking order is not influenced, significantly, by utilizing external capital financing options. Mark Flannery and Kasturi Rangan (2006) seem to disagree with this finding and confirm the existence of the pecking order in companies studied. The outcome of the survey, accompanied by several other studies, demonstrate the importance of pecking order theory to the governance of firms, more specifically, management of finances in a company.

2.2.6 Life Stage Theory

The life cycle of a firm is assumed to be similar to that of a human being in a variety of ways. As such, the life stages of a company have closely been linked to the concept of capital structure in a company by a variety of explorations. In an attempt to explain (Valente, 2017) the relationship between financial performance and capital structure in companies, a lot of theories have been developed including the life stage, or otherwise known as lifecycle theory. In the area of the organization, the model of the life cycle has widely been studied in the 1970s especially in regards to determining factors impacting the performance of an organization.

As a result, different studies have based their studies on varying number of stages ranging from as little as two to as many as ten. Some of the earliest explorations into the phenomenon can be traced to Miller and Friesen in 1984 who incorporate five different stages including birth, growth, maturity, revival, and decline – stages that have defined the modern understanding of life cycle theory (Valente, 2017). Different stages of a company's development, as the concept suggests, reveal different factors that change from a stage to the next and rooting from operating activities of a company like the product, investment, among others.

As Pinkova and Kaminkova (2013) point out, decisions involving capital structure are, to some extent, influenced by the life stage a firm is in considering financial expectations change over time depending on circumstances. The theory, therefore, suggests that companies in their expansion and high-growth stages prefer equity financing over debt and companies in the maturity phase go for debt financing. in their early stages, companies are characterized by small in size, more opportunities for growth and information asymmetry. However, with time, companies become larger and older. Thus, their ambitions and characteristics change as well.

Decisions pertaining to external capital financing as the theory predicts will change based upon the stage a company is on the proposed five-stages of a life cycle. During the earlier stages, firms are more innovative, and due to this, they become more likely to raise funds from the stock market that mature firms that are further into the cycle (DeHan, 2014). This is because, financial institutions such as banks and other types of creditors, limit funding newer companies due to the higher levels of risks regardless of their potential to repay the debts. On the same point, mature firms have lower levels of risks, and they are also perceived to have the ability to pay back debts.

2.3 Capital Structure

As defined in the earlier part of the analysis, capital structure is a combination of equity and debt of a firm. It entails financing decisions in a company that regarding components of capital structure like shares, debentures, retained earnings, reserves, and long-term loans (Önel & Gansuwan, 2012). The decisions into capital structure explore what proportions of components of the mix has to be maintained and the manner in which a company finances its assets and investment options. Different components of the capital structure are sourced from different areas with shares and debentures being sourced publicly from investors at the stock and financial markets (for listed companies), long-term loans from creditors such as banking and other financial institutions and retained earnings from the operations of a company, that is sales.

Frank and Goyal (2009) introduce us to the concept of the optimum capital structure by associating it with maximizing the intrinsic value of a company requires the capital structure to be decreased to its minimum level. In other words, optimum capital structure refers to the level of a combination of debt and equity that maximize a business' value – this is at the point where WACC is at its lowest level with a company's value being at its highest possible level. Therefore, making decisions on the suitable capital structure is a critical management function in relation to the value of a company. As Dirk Hackbarth (2008) puts it, the optimal capital structure implies having the right balances of equity and debt financing in an organization. As such, with this in mind, certain decisions on capital structure include balancing trade-offs involving, liquidity, choice of maturity, cost and the frequency and basis upon which interest rates are reset.

2.4 Financial Performance

The general definition of the term performance is the achievement of a given task that is evaluated against present standards of completeness, speed, cost, and accuracy. Simply put, performance refers to the extent to which a task has been or is to be achieved. Therefore, financial performance from a broader point of view is the degree to which the financial objectives of a business are attained. According to Juha Uotila *et al.* (2009), financial performance is sometimes referred to as a process of measuring the effectiveness of a company's operations and policies in monetary terms. There are a variety of ways of evaluating both the financial health of a firm at any given time and how well a business uses its assets to generate as many revenues and profits.

Various stakeholders of a corporation such as shareholders, creditors, tax authorities, creditors, managers, and several others have interests, financially into the performance of a firm. However, their concerns root from the following two questions – what a financial position of the business at a particular time and the overall financial performance of the company is at any given time. These questions are usually answered through the use of financial statements – organized sets of data that comply with accounting standards and procedures (Abu-Rub, 2012). Financial performance of a company is, therefore, measured through key financial statements.

Financial analysts and experts are often interested in certain areas of financial performance for purposes of evaluating how business is fairing. Traditionally, analysts assess productivity and production performance, profitability, liquidity, working capital, fixed assets, and cash flow as the main areas of analysis (Deesomsak, Paudyal & Pescetto, 2004). The significance of financial performance is reflected by various interests of related groups affected by a company's performance. For instance, creditors focus on liquidity levels of a firm, investors related in the current and projected earnings of a company, and management concerned about internal control and better financial performance.

2.5 Capital Structure and Financial Performance

As Puwanenthiren Pratheepkanth (2011) cite, the association between the concept of financial performance and capital structure in organizations is one that has received enormous amounts of attention from various scholars interested in the implications of the relationship especially considering its role in the management of firms. Prior empirical studies reveal a relationship between capital structure and corporate governance – issue with state-owned enterprises. A deeper exploration of the effects of capital structure and financial performance in management as independent aspects helps in understanding the correlation between them as suggested by Rao, Al-Yahyaee, and Syed (2007).

A substantial amount of evidence associates the two variables; in which capital structure is represented as the independent variable and financial performance as the dependent variable. For instance, in their investigation, Krishnan and Moyer (1997) noticed leverage and ROE having what appears to be a positive correlation in the event that the company has earning power that surpasses the interests on its debt financing. a significant positive association also exists between indicators of profitability and the debt ratio.

Evidence from Maina's and Ishmail's (2014) investigation reveal that greater financial leverage has direct implications on the management of a firm and may also reduce agency costs through the threat of liquidation, of which, as a result, causes loss of salary, perquisites, and salaries among others of the managers. Additionally, it bears pressure of generating more cash inflow required in meeting the interest expenses of the company. All these and evidence from a variety of investigations all agree that capital structure and financial performance are correlated across listed business enterprises the

nature of the correlation varies depending on the proportion of the components of capital financing in such companies.

As a component of capital structure, short term debt is not given as much attention as long term debt regardless of the significant role it lays on capital structure and its extensive implications on financial performance as a number of studies suggest. Sortterm debt is significant tool used in measuring leverage of a firm thus making it critical in financing operations and activities of a company. Often, firms increase short-term share of the total debt financing largely when its cost is relatively less than that of longterm debt or equity. Additionally, short-term debt such as short-term loans are much easier and faster to access and obtained as opposed to long-term debt financing. This is because, unlike long-term debt financing, they mostly do not require collateral depending on a creditor. Usually, while out of internal sources of funding for urgent projects, the management often go for short term debt as the first step.

