

إقرار

أنا الموقع أدناه مقدم الرسالة التي تحمل العنوان:

محددات هيكل رأس المال - دراسة تطبيقية على الشركات المدرجة في سوق فلسطين للأوراق المالية

The Determinants of Capital Structure an Empirical Study of Companies listed in Palestine Exchange

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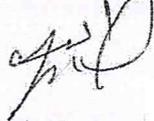
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**The Determinants of Capital Structure**  
**"An Empirical Study of Companies listed in**  
**Palestine Exchange (2009-2014)"**

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"A Thesis Submitted in Partial Fulfillment of the Requirements for the Degree  
of MBA"

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## نتيجة الحكم على أطروحة ماجستير

بناءً على موافقة شئون البحث العلمي والدراسات العليا بالجامعة الإسلامية بغزة على تشكيل لجنة الحكم على أطروحة الباحث/ طالب صالح طالب لنييل درجة الماجستير في كلية التجارة/ قسم إدارة الأعمال وموضوعها:

### محددات هيكل رأس المال - دراسة تطبيقية على الشركات المدرجة في سوق فلسطين للأوراق المالية

#### The Determinants of Capital Structure an Empirical Study of Companies listed in Palestine Exchange

وبعد المناقشة العلنية التي تمت اليوم الأربعاء 30 ذو الحجة 1436هـ، الموافق 2015/10/14م الساعة العاشرة صباحاً بمبنى القدس، اجتمعت لجنة الحكم على الأطروحة والمكونة من:

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وبعد المداولة أوصت اللجنة بمنح الباحث درجة الماجستير في كلية التجارة/ قسم إدارة الأعمال.

واللجنة إذ تمنحه هذه الدرجة فإنها توصيه بتقوى الله وبنوع طاعته وأن يسخر علمه في خدمة دينه ووطنه.

والله ولي التوفيق ،،،

نائب الرئيس لشئون البحث العلمي والدراسات العليا

أ.د. عبدالرؤف علي المناعمة

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

قال تعالى:

{يَرْفَعُ اللَّهُ الَّذِينَ آمَنُوا مِنْكُمْ وَالَّذِينَ أُوتُوا الْعِلْمَ دَرَجَاتٍ}

صدق الله العظيم

(المجادلة 11)

## **Abstract**

This study examines capital structure determinants of companies listed in Palestine Exchange. The study population consisted of 49 listed companies and the study sample consisted of 35 listed companies during the period (2009-2014). This study used the descriptive analysis to analyze the financial reports of the companies for six years using the E-Views program. The data of the study variables during this period was collected from the annual financial reports (balance sheet and income statement). The capital structure determinants were used as dependent variables was expressed as: Short term debt (STD), Long term debt (LTD), Total debt (TD). The study used seven independent variables as: Firm age, Liquidity, Profitability, Tangibility, Risk, Firm size, Growth Opportunities. The study showed that there is a significant relationship between the dependent variables: Short term debt (STD), Long term debt (LTD), Total debt (TD), and all the independent variables: Age, Liquidity, Profitability, Tangibility, Risk, Size and Growth. In addition, The study found that there is a negative relationship between Liquidity, Profitability, Growth, Age and Capital structure, and found a positive relationship between Capital Structure and Tangibility, Risk, Size. The study recommended that all companies in all sectors have to finance the future expansion of their investment, and advises companies to maintain a good reputation throughout all stages of their lives to retain the advantage of access to debt and take advantage of the leverage in time of need.

## Abstract (Arabic)

### ملخص الدراسة

تناولت هذه الدراسة محددات هيكل رأس المال للشركات المدرجة في سوق فلسطين للأوراق. ويتكون مجتمع الدراسة من 49 شركة مدرجة في سوق فلسطين للأوراق المالية، تم اختيار عينة تتكون من 35 شركة مدرجة خلال الفترة (2009-2014). استخدمت هذه الدراسة التحليل الوصفي لتحليل التقارير المالية للشركات لمدة ست سنوات باستخدام برنامج E- Views. تم جمع بيانات متغيرات الدراسة خلال هذه الفترة من التقارير المالية السنوية (الميزانية العمومية وقائمة الدخل). تم استخدام هيكل رأس المال كمتغير تابع وتم التعبير عنه بالديون قصيرة الأجل (STD)، والديون طويلة الأجل (LTD)، ومجموع الديون (TD). كما استخدمت الدراسة سبع متغيرات مستقلة على النحو التالي: عمر الشركة، السيولة، الربحية، الملموسية، المخاطر، حجم الشركة، النمو. وأظهرت الدراسة أن هناك علاقة ذات دلالة إحصائية بين المتغيرات التابعة: الدين قصير الأجل (STD)، والديون طويلة الأجل (LTD)، ومجموع الديون (TD)، وجميع المتغيرات المستقلة: العمر، السيولة، الربحية، ملموسية، المخاطر، حجم والنمو. وبالإضافة إلى ذلك، وجدت الدراسة أن هناك علاقة سلبية بين السيولة والربحية والنمو، والعمر هيكل رأس المال، وعثرت على وجود علاقة إيجابية بين هيكل رأس المال وملموسية، المخاطر، والحجم. وأوصت الدراسة بأن جميع الشركات في جميع القطاعات لديها لتمويل التوسع المستقبلي لاستثماراتهم، وتتصح الشركات للحفاظ على سمعة طيبة في جميع مراحل حياتهم على الاحتفاظ بميزة الوصول إلى الديون والاستفادة من النفوذ في وقت تحتاج إليها.

## **Deduction**

To my dear father and my kind mother.

To my beloved wife and my beloved children.

To my generous family.

To my honorable university.

To my friends, who support me all the time.

To my lovely country Palestine.

## Acknowledgments

This thesis is by far the most important accomplishment of my life and it would have been impossible without the help of God Almighty then the support of many people. I would therefore like to offer my sincere gratitude to all of them.

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## List of Abbreviations

EBIT	Earnings before interest and taxes
FMDV	Financial Market Development Variables
G	Growth
LQ	Liquidity
LTD	Long Term Debt
MM	Modigliani and miller
NDTS	Non-debt tax shields
PEX	Palestine Stock Exchange
PROF	Profitability
ROA	Return on Assets
ROE	Return on Equity
STD	Short Term Debt
TA	Total Assets
TANG	Tangibility
TD	Total Debt

# **Chapter 1**

## **Study Background**

## **1.1. Introduction**

Capital structure is considered one of the most important topics that have been tackled by theories and literature of accounting and finance. It has been used to specify the best mixture and identify the affecting factors in the capital structure, besides guiding firms to make their optimal capital structure decisions. The argument regarding the determinants of capital structure began since Modigliani and Miller (1958) and concluded to the broadly known theory of capital structure where financial leverage does not affect the firm's market value. This theory was based on very restrictive assumptions that do not hold in the real world. Modigliani and Miller (1963) reviewed their theory by incorporating tax benefits as determinants of the capital structure of firms. The argument continued to Miller (1977) and was based on three tax rates that determine the total value of the firm. These are: (1) The corporate tax rate, (2) The tax rate imposed on the income of the dividends, (3) The tax rate imposed on the income of interest inflows. (Abu Mouamer, 2011).

Titman & Wessels, (1988) list some fundamental conditions that make the (MM) proposition hold: 1. (distortionary) taxes, 2. transaction costs, 3. bankruptcy costs, 4. Perfect contracting assumptions, and 5. Complete and perfect market assumption. Since the publication of MM's irrelevance proposition, hundreds of articles on the theory of capital structure have been written in order to find out under what conditions capital structure does matter because the impact of firm characteristics on a firm's financing choices has been extensively studied across firms and countries; for example, Rajan and Zingales (1995), Goyal and Frank (2003) studied US firms, while Deesomsak, Paudyal and Pescetto (2004) studied determinants of capital structure from Asia Pacific region. (Mosa, 2012) studied the national telecommunications companies in the Arab world. but Abu Mouamer (2011), studied Palestine-listed companies. This study explored the determinants of capital Structure of listed companies in Palestine Exchange, from the period 2009-2014. The study explore whether the decision of the firms concerning the financial leverage is in conformity with the patterns proclaimed in previous studies.

This thesis is divided into six chapters. The introduction with its contents in the first chapter. The second chapter reviews the relevant literature. Chapter three provides a theoretical framework and defines the variables. The fourth chapter discusses the method and data respectively. Data analysis and testing of the hypothesis are in chapter five and chapter six summarizes the key results and recommendations and concludes the study.