2.6 The Palestine Exchange

Since it was established, The Palestine Exchange (PEX) has tremendously grown from just 24 listed firms in 1999 to 49 firms in 2018 that are found in several sectors of the country such as insurance, banking, financial services, and service industry among others. The main objective of PEX is to provide a trading platform characterized by equity, transparency, and competence (Awad & Al-Ewesat, 2017). The stock market, over the past few years, has been ranked as top performer in the Arab world over that of Cairo or Dubai as reported by the New York Times. In spite of political and economic hindrances in the region, public companies have continued to perform well and make an

enormous amount of profits – an aspect that has increasingly contributed to the manner in which investors, not only in Palestine, have shown interest in the companies.

The PEX plays an important role in the Palestine overall economy as it features some of the corporations in the entire country. Despite incorporating 49 listed firms, PEX sees a total of 35 nonfinancial companies operating in either local or foreign currencies listed on the stock market. Some of the listed nonfinancial firms include the following Arab Company for Paints Products, Palestine Poultry, Beit Jala Pharmaceuticals, Birzeit Pharmaceuticals, Jerusalem Cigarette, Al Shark Electrode, and Jerusalem Pharmaceuticals among several others The stock market has excellently impacted the country by providing a safe trading environment where buyers and sellers in the stock meet, increased the development of domestic investment and attracted foreign investors, equipped the economy with services and tools in finance-related matters and also established a suitable trading environment for the participating companies. (Awad & Al-Ewesat, 2017)

2.7 Factors Affecting Capital Structure

A number of factors play into an organizations decision of selecting the most suitable external financing from the wide range of existing options. Some of these factors have widely been explored by financial analysists and other financial scholars. The identified factors do not only affect the decisions on choosing appropriate external funding but also shape variations of capital structure from a business corporation to the next. According to Titman and Wessels (1988), capital structure is determined by factors from both within and beyond an organization. Through this, they mention legal, financial, and institutional factors as the largest determinants of capital structure. Both financial and legal environment play a significant role in shaping the structure of external capital funding. For instance, organizations with weak financial systems, usually small-to-medium companies, experience difficulties in accessing external sources of financing. legal framework also plays a fundamental role in accessing external finances by companies. Some jurisdictions have strict measures on different options of capital. For example, in his analysis, Jean Chen (2004) mentions that in countries where dividends are highly taxed, business corporations often end up settling for debt financing. Conversely, countries with relatively lower levels of taxation on dividends, such companies use less of debt that equity.

Capital structure is also directly and indirectly affected by the nature and size of a business enterprise. Access to long-term debt favors large companies than small companies. This is because, as discussed earlier, financial institutions and creditors are likely to finance large firms than small firms largely because of a range of factors including information asymmetry between creditors and small firms and the perception that large firms are likely to pay back the borrowed funds. To this end, larger firms are characterized by more debt than small firms. In addition to the above-explained reasons, large companies have the ability to favorably negotiate the terms of the loans which enables them to take more loans at very little interest rates. Also, as mentioned by Bevan and Danbolt (2004), large firms have lower levels of risks compared to small firms. This, therefore, acts as a hindrance for small firms to access debt.

Due to different studies into the relationship between a company's leverage and its size, varying contributions into the relationship has significantly been noted. Guihai Huang (2006) disagrees with the belief that the larger the size of a company, the easier for it to access external sources of financing, specifically, external debt. Huang (2006) goes

further to argue that the size of a company does not determine its leverage but rather other factors come into play instead. This is because, from his analysis, some companies, irrespective of their enormity, had easier access to external financing than others that were much bigger than them. This happens when the logarithm of total assets or net worth of a firm are used to determine its size.

By using the logarithm of sales as proxy to a company's size, across Germany and France, Bancel and Mittoo (2004) discovered that sales have an effect on the leverage of a company, this is not because sales increase maximizes the rates of retained earnings, as a component of capital structure, but also boosts its ability to access external financing. companies that do exceptionally well in terms of sales, irrespective of the industries, attract potential investors and creditors. Through this, issue of shares or approach to financial institutions when seeking debt becomes easy and quick.

A company's leverage is also affected by the level of profitability of the company. Ideally, the relationship between leverage and profitability can be described as negative. This is because companies with significantly high profits tend to finance its operations and projects from retained earnings as opposed to externally obtained equity and debt (Karadeniz, Yilmaz Kandir, Balcilar & Beyazit Onal, 2009). Due to this, such companies are characterized by lower debt ratios as opposed to companies with low levels of profitability. Through the lenses of certain theoretical suggestions such as that of trade-off and free cash flow, some different aspects emerge that contradicts the correlation that exists between a firm's profitability and its leverage.

For instance, as per the model of the theory of trade-off, profitable companies are recommended to enjoy tax shields on interest rates linked to higher leverage. Through this, companies are expected to have increased debt ratio. On the other hand, the free cash flow theory suggests that profitable firms need to issue more debt. The logic behind this is that in the future, managers should commit to paying out cash flow to debt holders instead of wasting the money on non-rewarding investments. Opposed to views of these two theories, the pecking order theory suggests otherwise by revealing an inverse relationship between the two concepts.

In their study, Ghosh, Cai, and Li (2000) test the relevance of profitability and structure of ownership of firms finances and discovers a negative relationship. The study notes that, as analyzed in terms of total debt-to-book value and market value of equity, that profitability has an inverse effect on a company's leverage. A number of similar studies confirm this conclusion across the globe.

The age of a firm is also an important determinant of the structure of ownership of a company's capital. This is because, the age, as revealed earlier by the life stage theory, plays a significant role in the ability of a company to acquire debt financing (Céspedes, González, & Molina, 2010). Although the relationship between age and leverage has not widely been explored, a number of existing studies suggest that older companies are perceived by creditors as less risky, more stable and are also of high reputation considering their ability to survive for long in their respective markets despite a wide range of factors that hinder the growth and existence of businesses. As a result, the capital structure of such companies is composed of long-term loans and other forms of debts.

With this, it can be argued that there is a positive relationship between the age of a company and its age. One reason behind older firms being preferred by debtholders is because of the reputation the companies have held that also defines the level of risk of

such firms the reputation is adequate to lower the risk levels of a company to the lowest possible rates regardless of the current performance of a company.

There are however conflicting conclusions in regards to the relationship in questions. Although a majority of studies reveal a positive relationship, some studies conducting on specific economies reveal otherwise. For instance, a positive relationship exists in firms operating in first world countries like the U.S., U.K., and Australia. Conversely, a negative relationship is revealed in companies operating in developing economies such as Nigeria, Zimbabwe, and Kenya among other as (Bancel and Mittoo, 2004).

The tangibility of a company's assets is, according to a bunch of significant studies, related, directly, to its leverage. Sometimes, the management of a company may resolve to investments deemed riskier at the expense of debt holders. As such, the aspect of agency costs of the debts emerge, and these costs can be done away with by the collateral value of the assets being high. To this end, the tangibility of assets has positively affected a company's leverage. In the event a company is declared bankrupt and is unable to settle its debts, it is the tangible assets that are salvaged for purposes of paying out the amounts owed to creditors. As such, creditors choose to finance businesses with high-value intangible assets.

According to Antoniou et, al (2008), a company's dividend policies has a high effect on the cost of equity and the value of a firm. In a practical sense, investors, in this case, shareholders, value the returns of their investments. The riskiness of a company to some degree is determined by the dividend policies that a company has. For instance, companies that pay out dividends are less risky than those that do not. Investors are naturally attracted to firms that have favorable dividend policies to the desires of the investors, and vice versa is true. As such, it becomes easier to access external funding
by issuing equity to external investors. (Karadeniz, Yilmaz Kandir, Balcilar & Beyazit Onal, 2009)

Corporate taxes affect various components of business including its leverage. As Modigliani and Miller (1963) explain, tax savings linked to interest tax shields drive companies into more borrowing revealing a positive relationship between leverage and corporate tax. By attempting to test the relevance of the association, Jean-Laurent Viviani (2008), by hypothesizing lack of relationship, discovers that, in the short run, corporate tax has a positive implication on leverage whereas, in the long run, the relationship is not the same. However, after identifying the limitations of the study and adequately (Kayo & Kimura, 2011) addressing them in his similar study on the phenomenon, Bhattacharjee and Dash (2018) found out that corporate tax and leverage are positively correlated.

Another investigation carried out where companies are not taxed revealed conversing conclusion to the argument. There was no positive association between corporate tax and leverage. To this end, owing to various conflicting analysis, it can, therefore, be postulated that the connection between tax and leverage is one that is not conclusive as further research into the subject matter is needed. It is, therefore, important to come up with conclusive remarks backed by sets of testable evidence regarding the association.

Lastly, growth prospects of companies are associated with its capital structure. From a theoretical perspective, growth prospect of companies is inversely associated with leverage. This is mainly because future projections in growth are usually intangible thus making it impossible to collateralize (Gropp & Heider, 2010). A counter-argument to this claim suggests that the logarithms under which growth is projected play a role in determining the structure of a firm's capital. For instance, growth in sales is an

important measure and a useful instrument used in predicting future performance of business corporations. therefore, growth prospect compounded on rates of sales of a company is characterized by high leverage thus exhibiting a positive relationship.

Other studies have attempted to project growth based upon percentage changes in total assets. Similar to the conclusions arrived at with rates of sales, the use of assets to determine growth prospect also reveal a positive relationship. other studies seem to differ with the conclusions. For instance, Sarno and Cinquegrana (2018) argue that considering growth prospect is intangible; firms will avoid debt for purposes of mitigating loss underinvestment problem associated with financial distress. Another observation of the subject matter from a different angle associate intangible growth with variations in the value of the company with substantial variations being interpreted as risks. As such, it becomes difficult for such firms to raise capital with favorable terms.

2.8 Determinants of Financial Performance of Listed Companies

A wide range of factors both from within and beyond an organization affect the performance of an organization monetarily. According to Capon, Farley, and Hoeing (1990), the size of a firm is one of the leading determinants of the financial performance of the company. The relationship between financial performance and size of a company is one that is positive in the sense that, the bigger the size, the more performance, financially, of the company. Large corporations enjoy the cost efficiencies of operating on a large scale that is reflected through increased output and economies of scale. The management team of large-sized companies, in times of changes in market conditions, have the ability to respond by diversifying their assumed risks.

Due to their enormity, large firms have the ability to set prices above the economic costs involved in the production of the products and services. This power stems from the possession of monopoly power in the market. It is due to the same reason that Maina and Ishmael (2014) explains that large companies have the ability of, and most certainly the incentive, to diversify their investment portfolios and this helps them reduce potential risks. Usually, smaller companies are outperformed by large companies who are equipped with numerous resources and also enjoy economies of scale to attract and retain the best talents in management.

The amount of assets possessed by a company also plays a role in the overall financial performance. Companies with sizable liquid assets have the power to realize the cash necessary to meet the obligations of a company. Also, a company with favorable liquidity are, to some extent, shielded from risks related to liquid assets. In the event a company lacks liquid assets or appropriate cash, it is forced to issue securities at below value for purposes of raising cash to finance different activities and operations of a business. As explained by Waemustafa and Sukri (2015), cash and liquid assets are means by which the directors of the company fulfill the immediate obligations of creditors and policymakers of the company without necessarily increasing profits from investment activities or liquidate financial assets.

Solvency margin is another key factor that shapes how well or badly a company accomplishes its financial goals. It plays an important role in absorbing risks associated with carrying out the day-to-day business operations. Companies with a high solvency margin value, are believed to be financially stable, and the surplus capital can cater for the unplanned activities, risks or even loses. Solvency margin is arrived at by evaluating excess assets over obligations. Higher solvency margin does not only contribute to

higher rates of returns but also aids a company is achieving better financial results. Thus, the higher the solvency margin, the better the financial performance.

In their investigation, Ayadi, Arbak, Naceur, and Groen (2015) point out that interest rates on bonds and fixed deposits are also a factor in determining financial performance in companies. High-interest rates on fixed deposits and bonds earn higher returns to the investors which in turn gives rise to performance on investments. Interests are a significant source for investors; as such, if they are favorably high, investors are motivated into putting their investments into the company for purposes of getting higher earnings.

2.9 Prior Empirical Research

A number of studies have successfully been carried out on the subject matter by a number of credible and qualified scholars in various listed and non-listed companies across the globe found in various sectors of the economy. Roanne Martis (2013) bases his research on constituents of the S&P 500. This is largely because no previous studies up until 2013 had been conducted on any of the S&P 500 constituents regarding the correlation between capital structure and financial performance. The main reason for the investigator to focus on S&P 500 firms is because it is regarded as the most appropriate and accurate gauge of the large-cap U.S. equities since the late 1950s. therefore, exploring the S&P 500 firms would be pivotal to the field of capital structure and financial performance. Panels of data were gathered in periods between 2003 and 2008 and also 2003 and 2011 where ROA, ROE and Tobin's Q were the main points of focus in relation to the performance of the company.