## **1.2. Research problem**

Many studies have been done to explore to what extent the capital structure theory can be applied to different circumstances. These studies were conducted under different assumptions which fit in to the particular situation. Recently, different results appeared in each of the studies such as: (Caglayan & Rashid, 2014) which studied UK Public versus Non-Public Manufacturing Firms, (Masoud, 2014) which studied Libyan Firms, (Osaretin & Michael, 2014) which studied firms listed In Nigeria, (Fauzi, Basyith, & Idris, 2013) which studied New Zealand-Listed Firms, (Bülent, Cüneyt, & Arif, 2013) which studied Major Emerging Market Economy.

Based on the above, the vision is not clear regarding the different results of the studies due to the different factors and determinants variables of capital structure for each study. So, this requires us to know whether there is consensus or disagreement in reality with companies listed in the Palestine Exchange and requires us to clarify the head optimal capital structure determinants. The problem is confined to determine the extent of the impact of capital structure determinants (Liquidity, Growth opportunities, Profitability, Tangibility, Age, Size and Risk) on the independent variable (Capital structure) of companies listed in (PEX).

## **1.3. The Study importance**

It is important to examine the capital structure of companies because it affects company's real decisions on employment, production, and investment decisions (Harris & Raviv, 1991). This study will tries to identify, examine and analyze the determinants of capital structure in a systematic way. The study provides applicable and practical teaching to anyone who wishes to understand the topic. This study will help managers in Palestinian firms to make financing decisions for their firms. The creditors can also benefit in minimizing their risk when they deal with a specific sector of firms.

## **1.4. The Study Objectives**

The main objectives of this study are to identify and examine the factors that affect the Capital Structure of 49 listed companies in Palestine Exchange and to determine the extent of harmony with the results of studies that have been carried out on the corporate capital structure in developed countries.

- To analyze the main determinants that influence financing decisions regarding the choice of capital structure in the Palestinian firms listed in PEX.

## 1.5. Study variables

In order to identify the determinants of capital structure, some determinants mentioned in the previous literature were used in this study availability. The study variables were determined in this study according to the results reached by previous studies. The studies have identified a number of variables as potential determinants of firm financing decisions. This study uses **Capital Structure** as the dependent variable and which includes three leverage proxies: **Total debt**, **Long-term debt** and **Short term debt**. Independent variables were used as follows:

### *Independent Variables:*

1. Firm age
2. Liquidity
3. Profitability
4. Tangibility
5. Risk
6. Firm size
7. Growth Opportunities (Market value per share-to-book ratio)

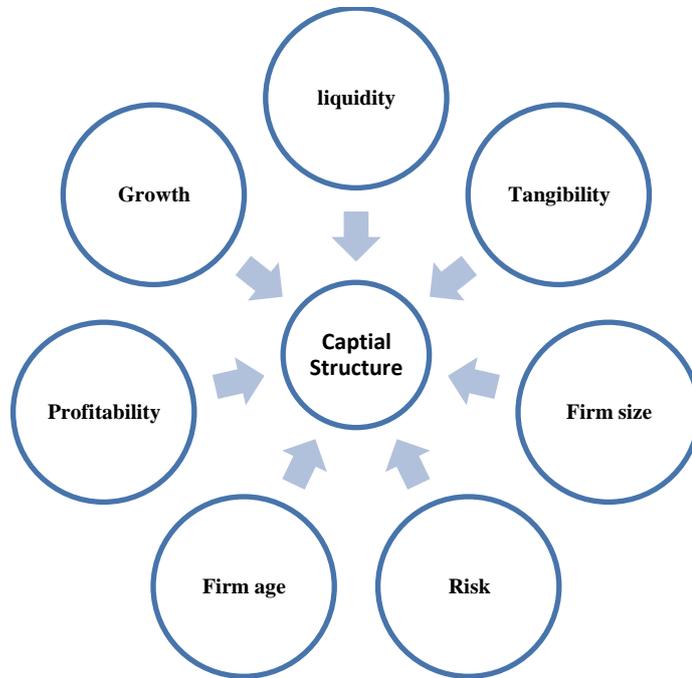
## 1.6. Study hypotheses

The hypotheses we proposed about the possible determinants of the capital structure decisions of Palestinians firms are as follows:

- H1: There is negative significant relationship between firm age and Capital Structure (LTD, STD, TD).
- H2: There is negative significant relationship between Liquidity and Capital Structure (LTD, STD, TD).
- H3: There is negative significant relationship between Profitability and Capital Structure (LTD, STD, TD).
- H4: There is negative significant relationship between Tangibility and Capital Structure (LTD, STD, TD).
- H5: There is negative significant relationship between Risk and Capital Structure (LTD, STD, TD).

H6: There is positive significant relationship between firm size and Capital Structure (LTD, STD, TD).

H7: There is a negative significant relationship between Growth Opportunities and Capital Structure (LTD, STD, TD).



**Figure 1: Hypotheses**

## **Chapter 2**

### **Literature Review**

## **Literature Review**

### ***2.1 Arabic Studies:***

#### **2.1.1 (Masoud, 2014) The determinants of capital structure choice: Evidence from Libyan firms**

This study aims to explore the dynamism of capital structure and the impact of stock market development on firms' financing choices using panel data methodology. This paper examined the effect of financial market development on the determinants of capital structure sampling eight firms listed in the Libyan stock market during the period (2008-2013). The empirical finding found that liquidity and profitability are negatively and significantly related to the leverage ratios, firm size is positively and significantly related to leverage ratio of firms, leverage is negatively related with tangibility, growth opportunities are positively related to book value leverage and negatively related to market leverage. The results suggest an unimportant role for economic growth and inflation rates in explaining the variation in debt-equity ratios. The results indicate that both the trade-off and the pecking order theories can explain the Libyan firms' financing decisions. This study recommended that further research is necessary to ascertain determinants of capital structure of developing countries based on the institutional settings.

#### **2.1.2 (Mosa, 2012) The determinants of capital structure of national mobile telecommunications companies in the Arab world comparative study**

The main objective of this study is to determine the corporate capital structure determinants of national mobile telecommunications companies in the Arab world, The researcher used the descriptive analytical method in analyzing the financial statements of the companies for a period of six years. The study population consisted of (7) companies during the period (2006-2011). The main findings of the study were that there is an inverse relationship between liquidity and capital structure. The study recommends that the companies should use liquidity to finance future expansion and to stay away from long-term loan financing.

#### **2.1.3 (Abu Mouamer, 2011) The determinants of capital structure of Palestine-listed companies (2000-2004)**

The purpose of this paper is to examine the relationship between capital structure and debt lifetime among listed companies in Palestine stock market. Only 15 firms working in

different economic sectors qualified to be included in the study sample according to the availability and continuity of published financial statements during the period of 2000-2004. Variables used for the analysis include profitability, leverage ratios total debt (TD), short-term debt (STD) and long-term debt (LTD)), liquidity (LQ), age, asset structure, and firm size and sales growth are also included as control variables. The panel character of the data allows for the use of panel data methodology. The study has shown that the service companies have the highest TD ratio (53.69 percent), followed by industrial companies (50.86 percent), trade companies (34.11 percent) and agriculture companies (24.02 percent). The one way analysis of variance (ANOVA) shows no significant difference in the use of debt, neither total, LTD or STD among companies in the four sectors. The correlation analysis has shown that TD is positively and significantly related to TAN, on the country, no significant relationship between the long debt and STD on the one hand and age, growth, LQ, TAN, and size on the other hand.

#### **2.1.4 (Kilani, Qadumi, & Amarna, 2011) Factors affecting the use of debt in Jordanian Industrial Corporations for the period (2000-2009)**

This study aims at examining the possible impact of determinant factors of Capital Structure on debt ratio for Industrial Corporations listed in ASE for the period 2000-2009. The publications of the Jordan Securities Exchange and Commission and Central Bank were used to obtain the necessary data of the research. To get the results of the study the simple regression analysis method was used. The simple-regression at 5% significance level showed that the debt level in Jordanian Industrial Corporations is affected by operating profit margin and assets growth rate at 0.003 and 0.002 significance level respectively. The researchers recommended the need for companies to take into consideration all the factors that studies have shown that have an impact on the decision to use private debt and the prevailing market interest rates for the appropriate leverage for companies to achieve.