The analysis of various sets of data gathered from the identified firms, that was done through regression analysis revealed an interesting conclusion and suggestive shreds of evidence. For instance, the evidence from the analysis revealed a negative relationship between a firm's ROE and leverage with short-term debt and total debt having a significant inverse association with the effect of leverage on a company's Tobin's Q. Findings from the analysis, in other words, is consistent with similar investigations across the country. Considering the use of the S&P 500 firms, the conclusion of the study can also apply across multiple entities across the globe.

An analysis by Gicheha (2012) on the influence of capital structure on the financial performance of financial institutions in a developing economy, in Kenya, to be specific, the study analyzed financial performance in terms of ROE and ROA. The study was conducted in a five year- period between 2004 and 2009 and consisted of a total of all the 43 listed banking institutions in Kenya as registered since with the country's central bank up to 2009. Secondary data, financial statements of the banks ranging between 2004-2006, was obtained from the central bank of Kenya. The collected data were then analyzed using a regression analysis model where the SPSS model was also incorporated in analyzing the data. According to the findings from the analysis, factors affecting capital structure of the selected commercial banks included liquidity, profitability, growth, and size of the institutions. Originally, the research hypothesis had predicted that there was no relationship between financial performance in commercial banks and their capital structure from the use of chi test; as such, the researcher accepted the alternative hypothesis that financial performance of commercial banks is related, positively, to capital structure.

One of the most influential studies by Khatoon and Hossain that centered on exploring the relationship in companies listed on Dhaka stock exchange is a good reference point in understanding the phenomenon and applying the knowledge to companies in question. Findings from the analysis conclude that financial performance is greatly impacted by a company's capital structure with their association being inversely related. The outcome of the study argues that a company's capital structure has an inverse effect on the market value of the company market value with an increase in risk levels being a consequential effect of the increase in capital mix. Although the findings from the study contribute to the understanding of the subject matter, the researchers based their investigations on cement companies, samples which, in nature varies from the companies under the examination, non-financial firms. Additionally, the study was conducted in Pakistan, although the Arabic nation, the market differs, to some degree, from the Palestine market in a variety of ways. As such, findings from the analysis cannot be used to accurately make conclusions about the subject matter under examination.

An analysis by Zeitun and Titan (2014) reports that components of the capital structure, especially debt, has an influence on the financial performance of listed companies. The study was based on listed companies in Jordan where the researchers collected data of more than 20 corporations (both public and private) that are found on the stock market including the composition of their capital financing, decisions involving investments and the aspect of how the companies were performing financially based on the capital structure and choices the companies make in investment choices. The study notes that, in respect of the optimization of a company's performance, the directors of a company are careful regarding the decisions they make on matters pertaining to capital financing.

An investigation was conducted by Abbadi and Abu-Rub (2012) on the effect of capital structure on the financial performance of Palestinian financial institutions and how the two are related. The population of the study was made up of 32 firms as at the time of the study. The research adopted a convenient sampling method in gathering data for the analysis that involved gathering data from financial statements of the identified companies for a period of four years, that is between 2007 and 2011. The collected data was then summarized using s secondary data collection form and analysis done through descriptive statistics, ratios, and multiple regression analysis. According to the findings, most of the listed companies employed high leverage into their capital structure.

In addition to this, the findings suggest that listed financial companies preferred longterm debt financing over short-term debt financing for all their operations with a mean debt ratio across all the company being 74%. The ROE and ROA were recorded at 33 percent and 34 percent respectively on average across the firms. Financially, most of the studied firms were doing well with a few struggling in respect to their leverages. To this end, the study concluded that financial performance, is to a great extent, affected by capital structure and that the association between the two variables is a positive one.

In 2012, Ana, Dragan, and Monica conducted an investigation to determine the correlation between capital structure and financial performance. The exploration focused on agricultural firms in Macedonia. Owing to limitations of studies conducted previously in the field, the research dynamic of the investigation consisted of a total of 26 agricultural companies in Macedonia between the period of 2006 and 2010. Two models, debt-to-equity ratio and debt ratio with D/E ratio acting as a capital structure indicator are used in analyzing data. Findings from the analysis suggest that the Macedonian agricultural companies are restricted in the short run by pricing strategies

in different strategies aimed at arriving at the profitability goal of the companies. Agricultural companies with growth prospect use more effective strategies while operating within fixed assets capabilities. They are, however, confronted by the inefficiencies associated with the use of working capital which reduces their ability to fulfill the demands of the increasing market. Evidence from the analysis disregard the hypothesis that high-levered firms in the agricultural sector have increased opportunities in making profits. This aspect is attributed to the information asymmetry between such firms and capital/credit markets. In this regard, firms in the agriculture sector prefer assets to the debt due to financial risks in the long run.

By recognizing the importance of capital structure in the decisions that organizations partake, especially on matters related to financial performance, Takeh and Navaprabha (2015) investigate the concept of capital structure and its implications on corporate performance of Indian steel industry. The study, therefore, selects multiple firms in the Indian steel sector between the years 2007 and 2012. After obtaining data, financial performance was computed in terms of ROE, ROA, ROCE, OPM as indicators with FDR, TDER, ICR, and TADR representing capital structure. Multiple regression analysis, ANOVA, correlation matrix, and descriptive statistics were used to analyze the collected data. The findings from the analysis showed that capital structure has an impact on financial performance which is negative.

A study by Feng and Guo (2015) gives a different dimension into the matter since it surveys real estate firms listed in Chinas market exchange. The study was primarily inspired by the rocketing of prices in the real estate industry that, according to the researchers, needed effective financial management. The paper begins by hypothesizing that there is a positive relationship between capital structure and financial performance in listed real estate firms. As such, in order to fulfill the objectives of the study, all the real estate firms listed on the Shanghai Stock Exchange as from 2010 to 2012 were selected upon which data was obtained. The extracted data was expressed in the forms of ROE, ROA, debt-to-asset ratio, EPS and net profit growth rates as indicators of financial performance.

Regression analysis accompanied by factor analysis and model building analyses were used in analyzing the gathered data. The empirical study concludes that there is a negative association between capital structure and financial performance in real estate firms listed on the Shanghai Stock Exchange. This implies that an increase in debt ratio results in a reduction in the financial performance of the firms. The study, therefore, recommends the following actions in regards to the conclusion drawn from the findings of the analysis, the management of the companies should reduce the debt-to-asset ratio; current ratio is relatively large and needs to be reduced for purposes of facilitating longterm investment, and lastly, there are a wide range of financing options to choose from. While basing their research on listed companies in Sri Lanka, Arulvel and Ajanthan (2013) sought to determine the impact of capital structure on the company's financial performance. The study begins by acknowledging the importance of decisions on capital structure in a company for purposes of maximizing returns and the ability of a firm to sustainably survive in a competitive environment. The research, prior to embarking on data collection, hypothesizes that there is a relationship between financial performance and capital structure. Data collection processes involved obtaining financial statements of the listed trading companies on the Colombo Stock Exchange as from 2007 to 2011. A regression analysis with the help of SPSS model into the various components of the capital structure. Findings of the analysis revealed that measures of financial performance such as ROE, ROA, EPS, debt-to-equity ratio, net, and gross profits had a negative correlation with measures of financial performance with the exception of gross profit and debt-to-equity that exhibited a significant relationship with net profit.