#### **2.1.5 (Ramadan & Alokdeh, 2011) Determinants of capital structure: Evidence from Jordan (2000 -2006)**

The aim of this study is to explore the determinants of the corporate capital structure in Jordan, focusing on the period 2000-2006. This study used the Fixed Effect "Regression" Model. The study population consists of Jordanian public shareholding companies, which are divided into three economic sectors: industrial, financial, and service sectors. The sample consists of 100 firms listed in Amman Stock Exchange (ASE). The study

concluded a negative correlation with economic and statistical significance between the capital structure of Jordanian companies and all of the companies' profitability and liquidity. The results of this study showed the impact of the companies' life on the capital structure. Finally, they recommend expanding the study in terms of the period.

#### **2.1.6 (Al-Shubiri, 2010) Determinants of capital structure choice: A case study of Jordanian industrial companies**

The aim of this paper is to analyze the determinants of the capital structure in industrial Jordanian firms. This paper analyzes the explanatory power of some of the recent theories of optimal capital structure of the industrial companies listed in Amman Stock Exchange in the period (2004-2007). The simple and multiple regression analysis test is used in this study. The results of this study showed that the issue of capital structure is an important strategic financing decision that firms have to make. The study recommendations reduce businesses' sensitivity to economic cycles. There could also be policies intended to encourage establishing financing schemes to assist firms in specific industries.

#### **2.1.7 (Khrawish, 2010) The determinants of the capital structure: Evidence from Jordanian industrial companies**

The primary objective of capital structure decisions is to maximize the market value of the firm through an appropriate mix of long-term sources of funds. This mix is called the optimal capital structure. This study examined the capital structure of industrial companies listed in Amman Stock Exchange (ASE) over the period (2001-2005). The sample of this study consists of all industrial companies listed in the Amman Stock Exchange (ASE) for 2005 totaling to 30 companies. The findings of this study contribute towards a better understanding of financing behavior in Jordanian industrial companies. This implies that: (1) Growing companies and companies with high levels of tangible assets tend to use short-term debt rather than long-term debt. (2) Large and profitable companies are less likely to use short-term debt and tend to use less debt overall.

#### **2.1.8 (Qasim & Jamil, 2009) The impact of cash flows on the elements of the capital structure: An Empirical Study based on a number of international companies data**

This research mainly aims to determine the effect of cash flows in components of the capital structure, long-term debt and ownership to provide a clear picture of the relationship between them and the degree and type of influence. This research was based

on two methods; the theoretical and applied methods where the data was analyzed using the SPSS program. The sample was made of 16 international companies operating in different sectors and the key finding of this study was that the only effect of cash flows was specifically the property element, which refers to the exposure of companies. The researcher recommends the need to study the relationship between new variables and their impact on the capital structure and the need to re-examine the relationship between the components of cash flow and capital structure to gain access to more decisive results.

## **2.2 Foreign studies:**

### **2.2.1 (Caglayan & Rashid, 2014) The response of firms' leverage to risk: Evidence from UK public versus non-public manufacturing firms.**

This paper empirically investigates the effects of macroeconomic and firm-specific risk on firms' leverage. The analysis is carried out for a large panel of public and non-public UK manufacturing firms over the period 1999-2008. They use the system generalized method of moments (system-GMM). In this paper, they only focus on manufacturing firms. The paper investigation provides evidence that UK manufacturing firms use less short-term debt during periods of high risk. However, the leverage of non-public manufacturing firms is more sensitive to firm-specific risk in comparison to their public counterparts while macroeconomic risk affects both types of firms similarly. The investigation also shows that firms with high liquid assets reduce their leverage more (less) during periods of heightened firm-specific (macroeconomic) risk. They suggest that researchers should consider the effects of both macroeconomic and idiosyncratic risks while studying firms' optimal leverage over and above the other factors that have been examined in the literature.

### **2.2.2 (Osaretin & Michael, 2014) The determinants of capital structure of listed firms in Nigeria**

In this research, the key aim is to identify the main determinants of capital structure in Nigerian firms. The objectives of the research are to assess the significance of the impact of ROA on capital structure and to assess the significance of the impact of the company size on capital structure. The study is focused on the analysis of the determinants of capital structure of Nigerian companies for 2013. The cross-sectional least squares regression is applied to determine the impact of two independent variables on debt ratio. The sample in this paper were 20 companies which have been retrieved from CBN statistical bulletin and Thomson One Banker (2012) on 20 June 2013. The study found that profitability is not a

significant determinant and has a negative impact on leverage while the impact of company size was not confirmed in the model. They recommend to expand further studies with an inclusion of an industry variable in order to figure out the effects that industries can have on debt ratios.

### **2.2.3 (Fauzi et al., 2013) The determinants of capital structure: An empirical study of New Zealand-listed firms**

This paper is an attempt to empirically test for the capital structure determinants in the New Zealand context. This study examines a recent dataset of New Zealand listed-firms and investigates capital structure determinants of New Zealand-listed firms. This study uses panel data which allows the unobservable in the regression model, sampling 79 New Zealand-listed firms were observed from 147. In the result the dynamic-IV GMM regression reveals that tangibility, growth, signaling, managerial ownership and firm size exhibit a significant impact on total debt. Those variables confirm the trade-off theory but firm size supports the pecking-order theory. In addition, non-debt tax shield and profitability have no significant impact on total debt; though the coefficient for non-debt tax shield confirms the pecking-order theory and the coefficient for profitability confirms the trade-off theory.

### **2.2.4 (Shang, 2013) Determinants of capital structure in agricultural cooperatives in North Dakota.**

The objective of this research was to identify determinants of the optimal capital structure in farm supply and grain marketing cooperatives within the state of North Dakota. This thesis analyzes how the optimal capital structure is affected by capital management and major sources of risk under the rule of maximizing the value of discounted cash flows to members. It is done by using the present value of cash flow method. The data set includes financial reports from farm supply and grain marketing cooperatives in North Dakota and the final sample included 704 observations. Empirical Results indicate that the optimal debt ratio is related to the lagged debt ratio.

### **2.2.5 (Ilgaz, 2013) Determinants of firms' capital structure choice, their credit ratings and the leverage-rating relation.**

The aim of this study is to agree that firms adjust their capital structure to stay in close proximity to a target leverage ratio. All firm year observations are obtained from COMPUSTAT for the 1985-2010 period following Fama and French (1997) from the

financial sector, from non-classifiable establishments, and from the regulated sector or utilities. In this study the author model leverage changes and rating changes using a simultaneous equation system. The key finding is that the addition of deviations from target leverage more than doubles the explanatory power compared to existing empirical specifications. Using standardized regression coefficients, the study shows that the deviation from target leverage ratios is the most important determinant of firms' capital structure. The study points out to that neither leverage nor ratings are exogenous to each other and leverage-rating relationship should be appropriately modeled using simultaneous equation systems.

#### **2.2.6 (Bülent et al., 2013) Determinants of capital structure: Evidence from a major emerging market economy.**

This paper investigates the capital structure of non-financial firms in a major emerging market economy, Turkey. Authors model leverage as a function of various factors discussed in the study. Sample was split into two seven-year periods, namely, 1996-2002 and 2003-2009, to test for any structural breaks in the firms' capital structure choices. The paper results suggest that tax-related factors and asset tangibility are the most economically significant factors for short-term and long-term debt ratios, respectively. Results also suggest that inflation is an important determinant of leverage and the most economically significant macroeconomic factor. The study suggests that the trade-off theory may be a better description of the capital structures of Turkish non-financial firms than the pecking-order theory, particularly after the early 2000s.

#### **2.2.7 (Ghosh, Petrova & Wang, 2012) Determinants of capital structure: A long term perspective**

The objective of this study is to provide additional evidence to this growing literature by testing the persistence of the effect of profitability on capital structure. This paper examines whether market and operating performance have a long lasting effect on firms' use of leverage. They design a weighing scheme that captures the effect of profitability during the periods when the firm rebalances its leverage. The analysis includes two subsamples: one of all firms from 1950 to 1989 and a second including firms within 1990–2008. The results show that the constructed variable weighted average historical profitability has a strong negative impact on the firm's current capital structure. The study findings imply that the firm's capital structure is to a large extent the outcome of accumulating historical operating profits.

### **2.2.8 (Akinlo, 2011) Determinants of capital structure: Evidence from Nigerian panel data**

The paper examines the determinants of capital of 66 firms listed on the Nigerian stock Exchange during the period (1999-2007) using panel data. The results show that there is a negative relationship between leverage and growth opportunities, leverage and tangibility. Negative relationship of profitability with leverage in the three models confirms the implication of pecking order hypothesis which argues that highly profitable firms prefer to finance new investment with internally available funds than through debt finance. The research recommends that it is necessary to ascertain determinants of capital structure of Nigeria based on the institutional settings.

### **2.2.9 (Sbeiti, 2010) The Determinants of capital structure: Evidence from the GCC countries**

This paper investigates the determinants of capital structure in the context of three GCC countries and the impact of their stock markets' development on the financing choices of firms operating in these markets. The leverage ratios of individual firms are modeled as a function of several firm specific factors in a cross sectional framework. The sample includes 59 companies from Kuwait, 41 from Saudi Arabia, and 42 from Oman for the period (1998-2005). In 2005 the number of listed companies was 147, 66, and 122 (excluding 10, 8 and 3 banks) in Kuwait, Saudi Arabia and Oman respectively. The key findings are that corporate capital structure in these countries can be explained by the determinants suggested in corporate and stock markets in the these countries. They have become more developed and are considered an important tool for corporate financing decisions.

### **2.2.10 (S. Akhtar & B. Oliver, 2009) The determinants of capital structure for Japanese multinational and domestic corporations.**

This paper aims to identify the determinants of capital structure for a sample of Japanese corporations, to identify if being a Japanese multinational corporation is a determinant of capital structure and if the capital structure is different between multinational and domestic corporations and what explains this difference. This paper documents the determinants of capital structure for a sample of 360 Japanese multinational and domestic corporations over a 10year period ending in 2003. The study finds that being a multinational corporation is a significant variable in explaining capital structure for a sample of Japanese firms. The study also finds that Japanese multinationals have significantly lower leverage than

domestic firms. The study recommends that profitability and size are not significant in explaining differences in capital structure between multinational and domestic corporations.

**Next, The study shows in table No. (1) the literature reviews summery.**

**Table (1): Summary of the Literature Review**

No.	Author Name	Study Title	Place	year	Objectives	Methodology	Sample	Variables
<i>Arabic studies</i>								
1.	Najeb Masoud	The Determinants of Capital Structure Choice: Evidence from Libyan Firms	Libya	2014	To explore the dynamism of capital structure and the impact of stock market development on firms' financing choice.	Panel data	8 firms	<ol style="list-style-type: none"> <li>1. Tangibility</li> <li>2. Growth</li> <li>3. Profitability</li> <li>4. Liquidity</li> <li>5. size</li> <li>6. The cost of equity</li> </ol>
2.	Mohammed Mosa	The determinants of capital structure of national mobile telecommunications companies in the Arab world comparative study (2006-2011)	Arab world	2012	To determine the corporate capital structure determinants of national mobile telecommunications companies in the Arab world	Descriptive analytical	7 firms	<ol style="list-style-type: none"> <li>1. ROA</li> <li>2. ROE</li> <li>3. Liquidity</li> <li>4. Growth</li> <li>5. Tangibility</li> <li>6. Age</li> <li>7. Size</li> </ol>
3.	Faris M. Abu Mouamer	The determinants of capital structure of Palestine-listed companies (2000-2004)	Palestine	2011	To examine the relationship between capital structure and debt lifetime among listed companies in Palestine stock market	Panel data	15 firms	<ol style="list-style-type: none"> <li>1. Profitability</li> <li>2. Tangibility</li> <li>3. Size</li> <li>4. Growth</li> <li>5. Ownership</li> <li>6. Age</li> <li>7. Liquidity</li> </ol>
4.	Qays Kelani Thaer Qadumi Asma Amarna	Factors affect the use of debt in Jordanian Industrial Corporations for the period (2000-2009)	Jordan	2011	This study aims at examining the possible impact of determinant factors of Capital Structure on debt ratio for Industrial Corporations listed in ASE for the period 2000-2009	Simple regression analysis	31 firms	<ol style="list-style-type: none"> <li>1. ROE</li> <li>2. Size.</li> <li>3. Profitability</li> <li>4. Age</li> <li>5. Growth</li> </ol>

No.	Author Name	Study Title	Place	year	Objectives	Methodology	Sample	Variables
5.	Imad Z. Ramadan and Saleh K. Alokdeh	Determinants of Capital Structure: Evidence from Jordan (2000 -2006)	Jordan	2011	To explore the determinants of the corporate capital structure in Jordan	Fixed Effect "Regression" Model	100 firms	<ol style="list-style-type: none"> <li>1. Size</li> <li>2. Age</li> <li>3. Profitability</li> <li>4. Liquidity</li> <li>5. Tangibility</li> <li>6. Growth</li> <li>7. Risk</li> <li>8. Taxes</li> <li>9. NDTS</li> </ol>
6.	Faris AL- Shubiri	Determinants of Capital Structure Choice: A Case Study of Jordanian Industrial Companies	Jordan	2010	To analyze the determinants of the capital structure in industrial Jordanian firms	Simple and multiple regression analysis	95 firms	<ol style="list-style-type: none"> <li>1. liquidity</li> <li>2. Profitability</li> <li>3. Risk</li> <li>4. Growth</li> <li>5. NDTS</li> </ol>
7.	Husni Khrawish & Ali Khraiweh	The Determinants of the Capital Structure: Evidence from Jordanian Industrial Companies	Jordan	2010	To maximize the market value of the firm through an appropriate mix of long-term sources of funds	The Ordinary Least Squares	30 firms	<ol style="list-style-type: none"> <li>1. size</li> <li>2. Tangibility</li> <li>3. Profitability</li> <li>4. LTD to TA</li> <li>5. STD to TA</li> </ol>
8.	Sabiha Qasem & Ahmed Jameel	The impact of cash flows in the elements of the capital structure: An Empirical Study based on a number of international companies data	International	2009	To determine the effect of cash flows in components of the capital structure, long-term debt and ownership to provide a clear picture of the relationship between them and the degree and type of influence	Theoretical and applied method	16 firms	<ol style="list-style-type: none"> <li>1. Equity</li> <li>2. Debt</li> </ol>

No.	Author Name	Study Title	Place	year	Objectives	Methodology	Sample	Variables
<i>Foreign studies</i>								
9.	Mustafa Caglayan, Abdul Rashid	The Response of Firms 'Leverage to Risk: Evidence from UK Public versus Non- Public Manufacturing Firms	UK	2014	To investigate the direct and indirect effects of idiosyncratic and macroeconomic risk on public and non-public manufacturing firms' leverage	Panel data	120,337 firm- year observations	Risk
10.	IGBINOSA Sunday Osaretin, CHIJUKA Ify Michael	The Determinants Of Capital Structure Of Listed Firms In Nigeria	Nigeria	2014	To assess the significance of the impact of ROA on capital structure and to assess the significance of the impact of the company size on capital structure	Cross-sectional least squares regression	20 firms	1. Profitability 2. Size
11.	Fitriya Fauzi	The Determinants of Capital Structure: An Empirical Study of New Zealand-Listed Firms	New Zealand	2013	It investigates capital structure determinants of New Zealand-listed firms	Panel data	79 firms	1. Tangibility 2. NDTs 3. Profitability 4. Growth 5. Signaling
12.	Ran Shang	Determinants of capital structure in agricultural cooperatives in North Dakota.	North Dakota	2013	To identify determinants of the optimal capital structure in farm supply and grain marketing cooperatives within the state of North Dakota.	Present value of cash flow	704 observations	1. Last Debt/Last TA 2. Cash/Total Assets 3. Sales/Total Assets 4. Depreciation/TA 5. Interest Rate 6. Inflation Rate 7. Commodity Price 8. Exchange Rate 9. Input Price