Due to the identified challenges and limitations of the study tied to Arulvel and Ajanthan (2013), Sivalingam and Kengatharam (2018) decided to perform a similar but a more improvised analysis into the phenomenon. In other words, the objective of the research was to determine the relationship between capital structure and financial performance of listed and licensed commercial banks in Sri Lanka. The study use panel data obtained from a list of 10 selected commercial banking institutions between the years 2007 and 2016. Capital structure was measured using TDTTA ratio, LTDA ratio, and STDTTA ratios with ROE and ROA being used as indicators of financial performance. The study also took into account the bank deposit growth and the size of the institutions as the control variables of the examination.

A variety of analysis models were adopted including fixed effect, random effect and descriptive statistics models with the outcome from the Haussmann Specification Test used to correlate ROA and capital structure. As per the Haussmann Specification Test model, TDTA ratio was inversely correlated with ROA. Conversely, increase in bank deposits, and ROA had a positive association. However, no evidence from the study exhibited the relationship between the size of the banks, their STDTA, and LTDTA with the ROA.

According to the random effect model, TDTA ratio had a negative association with ROE with growth in bank deposits having a positive correlation on ROE. STDTA and LTDTA rations, however, did not reveal any significant relationship with ROE. To this end, the random effect model was regarded as the most appropriate model for exploring the relationship between financial performance and capital structure. The study, owing to the natural relationship discovered, suggests that the directors of commercial banks need to utilize more of internal sources of capital financing as opposed to debt capital of their capital structure in financing operations.

In another analysis, Puwanenthiren Pratheepkanth (2011) investigated the effect capital structure has on the overall performance of business corporations in Sri Lanka. Company's performance was evaluated through financial performance as an indicator, and the study was carried out between 2005 and 2009 involving companies listed on the Colombo Stock Exchange. The findings were consistent with most of the similar studies and concluded that that capital structure and financial performance are negatively related. Evidence from the research suggested that the association between the two concepts stood at -0.114 which was an insignificant level of association. Furthermore, it was observed that for purposes of financial performance, most listed companies opted for debt as opposed to other forms of capital financing. With the recommendations of the study in question, such as the exchange rates, politics, and inflation among others playing a role in financial performance in corporations in the market, it is important to factor in these factors when assessing the role of capital structure.

An analysis by Anas Ali Al-Qudah (2010) that focused on studying the phenomenon in reference to firms listed in the Abu Dhabi Securities Exchange. In the analysis, the capital structure was expressed as debt ratio with financial performance being expressed as profitability ratios. A sample consisting of 48% of all the companies listed on the Abu Dhabi Securities Exchange was obtained between the period of 2008 and 2015. The examiner adopted the SPSS for purposes of analyzing hypotheses thereby using model summary, ANOVA and coefficients for the study variables. The results were

consistent with some of the previous analysis which showed that debt ratio (capital structure) and ROA (financial performance) were positively related in firms listed at the ADX. However, when ROE was used, a negative correlation was found between the variables. In addition to this, the study noted that up to 31 percent of the changes in profitability was as a result of capital structure.

In another study, Gharaibeth (2015) explored the implications of capital structure on financial performance in reference to firms listed on the Bahrain Bourse. These particular studies, too many levels, is related to the subject matter under investigations as it centers on determining the association between financial performance and capital structure in non-financial firms. With a sample of seventeen non-financial business corporations listed on the stock market, the investigator extracted a five-years data of between 2009 and 2013. Inflation rate and domestic product growth were used as control variables for the study. Using multiple regressions as presented by ordinary least squares (OLS), the implications of inflation, growth domestic product, the capital structure on financial performance were evaluated. ROE, ROA, dividend yield and EPS were used as indicators of financial performance with total equity to total assets (EQTOTA) and total liabilities to total assets (TLTOTA) used as indicators of capital structure.

According to the findings, TLTOTA as an indicator of capital structure was positively related to ROE, an expression of financial performance with the exceptions of EPS, ROA, and DIYILD. The study also revealed that lagged performance measures of ROE, ROA, EPS, and DYIELD have a significantly positive influence on the current year's performance measures of the firm. Moreover, macroeconomic variables, that is, GDP growth and inflation rates, are negatively related to certain performance measures, that is ROE, EPS, and ROA. In general, however, capital structure has implications for financial performance, but the nature of the relationship varies depending on the components of a capital structure such as debt and equity and financial performance.

In another investigation conducted by Abu Rub (2012) in the exact field of study that the examiner sought to extract data, that is, research on the phenomenon of firms listed on the PEX also contributed, substantially, to the to the field and also understanding of the topic. The research study incorporated a total of 28 listed companies at PEX over a period of five years, that is, between 2006 and 2010. Panel data procedure was used to generate the essential data for the investigation. The results were rather interesting since, unlike most studies, reveal a positive correlation between capital structure and financial performance.

Even more contradicting observation is the outcomes of the analysis by Daraghma and Alsinawi (2010) whose analysis did not reveal any kind of relationship between the debt financing, as a form of capital structure, and financial performance for the listed firms. The research, therefore, concluded that there is no significant association between the variables. In generating data for the analysis, the study incorporated a list of 28 listed firms on the stock market and obtained data from the companies for the period between 2005 and 2008. Regression and OLS analysis were used to analyze the gathered data. Although there was not the relationship between debt financing and financial performance, in general, the study concluded, with evidence, that capital structure negatively affected the financial performance of the said companies.

Another interesting exploration is by Abu Mouamer (2011) who also objectively examined the concept of capital structure and how it is related to financial performance in reference to firms listed on the Palestine Exchange for a period of five years between 2000 and 2004. The findings of the research revealed that the listed service companies had the highest debt ratios which stood at 53.69% and coming closely were firms in the following sectors industrial, trade, and agriculture in that order. With the use of ANOVA, the study revealed that regardless of what source of capital financing the firm used, that is, long-term debt, short-term debt, or total debt, the impact was not felt on overall profitability in all the firms studied across the four sectors of the economy. However, growth, liquidity, size, and asset tangibility played a role in fluctuating profitability of the companies.