No.	Author Name	Study Title	Place	year	Objectives	Methodology	Sample	Variables
13.	Doruk Ilgaz	Determinants of firms' capital structure choice, their credit ratings and the leverage-rating relation.	COM-PUSTAT	2013	The aim of this study is to agree that firms adjust their capital structure to stay in close proximity to a target leverage ratio.	Simultaneous equation system	2,585 public and private firms	<ol style="list-style-type: none"> <li>1. Market to book ratio.</li> <li>2. Profitability</li> <li>3. Tangibility</li> <li>4. size</li> </ol>
14.	Koksal Bulent and Orman Cuneyt and Oduncu Ari	Determinants of Capital Structure: Evidence from a Major Emerging Market Economy.	Turkey	2013	To investigate the capital structure of non-financial firms in a major emerging market economy, Turkey	Panel data	two seven-years 1996-2002 & 2003-2009	<ol style="list-style-type: none"> <li>1. Size</li> <li>2. Profitability</li> <li>3. Tangibility</li> <li>4. Growth</li> <li>5. Business risk</li> <li>6. Tax-related factors</li> </ol>
15.	Chinmoy Ghosh Milena Petrova Adam Wang	Determinants of Capital Structure: A Long Term Perspective	COM-PUSTAT	2012	To provide additional evidence to this growing literature by testing the persistence of the effect of profitability on capital structure	Panel data	years 1950 -1989 & 1990 – 2008	<ol style="list-style-type: none"> <li>1. Book Equity</li> <li>2. Book Debt</li> <li>3. Net Equity</li> <li>4. Net Debt</li> <li>5. Profit</li> <li>6. Loss</li> <li>7. Book Leverage</li> <li>8. Market Leverage</li> <li>9. Profitability</li> <li>10. Growth</li> <li>11. Tangibility</li> <li>12. Size</li> </ol>
16.	Akinlo, Olayinka	Determinants of capital structure: Evidence from Nigerian panel data	Nigeria	2011	To examines the determinants of capital of 66 firms listed on the Nigerian stock Exchange during the period 1999-2007	Panel data	66 firms	<ol style="list-style-type: none"> <li>1. Growth</li> <li>2. Tangibility</li> <li>3. Liquidity</li> <li>4. Profitability</li> <li>5. Size</li> <li>6. growth</li> </ol>

No.	Author Name	Study Title	Place	year	Objectives	Methodology	Sample	Variables
17.	Wafaa Sbeiti	The Determinants of Capital Structure: Evidence from the GCC Countries	GCC Countries	2010	To investigate the determinants of capital structure in the context of three GCC countries and the impact of their stock markets' development on the financing choices of firms operating in these markets	Panel data	142 firms	<ol style="list-style-type: none"> <li>1. Size</li> <li>2. Profitability</li> <li>3. Tangibility</li> <li>4. Growth</li> <li>5. Liquidity</li> <li>6. Interest Rate</li> <li>7. FMDV</li> </ol>
18.	Shumi Akhtar, Barry Oliver	The determinants of capital structure for Japanese multinational and domestic corporations	Japan	2009	To identify the determinants of capital structure for a sample of Japanese corporations	A pooled cross-sectional time series regression model	360 firms	<ol style="list-style-type: none"> <li>1. Age</li> <li>2. Agency costs</li> <li>3. risks</li> <li>4. value of assets</li> <li>5. cash flows</li> <li>6. Growth</li> <li>7. Profitability</li> <li>8. size</li> <li>9. NDTs</li> </ol>

**Table (2): Summery of the current study**

Name of study	Place	year	Objectives	Methodology	Sample	Variables
The Determinants of Capital Structure "An Empirical Study of Companies listed in Palestine Exchange (2009-2014)"	Palestine	2015	The main objectives of this study is to identify the factors that affect the Capital Structure of listed companies in Palestine Exchange, to determine the extent of harmony with the results of studies that have been affect the corporate capital structure in developed countries.	Panel data	35 firms	<ol style="list-style-type: none"> <li>1. Age</li> <li>2. Liquidity</li> <li>3. Profitability</li> <li>4. Tangibility</li> <li>5. Risk</li> <li>6. Size</li> <li>7. Growth</li> </ol>

**The Main Differences between the Previous Studies and this Current Study:**

- The current study used all PEX sectors (banking sector, industries sector, insurance sector, investing sector and services sector).
- The study of Abu Mouamer (2011) was implemented in PEX during the period (2000-2004) while the current study was implemented in the period of (2009–2014), taking into consideration that many events occurred during this period.
- The study sample was 35 firms out of 49 firms in PEX from various sectors. This is equal to 71%, while Abu Mouamer’s sample was 15 out of 29 firms which equals 51%.
- The current study used many variables and financial ratios such as: (Age, Liquidity, Profitability, Tangibility, Risk, Size, Growth) whereas previous studies did not use them together.
- The current study benefited from previous studies in constructing theoretical and practical frameworks.

# **Chapter 3**

## **Theoretical Framework**

### **3 Capital Structure**

3.1 Introduction

3.2 Overview of Palestine Exchange (PEX):

3.3 Capital Structure Definitions

3.4 Capital Structure Theories

3.5 Determinants of Capital Structure

### **3.1 Introduction**

The studies of capital structure attempt to explain the mixture of financing sources used by corporations to finance real investment. Companies use a particular combination of debt and equity and many of the sources of funding for capital structure. There are different factors that affect capital structure. Companies should try to determine the optimal or best mixture of financing. Most of the research on capital structure has focused on the proportions of debt vs equity observed on the right-hand sides of corporations' balance sheets (S. Akhtar & B. Oliver, 2009). Knowledge and most of the information about capital structure have been deduced and derived from data from developed economies that have many institutional similarities (Booth, Aivazian, Demircuc-Kunt, & Maksimovic, 2001). It is important to examine the capital structure of companies because it affects companies's real decisions about employment, production, and investment (Harris and Raviv, 1991). Although the selection of the company's capital structure is considered one of the most important strategic financial decisions , there is an open debate about the controversial setting of the optimal capital. After the seminal work of Modigliani and Miller (1958), of which there are supporters and opponents, theoretical literature developed and led to the formulation of alternative theories such as the static trade off model, pecking order theory, agency theories and others. There is empirical literature testing the validity of these theories and suggesting a number of specific factors that may affect the capital structure of firms but it has also failed to reach firm decisions (Sbeiti, 2010). The corporate capital structure literature contains many papers that examine the nature and the determinants of corporate capital structure. It identifies specific factors that may affect a firm's optimal capital structure. Some papers examined the determinants of capital structure including: (Abu Mouamer, 2011; Ahi, 2013; AL-Shubiri, 2010; Bülent et al., 2013; Caglayan & Rashid, 2014; Emad & Alokdeh, 2011; Ghosh et al., 2012; HOSIN, 2012; Ilgaz, 2013; Khrawish, 2010; Kilani et al., 2011; Masoud, 2014; Mosa, 2012; Mouamer, 2013; Osaretin & Michael, 2014; Rajan & Zingales, 1995; Ramadan & Alokdeh, 2011; Rurangangabo, 2013; Song, 2005; Titman & Wessels, 1988; Walliman, 2005; Zeitun, 2014). In this chapter the identities factors that have been selected based on their importance and frequency and which have been tested in previous studies in other countries, many financial markets and also in Palestine Exchange.

### **3.2 Overview of Palestine Exchange (PEX):**

The Palestine Exchange (PEX) was established in 1995 to promote investment in Palestine as a private shareholding company and transformed into a public shareholding company in February 2010 responding to principles of transparency and good governance. The PEX was fully automated upon establishment- the first fully-automated stock exchange in the Arab world and the only Arab exchange that is publicly traded and fully owned by the private sector. The PEX operates under the supervision of the Palestinian Capital Market Authority.

The PEX strives to provide an enabling environment for trading that is characterized by equity ,transparency and competence, serving and maintaining the interest of investors. The PEX is very appealing in terms of market capitalization, it is financially sound, and well capitalized to maintain a steady business in a volatile world, as it passed with the minimum level of impact of the global financial crisis compared to other MENA Exchanges.

There are 49 listed companies on PEX as of 31/03/2015 with market capitalization of about \$2,993 billion across five main economic sectors; banking and financial services, insurance, investments, industry, and services. Most of the listed companies are profitable and trade in Jordanian Dinar, while others trade in US Dollars (web).

### **3.3 Capital Structure Definitions**

Capital structure is defined as the specific mix of debt and equity a firm uses to finance its operations. To explain the capital structure decisions we use capital structure theories. They are based on asymmetric information, tax benefits associated with debt use, bankruptcy cost and agency cost (Abor, 2008). (Myers & Majluf, 1984) expressed that the concept of optimal capital structure is based on the notion of asymmetric information. (AL-Shubiri, 2010) discusses operational definitions of capital structure which include: capital structure, leverage, ownership structure and behavior finance. Rajan and Zingales (1995) study provides an overview of the different definitions of leverage. Apart from identifying the determinants of capital structure an important issue is defining what is meant by capital structure or leverage. (Doukas & Pantzalis, 2003) and (Mittoo & Zhang, 2005) define leverage as long-term debt scaled by total debt plus market value of equity.