AbuTawahina (2015) takes a deeper look into the relationship between financial performance and capital structure with the objective of determining the implications of capital structure on financial performance for firms listed on PEX. The study partakes a population of 49 companies and uses ROA, ROA, and ROI as the dependent variables also representing financial performance and STDTA, LTDTA, and TDTA as independent variables and also representing capital structure. Data were obtained for a period of five years including the years between 2009 and 2013 from the corporation all of which belonged to different sectors of the economy.

The results showed varying relationships between the variables depending on the sectors the firms were in. for instance, for banking companies, there was a positive relationship between the variables; with insurance companies showing a negative relationship between STDTA and financial performance but with the exception of ROE. Investment firms also revealed a negative relationship between STDTA with the exceptions of ROA. For industrial companies, there was no significant association with service firms revealing the positive influence of TDTA and STDA on ROA but a negative influence on ROI and ROI.

In spite of the intensives analyses conducted on the relationship between capital structure and financial performance of firms across different sectors in Palestine, there is still inconclusive evidence and conflicting results with some of the research revealing no association between the two, others revealing negative correlation while others reported positive relationship. Therefore, a thorough analysis needs to be performed for more profound and credible results. Moreover, regardless of numerous studies conducted on the subject matter on firms listed on PEX, there is still no substantive evidence on this matter and no one addressed the period 2013-2017.

2.10 Conceptual Framework

The conceptual framework is usually developed for purposes of providing a clear illustration of the association between the variables (independent and dependent) in a topic under investigation. As initially mentioned, the purpose of the study is to determine how Palestine exchange listed firms are affected by the capital structure in terms of financial performance. In this case, capital structure, and its components will form the independent variables of the study with the financial performance forming the dependent variable of the study. Below is a diagram illustrating the relationship between the variables of the study.



Figure 1: Conceptual Framework

CHAPTER THREE RESEARCH METHODOLOGY

3.1 Introduction

This section identifies and describes methods used by the examiner in generating sufficient data necessary to fulfill the objectives and purpose of the research study. It outlines the instruments used in the investigation and the process of data collection and analysis. Other areas covered in this chapter include the research model/design; sample and population; measures of variables; data collection; and data analysis techniques. The study is descriptive depends on statistical model to test the hypothesis of the study H0: there is no relationship between capital structure and financial performance for Palestine Exchange listed firms.

3.2 Data collection and sample selection

The analysis was based on nonfinancial firms listed on the PEX comprising of 35 firms out of 49 total listed firms. This suggests that the study focused on PEX listed firms with the exception of the ones in the financial sector numbering of 14 firms. The data for the analysis was obtained from the companies' financial statements between the periods of 2013 and 2017. The sample of study is divided into three sectors, industry, services and investment, with total of 13, 11, and 7 firms respectively.

The Sample was selected through a purposive/ judgment sampling technique. Also known as subjective or selective, purposive sampling is a technique that relies on the judgment of the examiner when selecting samples for an investigation. As cited by Fraley and Hudson (2014), researchers implicitly choose a representative sample to suit the needs of a research project or select samples that possess certain features.

The research project obtained secondary data from the selected firms for the period 2013 - 2017. Data collection method began by analyzing the determinants of capital structure, that is, STDTA and LTDTA of nonfinancial firms listed on the PEX as the main independent variables. Analysis of financial performance was drawn from financial statements of the selected companies requested from the companies for analysis purposes using return on assets and return on equity measures. The collected data was then encoded in the excel 2013.

3.3 Research variable Measurements

Variables of the study are illustrated in table 3.1 as designed by the examiner. The independent variable, capital structure, of nonfinancial firms is measured by multiple accounting methods such as short-term debt to total assets (STDTA) and long-term debt to total assets (LTDTA). As such, the investigation took STDTA and LTDTA representative capital structure for the targeted firms. Also, the model added the age of the firm as control variable.

Financial performance, the dependent variable, is represented by a couple of variables aimed at measuring the performance of the targeted firms financially. Accounting based measured calculated and obtained from financial statements include Return on Assets (ROA) and Return on Equity (ROE). Therefore, the examination adopts two accounting-based measures of financial performance including ROA and ROE.

Table 3.1: measures equations

LTDTA (Independent variable)	= long term debt/ total assets
STDTA (Independent variable)	= short term debt/ total assets
Age of the listed firms (Control	=Year of data - Established year
ROA (Dependent Variable)	= Net income/total assets
ROE (Dependent variable)	= Net income available for CS /total shareholders"
	equity

3.3.1 Research Model

Panel data sets refer to sets that consist of both time series and cross section data. For instance, if we have 10 years of data across 10 countries, we have 100 observations. So, there would not be enough to estimate the model as a time series or a cross section, there would be enough to estimate it as a panel.

Panel data models examine fixed and/or random effects of entity (individual or subject) or time. The main difference between fixed and random effect models lies in the role of dummy variables. If dummies are considered as a part of the intercept, this is a fixed effect model. In a random effect model, the dummies act as an error term. A fixed group effect model examines group differences in intercepts, assuming the same slopes and constant variance across entities or subjects. Fixed effect models use least squares dummy variable (LSDV) and within effect estimation methods. Ordinary least squares (OLS) regressions with dummies, in fact, are fixed effect models (Baltagi, 2008).

 $Y_{it} = \Sigma D_{it}\beta_i + \beta_i Xit + u_{it}$

Random Effects Estimation The fixed effects model assumes that each group (firm) has a non-stochastic group-specific component to y. Including dummy variables is a way of controlling for unobservable effects on y. But these unobservable effects may be stochastic (i.e. random). The Random Effects Model attempts to deal with this: $Y_{it} = \beta_0 + \beta_1 Xit + V_i + \epsilon_{it}$

Here the unobservable component, vi, is treated as a component of the random error term. vi is the element of the error which varies between groups but not within groups. ε_{it} is the element of the error which varies over group and time.

3.3.2 Selection method of regression panel data

Many tests are used to choose the best estimation model to estimate the panel data, such as:

1. Chow Test

Chow test is used to check whether Common Effect (CE) or Fixed Effect (FE) is most appropriately in estimating panel data.

If Results:

 H_0 : CE is most appropriate in estimating (p>0.05)

H₁: FE is most appropriate in estimating (p < 0.05)

2. Hausman Test

Hausman test is used to check whether Random Effect (RE) or Fixed Effect (FE) is most appropriate in estimating panel data.

H₀: RE is most appropriate in estimating (p > 0.05)

 H_1 : FE is most appropriate in estimating (p <0.05)

3. Lagrange Multiplier Test

Lagrange Multiplier test (LM) is used to check whether Random Effect (RE) or Common Effect (CE) is most appropriate in estimating panel data. If Result:

 H_0 : CE is most appropriate in estimating (p>0.05)

H₁: RE is most appropriate in estimating (p < 0.05)

3.4 Statistical Approach

The investigation employed a descriptive analysis with quantitative methods in analyzing data adopted by the examiner. Coding was done to the collected data and thereafter analyzed using SPSS program for some descriptive analysis, E-views for selecting and estimating the model, excel 2013 for presenting and collecting the data to give a clear illustration of the results of the investigation. In other words, findings are presented in tables for further interpretation. Correlation and regression analysis are employed in establishing the relationship and effects of the independent variables on the dependent variables.

CHAPTER FOUR ANALYSIS AND FINDINGS

4.1 Descriptive analysis

Table (4.1) represents statistical summary for the variables. Number of data points is 167 (n=167) for 35 firms for 5 years. The ROA average for the sample is 1.78%, which means that every dollar invested in assets generates 0.0178 dollar in income. The disparity of ROA is between -62.2% as minimum value to 26.1% as a maximum value of the studied firms. While the average of ROE is 1.11%, which means that each dollar invested in equity generates 0.011 dollar in income. The disparity of ROE is between - 120.9% as minimum value to 31.9% as a maximum value of the studied firms.

A quick review of leverage ratios shows that the first measures of leverage STDTA average was 22.2% ranged from 0.55% as minimum to a high value of 77.0% in studied firms. Which means that 22.2% of total assets financed by short- term debt, while the LTDTA has a lower average in comparison with STDTA (10.0%), which means that non-financial firms do not prefer long-term debt in their capital structure. Regarding TDTA, it has a mean of 32.3%, which means that 32.3% of assets for the whole sample financed by debt and remaining part of assets (67.7%) financed by the owners' equity on average. These findings reveal the fact that firms are financed by equity or mix of equity and short-term debt as long-term debt are relatively low.

	ROA	ROE	STDTA	LTDTA	TDTA	AGE
Mean	0.017835	0.011119	0.222055	0.100530	0.322663	24.74419
Maximum	0.261088	0.318633	0.770086	0.491507	1.000000	72.00000
Minimum	-0.621925	-1.209191	0.005482	0.000000	0.008810	1.00000
Std. Dev.	0.095349	0.165405	0.146418	0.115624	0.195723	15.07966
Number observations	167	166	167	167	167	172

 Table 4.1: Descriptive statistics of the main variables

The average age of the listed firms is 24.7 year, the oldest one was established before 72 year, but the newest was established last year. By comparing the financial performance and capital structure indicators by age as shown in table (4.2). It means that there is a difference between indicators among the age, the newest firm depend on debt more than the oldest.

 Table 4.2: Capital structure and financial performance indicators by age of the firms.

Age of the firms	ROA	ROE	STDTA	LTDTA	TDTA
< 6	-0.07	-0.14	0.27	0.21	0.48
6-10	-0.04	-0.11	0.20	0.17	0.37
11-20	0.00	-0.02	0.23	0.08	0.31
21-40	0.04	0.04	0.23	0.11	0.34
> 40	0.07	0.09	0.18	0.08	0.26
Total	0.02	0.01	0.22	0.10	0.32

4.2 Normality Test

Normality test is used to determine if the data is normally distributed to allow doing some necessary analysis like correlation. For this objective Jarque-Bera (JB) test will be used to check if the collected data distributed normally. The results in the table (4.3)

shows that the probability of the JB test for all variables is lower than 0.05; which means the data don't distributed normally.

 Table 4.3: Normality test result

	ROA	ROE	STDTA	LTDTA	TDTA	AGE
Jarque-Bera	1116.147	2646.546	26.14342	116.4622	116.4622	64.50487
Probability	0.000000	0.000000	0.000002	0.000000	0.000000	0.000000

4.3 Correlation analysis

Correlation analysis is used to measure the strength of the relationship between the variables. The value of correlation coefficient (r) lies between 1 and -1, and when the coefficient correlation the two-variable approximate +/-1 it indicates that the relation is perfect, but if r goes toward 0 the relation will be weaker. There are many tests are used to determine the degree of correlation between the variables such as; Pearson correlation and Spearman correlation. Since the collected data for this study not normal, the suitable test for correlation is Spearman. The table below shows that there are no relations between the variables except weak relationship between age of the firm and ROE, ROA. Also, weak relationship between STDTA and ROE, ROA.

		ROA	ROE	STDTA	LTDTA	TDTA	Age
ROA	Correlation Coefficient	1.000	.987**	267-**	-0.021	313-**	.379**
	Sig. (2-tailed)		0.000	0.000	0.785	0.000	0.000
ROE	Correlation Coefficient	.987**	1.000	200-**	0.014	250-**	.388**
	Sig. (2-tailed)	0.000		0.010	0.855	0.001	0.000
STDTA	Correlation Coefficient	267-**	200-**	1.000	.277**	.832**	166-*
	Sig. (2-tailed)	0.000	0.010		0.000	0.000	0.032
LTDTA	Correlation Coefficient	-0.021	0.014	.277**	1.000	.673**	0.035
	Sig. (2-tailed)	0.785	0.855	0.000		0.000	0.653
TDTA	Correlation Coefficient	313-**	250-**	.832**	.673**	1.000	-0.101
	Sig. (2-tailed)	0.000	0.001	0.000	0.000		0.194
Age	Correlation Coefficient	.379**	.388**	166-*	0.035	-0.101	1.000
	Sig. (2-tailed)	0.000	0.000	0.032	0.653	0.194	

Table 4.4: Spearman Rho correlation for all variables

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

*. Correlation is significant at the 0.05 level (2-tailed).

* Research Model

The collected data to achieve the objective of research is panel data which consist of cross section data(companies) for five years. The fitted model of this kind of data is on the form of panel fixed model or random or pooled.

First model: $ROE_{it} = \beta_0 + \beta_1 STDTA_{it} + \beta_2 LTDTA_{it} + Age_{it} + u_i + \epsilon_{it}$

Second model: ROA_{it} = $\beta_0 + \beta_1 STDTA_{it} + \beta_2 LTDTA_{it} + Age_{it} + u_i + \epsilon_{it}$

ROE: Return on Equity.

ROA: Return on Asset.

STDTA: Short-term debt to total assets.

LTDTA: Long-term debt to total assets.

Age: Age of the firm.

u_i: Error which varies between firms.

 ϵ_{it} : Error which varies over firms and time.