### **3.4 Capital Structure Theories:**

This part of the theoretical framework chapter will review the key theories of capital structure. These theories have emerged to give an idea of the precise combination of debt and equity that the company should be adapted to so as to achieve maximum capital mix (Osaretin & Michael, 2014). Theories funding structure are one of the largest fields that were discussed in corporate finance studies. The modern theory of the structure of funding began when (Modigliani & Miller, 1958) wrote their article (Cost of capital, corporate finance and the theory of investment) and demonstrated that the choice between debt financing and property, and also the company's value has nothing to do with the structure of funding and assumed that capital markets are ideal. Since (Modigliani & Miller, 1958), articles developed a theoretical framework to explain the corporate finance structure choices. Modern theories for the financing of companies are trying to find and improve the explanations for the behavior of investors and rely on traditional factors interpreting the structure of funding such as tax savings and the risk of bankruptcy. Dealing with other theories of information asymmetry between owners and management as an interpreter for the funding structure and theories that explain the increase in the debt ratio is a negative signal for the development of the company, according to the interpretation of investors (Gazi & Ali 2011). Capital structure theory is closely linked to the company's cost of capital. Capital structure is a combination of long-term sources of funds used by the company. Maximizing the market value of the company is the main objective of capital structure decisions of the company through an appropriate mix of long-term sources of funds. This combination, called optimal capital structure, reduces the overall cost of capital of the company. However, there are arguments about whether the optimal capital structure already exists. The arguments focused on whether a firm can, in fact, impact assessment and cost of capital by changing the mix of funds used (Khrawish, 2010).

#### **Many theories provided interpretations for capital structure:**

##### **3.4.1 Traditional view:**

(Barges, 1962) sees that the first is the traditional view which states that "*debt funds are cheaper than equity funds*". The implications of this is to say that the cost of debt in addition to increasing the cost of capital together will be less than the cost of equity that existed on equity before debt financing. However, Modigliani and Miller (MM), 1958 do not agree with the traditional view. They argue that in a perfect capital market without taxes

and transaction costs, the market value of the company and the cost of capital remains constant despite changes in its capital structure. This implies that the financial instruments issued by the firm do not affect a firm's productivity and value (Akinlo, 2011).

### **3.4.2 Modigliani and Miller Theory:**

Studies have shown that the theory of (Modigliani & Miller, 1958) on capital structure is the first theory that has been successful. and most critical. Despite the many criticisms that it has faced, it is well known that this theory has opened the door for many discussions on the below-mentioned published studies and research. This theory was subject to specific conditions. The theory will be best practiced under a flawless capital market and zero business cost and tax. Companies do their finances based on two claims, risk free debt and risky equity (Ahi, 2013). This theory asserts that the value of a firm does not depend on its capital structure and contradicts the beliefs that there is an optimal capital structure that may maximize the company's value. It suggests that a company's value is determined by optimal investments and that a company has a specific set of expected cash flows. The division of the cash flows among investors is made when the company selects a specific amount of debt and equity to finance its assets (Osaretin & Michael, 2014). (Modigliani & Miller, 1963) revised their earlier situation by incorporating tax benefits as determinants of the capital structure of firms. When there is a tax advantage resulting from the deductibility of interest paid on the debt, investors receive these interest payments as income. This interest income is also taxable on their personal account, and the personal income tax effect is negative (Abor, 2008). (Miller, 1977) determines three tax rates that determine the total value of the firm. These are:

- (1) The corporate tax rate.
- (2) The tax rate imposed on the income of the dividends.
- (3) The tax rate imposed on the income of interest inflows.

According to (Miller, 1977), the value of the firm depends on the relative level of each tax rate, compared with the other two. Bankruptcy costs are the costs directly incurred when the perceived probability that the firm will default on financing is greater than zero. The bankruptcy probability increases with debt level since it increases the fear that the company might not be able to generate profits to pay back the interest and the loans (Abu Mouamer, 2011). In Modigliani and Miller suggestions, it is contended that borrowing money and raising funds through debt in a weak market is very costly and risky and generates a desire

in customers to pay a higher price for the shares of the firms. Therefore, companies have to finance themselves with debt. Another thing is that the overall costs of capital of firms do not depend on their capital structure. With regard to taxes, it is noted that interest on debt is tax-deductible, and weighted average cost of capital is calculated after tax interest rate. As a result, by understanding the benefits of debt, firms may be more encouraged to use debt in their capital structure (Ahi, 2013).

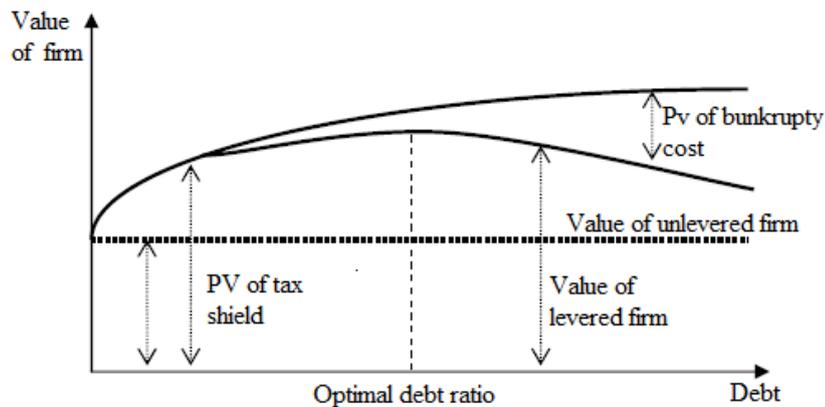
### **Three Conflicting Theories Appeared as a Result:**

#### **3.4.3 Trade-off Theory:**

This theory emerged as a result of discussion on and criticism of the theory of (Modigliani and Miller, 1958). It is based on the theory of the tax shield, the theory of bankruptcy costs and the theory of the agency costs in explaining the difference in the decision to finance the company's activities (Emad & Alokdeh, 2011). The trade-off theory suggests that firms balance the benefits and costs of debt (Baker & Martin, 2011). We can take advantage of the tax deductibility of interest payments and increase investment and projects that increase the value of the company but the main drawback of the theory is that if you do not invest the money wisely, this can lead to the closure of the company. Also, this may lead to the need for additional funding, Thus, according to this theory, the capital structure will be represented by a specific debt ratio that minimizes the costs of debt and maximizes its benefits (Osaretin & Michael, 2014). The target is to know the advantages and disadvantages of raising capital through debt or equity together, not just to criticize. Often we do not find firms that use one option (debt/equity) in their capital structure. The question here is how a firm which wants to increase its value can construct its capital structure. (Ahi, 2013).

Figure 1 clarifies the main idea of the trade off theory. We can see that debt has advantages and disadvantages for corporations: tax savings of debt have advantages whereas disadvantages are the increasing probability of bankruptcy of a company with higher debt and the increasing cost of failure. Optimal capital structure exists and is determined by the achievement of balance between tax benefits and costs of debt, considering other constant variables.

**Figure 2:static Trade off theory of capital structure**



Source: (Myers, 1984)

### **3.4.4 Pecking Order theory**

The pecking order theory of capital structure is among the most influential theories of corporate leverage. This theory is inherent to the concept of asymmetric information that corporate managers learn more about their company's prospects and the risks and value of the external investors (Akinlo, 2011). It explains the dissonance in the trade-off theory which fails to explain why some companies with high profitability level display little dependence on debt. Such companies pay large income taxes instead of saving these large amounts by using debt without any risk (Chandra, 2008). The theory suggests that companies tend to follow the pecking order of financing. In order, internal finance or retained earnings come first, followed by debt finance and then by external equity finance (Myers & Majluf, 1984). This theory hypothesizes that firms with high earnings are expected to use less debt capital than others which do not generate high earnings (Abu Mouamer, 2011). Firms that follow pecking order prefer to arrange finance as follows: internal funds, debt and finally equity financing. However, (Frank & Goyal, 2003) obtained different empirical evidence that contradicts the pecking order theory as net equity issues are related to the financing deficit more than net debt issues. They observed that large companies display some terms of pecking order behavior, but these observations are not confirmed when the conventional leverage factors are included.