 $i = 1, 2, \dots, 35$ (firm)

 $t = 1, 2, \dots, 5$ (year)

Before estimation the two models, the tests of selection the best model was done and the results have shown in table (4.5). According to the results, the best estimation model to estimate the impact of capital structure on financial performance is the random effect panel model for both ROE and ROA model

 Table 4.5: The three test results for selecting the fit model for estimating both

 models (ROE &ROA)

Test	P-Value ROE Model	Result	P-value ROA Model	Result
Redundant Fixed Effects Tests (Chow test)	0.0000	The data not pooled	0.0000	The data not pooled
Correlated Random Effects - Hausman Test	0.2712	The data not fixed panel	0.4458	The data not fixed panel
Lagrange Multiplier Tests for Random Effects	0.0000	The data is random panel	0.0000	The data is random panel

The table below presents the result of estimating ROE model. It shows that the ROE is affected by tow variables STDTA and the age of the firm, the variation of these independents variables explains 10% ($R^2 = 0.099$) of ROE. The overall model is significant at 0.05 level since the p-value of F test (0.0007) is less than 0.05. The results

show that there is positive relationship between age of the firm and ROE. The coefficient of the variable age equal 0.003; this means for every year of operation the firm increases the ROE of the firm by 0.003%. on the other hand, there is negative relationship between STDTA and ROE. The coefficient of the variable STDTA equal - 0.33; this means that the increase in STDTA by 10% will decrease ROE by 3.3%. for the test of autocorrelation problem, the Durbin Watson test is near to 2, which means no autocorrelation in this model.

Variable	Coefficient	P-value	Decision
С	0.031249	0.5367	
AGE	0.002832	0.041	Significant*
STDTA	-0.33001	0.0012	Significant
LTDTA	-0.19502	0.1436	Insignificant**
\mathbb{R}^2	0.099130		
Prob (F-statistic)	0.000719		
Durbin-Watson	2.023825		

Table 4.6: The output of ROE model

*Significant: If p-value < 0.05

** Insignificant: If p-value >0.05

The table below presents the result of estimating ROA model. It shows that the ROA is affected by tow variables STDTA and the age of the firm, the variation of these independents variables explains 9% ($R^2 = 0.089$) of ROE. The overall model is significant at 0.05 level since the p-value of F test (0.0015) is less than 0.05. The results show that there is positive relationship between age of the firm and ROE. The

coefficient of the variable age equal 0.002; this means for every year of operation the firm it increases the ROA of the firm by 0.002%. on the other hand, there is negative relationship between STDTA and ROA. The coefficient of the variable STDTA equal - 0.14; this means that the increase in STDTA by 10% will decrease ROA by 1.4%. For the test of autocorrelation problem, the Durbin Watson test is near to 2, which means no autocorrelation in this model.

Variable	Coefficient	P-value	Decision		
С	0.001932	0.9462			
AGE	0.002163	0.0093	Significant*		
STDTA	-0.1429	0.0087	Significant		
LTDTA	-0.07069	0.2683	Insignificant* *		
\mathbf{R}^2	0.089347				
Prob(F-statistic)	0.001576				
Durbin-Watson	1.868229				

 Table 4.7: The output of ROA model

*Significant: If p-value < 0.05

** Insignificant: If p-value >0.05

So, the results of the hypothesis test were as follows:

- Reject the null hypothesis that there is no relationship between capital structure and financial performance for Palestine Exchange (PEX) listed companies.
- Reject the null hypothesis that there is no notable impact of STDTA on financial performance of listed companies at PEX.
- Accept the null hypothesis that there is no notable impact of LTDTA on financial performance of listed companies at PEX.

CHAPTER FIVE

CONCLUSIONS AND RECOMMENDATIONS

5.1 Conclusions

Study findings make revelation that could help future stock investors, managers and regulators understand the impact of capital structure decisions on a firm's performance. The long-term debt to asset ratios and total debt to asset ratios have no notable impact on the financial performance Palestine Exchanged listed firms.

Palestinian non- financial firms are financed by equity or mix of equity and short-term liabilities as long-term debts are relatively low. For all non-financial firms listed in PEX. The debt on short term affect negatively on both return of asset and return of equity. This return to the recession of Palestinian economy on the period (2013-2017). This result same for many studies in different regions which explained in the literature review part. Also, the age of the firm effects on both return of asset and return of equity. Thus, if the firm operated more years will increase their financial performance directly. On the other hand, there is no relation between long term debt and on both return of asset and return of equity, because the firms depend more on short term debt.

5.2 Recommendations

Based on the research results, the study recommends the following:

- Non-financial firms should rely less on short term debt, which formed the major part of their leverage and focus more on developing internal strategies that can help improve more on their financial performance.
- 2. Non-financial firms should develop new strategies to use more of equity and try to finance their projects with retained earnings to maximize their financial performance.
- 3. PEX, the government and policymakers should attempt to facilitate policies to create opportunities for long term finance sources.
- 4. Non-financial firms should take into consideration their solvency and liquidity situation when they use short-term financing, to avoid any potential financial crises and bankruptcy.

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الملخص باللغة العربية

أصبحت قضية اختيار رأس المال المثالي ما بين الأسهم والدين من أهم القرارات الاستراتيجية للشركات. أجريت هذه الدراسة لبحث كيفية تأثر الشركات المدرجة في بورصة فلسطين بهيكل رأس المال من حيث الأداء المالي. حيث هدفت الدراسة لمعرفة تأثير هيكل رأس المال للشركات المدرجة في بورصة فلسطين (PEX) على أداءها المالي. تم استخدام العائد على الأصول والعائد على حقوق الملكية كمؤشرات للأداء ، بينما تم استخدام نسب الديون لقياس هيكل رأس المال.

كانت عينة الدراسة عبارة عن جميع الشركات الغير مالية والمدرجة في بورصة فلسطين وعددها 35 شركة من أصل 49 شركة مدرجة. تم استخدام موقع بورصة فلسطين ومنشورات الشركات كمصدر للبيانات. تم تحليل البيانات باستخدام فحص الارتباط والتحليل الوصفي والانحدار المتعدد.

وجدت الدراسة أن الأداء المالي للشركات المدرجة قد تأثر سلبًا ، حيث أظهرت الدراسة انخفاض العائد على الأصول والعائد على حقوق الملكية نتيجة لزيادة الديون ، حيث كانت العوائد من التمويل بالدين أقل من تكلفتها. بالإضافة إلى ذلك ، توصلت الدراسة الى أن الشركات غير المالية الفلسطينية يتم تمويلها إما عن طريق الديون قصيرة الأجل ، أو حقوق الملكية ، أو مزيج من الاثنين معا، حيث أن الالتزامات طويلة الأجل منخفضة نسبيا. أوصت الدراسة بأن الشركات غير المالية وصانعي السياسات يجب أن يعتمدوا بدرجة أقل على الديون قصيرة الأجل ، والتي شكلت الجزء الأكبر من مصادر تمويلهم، والتركيز أكثر على تطوير الاستراتيجيات الداخلية التي يمكن أن تساعد في تحسين الأداء المالي.

الكلمات المفتاحية: هيكل رأس المال ، الأداء المالي ، العائد على الأصول ، العائد على حقوق الملكية ، نسب الدين ، فلسطين ، غير مالية.