### 3.4.5 Agency Costs Based Theory:

The agency theory re-establishes the importance of incentives and self-interest in organizational thinking. It reminds us that much of organizational life, whether we like it or not, is based on self-interest. Agency theory also emphasizes the importance of a common problem structure across research topics (Eisenhardt, 1989). This theory suggests that firms choose their optimal capital structure that can minimize the agency costs, which consist of costs in debt and equity. The costs which are linked to the equity issue are: sum of the monitoring expenditure by the principal, bonding costs by the agent, and a residual loss (Jensen & Meckling, 1976). In addition, the debt issue causes the owner-managers' incentive to increase. As a result, they invest in more risky projects which have higher returns to the owner-manager even though these incentives can cause a more chance of failure (Grossman & Hart, 1982).

**Table (3): Determinants of capital structure according to this theories:**

Determinants	Trade-off Model	Pecking Order Theory	Agency theory
Liquidity	-	-	-
Growth Opportunities	-	+	-
Profitability	+	-	+
Tangibility	+	+	-
Size	+	-	-

(+) Positive

(-) Negative

**Previous studies on capital structure gave other theories such as:**

### 3.4.6 Signaling effect:

Signaling effect was proposed by Ross (1977) based on asymmetric information. This theory states that investors who believe in higher levels of debt will imply higher quality and higher future cash flows. This means that lower quality firms with higher expected costs of bankruptcy at any level of debt cannot follow the steps of higher quality firms by incurring more debt (Akinlo, 2011).

### 3.4.7 Market Timing Theory

This theory is based on the efforts made by the administration in choosing the right source of funding, which must be consistent with the timing of the need for financing. The conclusion of this theory is that the company is depending on the property funds to finance

the needs of cash in times when stock prices are a resident of the true value or higher than their real value, while the company is resorting to borrowing to finance its activities in cases where shares are resident company valued at less than their true value (Emad & Alokdeh, 2011).

## **3.5 Determinants of Capital Structure**

### **3.5.1 Age**

The age of a firm is a standard measure of reputation in capital structure models. Banks and bondholders tend to know more about firms and entrepreneurs before granting a loan and evaluating their credit worthiness. When the managers are concerned with the reputation of the company they tend to act wisely and avoid high-risk projects in favor of safer and more profitable projects (Diamond, 1989). Age is considered as a main determinant (Abu Mouamer, 2011). Petersen and Rajan (1994) found that older firms should have higher debt ratios since they should be higher quality firms. (Abor, 2008; Mosa, 2012) agreed that age is positively related to capital structure, (S. Akhtar & B. Oliver, 2009) found that age is a significant determinant of capital structure for domestic corporations but not multinational corporations. On the other hand, (Abu Mouamer, 2011) found no significant relationship between long term debt and short term debt on the one hand and age on the other hand.

### **3.5.2 Liquidity**

Liquidity ratios have both a positive and a negative effect on the capital structure decision, and so the net effect is unknown (Abu Mouamer, 2011). liquidity is defined as the ratio of current assets to current liabilities. This ratio shows the ability of the firm to cover its short-term financial commitments and it measures the liquidity of the firm. The trade-off theory believes that a positive relationship exists between leverage and liquidity because a higher liquidity ratio can support a relatively higher debt ratio due to greater ability of a firm to satisfy short-term contractual obligations on time (Masoud, 2014). However, the pecking order theory has a contrary view. This theory believes a negative relationship exists between liquidity and leverage because firms with enough liquidity may use internally available funds to finance investment (Akinlo, 2011). Some empirical studies include Deesomsak et al. (2004), Mazur (2007) and Viviani (2008). Liquidity (LIQ) is measured as number of days account receivable plus the number of days of inventory minus the number of days account payable i.e. cash conversion cycle (Akinlo, 2011).

### **3.5.3 Profitability**

There are conflicting financial theoretical predictions on the effects of profitability on capital structure (Gazi & Ali 2011). The trade-off theory is generally interpreted as predicting a positive relation between firm profitability and leverage. This is because

default risk is lower and interest tax shields of debt are more valuable for profitable firms. However, Frank and Goyal (2008) argue that the trade-off theory can also be viewed as predicting an inverse relation between leverage and profitability. This would be true, for instance, if profitability is a better proxy for growth opportunities than market-to-book ratios. Moreover, dynamic trade-off models generally predict a negative relationship between leverage and profitability (see, for example, Fischer et al., 1989, and Hennessy and Whited, 2005).

Thus, the trade-off prediction for profitability is ambiguous. Pecking order theory, on the other hand, predicts a negative relation between leverage and profitability, as profitable firms can use earnings to fund investment opportunities and hence have less need for external debt. Empirical tests find the relation to be robustly negative.

The Return on asset (ROA) is used as a measure of profitability (Sbeiti, 2010). Profitability is defined as the ratio of earnings before interest, tax (EBIT) and depreciation to total assets (Huang & Song, 2004). This is the most common measure in studies that tested the factors affecting capital structure. The importance of this element of the company's profitability strongly affects the financial risk to the company. The greater the profitability of the company, the less the possibility of failure and the more the ability to borrow and achieve tax savings. On the other hand, the greater the profitability of the company, the greater it's ability to finance its activities and fund expansion of its profits and thus rely less on external sources of funding (Emad & Alokdeh, 2011). According to Titman and Wessels (1988) and De Jong et al. (2008), among others, we define profitability as operating income over total assets (Bülent et al., 2013).

### **3.5.4 Tangibility**

Tangibility is defined as the ratio of total fixed assets to total assets. Titman and Wessels (1988), Rajan & Zingales (1995), Fama & French (2000) argue that the ratio of total fixed assets to total assets (tangibility) should be an important factor for capital structure. The static trade-off theory predicts a positive relation between leverage and tangibility. This is because tangible assets are easier to collateralize and they suffer a smaller loss of value when firms go into distress (Bülent et al., 2013).

The pecking order theory, on the other hand, is generally interpreted as predicting a negative relation between leverage and tangibility, since the low information asymmetry associated with tangible assets makes the issuance of equity less costly (Harris & Raviv, 1991). Empirical studies generally find a positive correlation between tangibility and

leverage. It exists in empirical studies discovered by, Titman & Wessels (1988), Harris & Raviv (1991), Rajan & Zingales (1995), Deesomsak *et al.* (2004), Akhtar & Oliver (2009) among others. A few empirical studies such as (Masoud, 2014), (Abu Mouamer, 2011), This study defines tangibility as the ratio of net fixed assets to total assets.

### **3.5.5 Risk**

The level of risk is one of the key determinants of a firm's capital structure. Business risk can be expressed in standard deviation returns to the company or the standard deviation of the annual profits of the company or the standard deviation of the company's sales (Ramadan & Alokdeh, 2011). According to (Črnigoj & Mramor, 2006; Ramadan & Alokdeh, 2011) risk can be expressed in standard deviation of return on assets. The tax shelter-bankruptcy cost theory of capital structure determines a firm's optimal leverage as a function of business risk, where it is seen to increase the volatility of the company's revenue and lack of stability as an increase in the risk of company failure on the one hand or a reduction in its ability to meet its obligations to lenders on the other hand. This reduces the efficiency of the company in obtaining loans and thus lowers the proportion of loans in the capital structure (Castanias, 1983). Both the static trade-off and pecking order theories predict a negative relationship between leverage and business risk. A number of studies have indicated a negative relationship between risk and debt ratio ((Ramadan & Alokdeh, 2011; Titman & Wessels, 1988). Other studies suggest a positive relationship (Michaelas, Chittenden, & Poutziouris, 1999). (Al-Shubiri, 2010) found statistically insignificant coefficients associated between business risk. (Bülent et al., 2013) found that the coefficient of business risk is significant only in the leverage equations for mature firms, suggesting that leverage decisions of young firms are not affected by variations in business risk.

### **3.5.6 Size**

In general the firm size is accepted in literature as an important factor that affects the firm's capital structure. The firm's size has been suggested as a determinant of a firm's capital structure. It is measured by the natural logarithm of sales, assets, and number of employees (Abu Mouamer, 2011). Large firms tend to be more diversified which reduces their exposure to bankruptcy. This indicates the existence of a positive relationship between the firm size and debt capacity. So larger firms with less asymmetric information problems should tend to have more equity than debt and thus have lower leverage. It may be able to take advantage of economies of scale in issuing long-term debt, and may even have

bargaining power over creditors; thus, it will be able to borrow at lower cost. Smaller firms may find it more costly to resolve information asymmetries with lenders, thus, they may present lower debt ratios (Titman & Wessels, 1988). (Ahi, 2013) confirmed in his study that cost of debt will be reduced when firms' sizes are bigger and they may face lower levels of asymmetry in information. (Abu Mouamer, 2011) sees that in most of the researches there is agreement between theories though their explanations differ in that size has a positive effect on the firm's capital structure. In his study he found that size is positively related to LTD and negatively related to STD. Additionally, many empirical studies including (AL-Shubiri, 2010; Faris, 2010; Fauzi et al., 2013; Khrawish, 2010; Masoud, 2014; Mosa, 2012; Ramadan & Alokdeh, 2011; Zeitun, 2014) find that leverage is positively related to company size. On the other hand, (Osaretin & Michael, 2014) find that company size is an insignificant determinant of capital structure of the Nigerian companies.

### **3.5.7 Growth Opportunities (Market-to-book ratio)**

Growth rate can be measured by several indicators: the growth rate in the number of employees or the growth rate in sales of the company or the percentage growth in total assets or the proportion of capital expenditure to total assets ratio or research and development to the proportion of total sales or expenses book value to market value of the company's capital (Ramadan & Alokdeh, 2011). High future growth opportunities give firms the ability to use more equity financing because a highly leveraged company may ignore profitable investment opportunities when it expects by enterprise new projects the value goes to the firm's existing debt holders. This suggests a negative relationship between leverage and growth (Myers, 1977). Static trade-off theory predicts a negative relation between leverage and firm growth. Intangibility of the assets of growth of firms mean that they lose more of their value in cases of financial hardship. In contrast, the pecking order theory predicts a positive relation between leverage and growth. This is because internal funds are unlikely to be sufficient to support investment opportunities for high growth firms, which increases their demand for external debt (Bülent et al., 2013). There is a difference in the results of studies on the impact of growth. In some studies the capital structure led to a positive relationship and in other studies it showed a negative correlation (Al-Shubiri, 2010). (Abu Mouamer, 2011; Bülent et al., 2013; Ramadan & Alokdeh, 2011) show a negative relationship. (Akinlo, 2011) results show that "there is a negative relationship between growth opportunities and leverage in the three models but this is only significant in fixed and random effects models.

## **Chapter 4**

# **The Study Methodology**

## 4 The Study Methodology

### 4.1 Introduction

This chapter determines the purpose of this study, the study design that the researcher used, what is the population and sample of the study, the optimum methodology order to achieve results, investigative techniques, data collections and bias.

### 4.2 Purpose

The purpose of this study is identify and examine the factors that affect the capital structure of listed companies in PEX. And to analyze the main determinants that influence financing decisions.

### 4.3 Study Design

This research is classified as an analytical descriptive approach. Thus, the research was achieved using the quantitative approach and will be studying and analyzing the financial statements of the companies under study for a period of six years to find the relationship between the dependent variables (liquidity, growth opportunities, profitability, tangibility, size, age and risk). During the six years, will also rely on official of the company listed on the Palestine Exchange financial reporting the study Sample basically, and that the reality of the annual financial statements (balance sheet and income statement).

### 4.4 Study Population:

The study population consists of companies listed in Palestine Exchange. There are 49 listed companies on PEX as of 01/12/2014 across five main economic sectors; banking and financial services, insurance, investments, industry, and services. Most of the listed companies are profitable and trade in Jordanian Dinar, while others trade in US Dollars (web).

**Table (4): Describe the study population (Sectors)**

<b>Sector Name</b>	<b>No. Company in the sector</b>
Investment	12
Service	12
Industry	9
Insurance	7
Banking	9
<b>Totals</b>	<b>49</b>

#### 4.5 Study Sample:

The Sample in this study consists of 35 companies from 49 companies. The reason for this sample lies in the availability of the necessary financial data for the study period from 2009 to 2014. Accordingly, it has been the exception and not the 14 supplement companies.

**Table (5): Describe the study sample (sectors)**

<b>Sector Name</b>	<b>No. Company in the sector</b>	<b>Company Sample</b>
Investment	12	7
Service	12	8
Industry	9	9
Insurance	7	4
Banking	9	7
<b>Totals</b>	<b>49</b>	<b>35</b>

#### 4.6 Investigative Techniques

Panel data using regression models method can be used in this study. Panel data involves the pooling of observations on a cross-section of units over several time periods. A panel data approach is more useful than either cross-section or time series data alone. One advantage of using the panel data set is that, because of the several data points, degrees of freedom are increased and collinearity among the explanatory variables is reduced, thus the efficiency of economic estimates is improved (Abor, 2008).

#### 4.7 Data Collection

The task of data collection begins after a research problem has been defined and a research plan has been chalked out. While deciding about the method of data collection to be used for the study, the researcher should keep in mind two types of data, primary and secondary. The primary data are those which are collected afresh and for the first time, and thus happen to be original in character. The secondary data, on the other hand, are those which have already been collected by someone else and which have already been passed through the statistical process (Kothari, 2004).

#### 4.8 Primary sources:

- Financial reports.

#### 4.9 Secondary sources:

- Books and scientific references dealing with the subject of the study.
- Researches in specialized journals and scientific journals.
- Master and doctoral theses relevant to the subject of study.

#### 4.10 Data Analysis Plan

**First:** Financial Analysis: The financial statements will be analyzed using financial ratios that serve the purpose of the study such as: Liquidity, Growth Opportunities, Profitability, Tangibility, Size, Age and Risk, where these ratios are used in the analysis of the data and in obtaining the results that serve the search.

Variables are measured as follow: Liquidity is measured as the ratio of current assets over current liability, growth opportunities are measured as market to book ratios, profitability is measured as the ratio of earnings before interest, tax over total assets, tangibility is measured as the ratio of total fixed assets over total assets, firm size is measured as the log of total assets, refers to the age of the firm and is expressed in the number of years, risk is measured as sales over operating income, total debt is the ratio of total debt to total assets. Total debt is both long term debt and short term debt.

Short term debt is the ratio of short term debt to total debt. Short term debt includes all types of debt that mature in less than one year. Long term debt is the ratio of long term debt to total debt. Long term debt includes all types of debt that mature beyond one year)P. Akhtar & B. Oliver, 2009; Deesomsak, Paudyal, & Pescetto, 2004; Myers, 1977; Rajan & Zingales, 1995; Titman & Wessels, 1988).

**Table (6) : Abstract of Measures of Capital Structure Determinants.**

Determinants	Symbol	Measures
Liquidity	LQ	Current assets/Current liability
Growth Opportunities	G	Market / Book ratio (M/B)
Profitability	PROF	EBIT/ Total Assets
Tangibility	TANG	Fixed assets/Total assets
Size	SIZE	Ln(Total Assets)
Age	AGE	Date of Birth
Risk	RISK	Sales/Operating Income
Short Term Debt	STD	STD/TA
Long Term Debt	LTD	LTD/TA
Total Debt	TD	TD/TA

**Second:** The researcher used panel data statistical techniques because the data have 5 sectors, namely: (Banks, Industries, Insurance, Investment and Services) over the

period (2009-2014). The researcher performed the data analysis by using E-Views

7.0. The researcher would utilize the following statistical tools:

- 1) Descriptive statistics (Minimum, maximum, mean and standard deviation).
- 2) Regression models.

## **Chapter 5**

### **Data Analysis & Test the Hypothesis**

## 5.1 Introduction

The nature of the study requires conducting financial analysis and identification data in tables which can be observed and requires making statistical analysis. This chapter will show the results of the analysis of the financial statements of the firms under study in order to determine the extent of the correlation between the dependent variable capital structure (LTD, STD, TD) with the independent variables (Liquidity, Growth Opportunities, Profitability, Tangibility, Size, Age and Risk).

Three models are formulated to state the hypothesized relationship:

$$STD = \alpha + \beta_1 AGE + \beta_2 LIQUIDITY + \beta_3 PROFITABILITY + \beta_4 TANGIBILITY + \beta_5 RISK + \beta_6 SIZE + \beta_7 GROWTH$$

$$LTD = \alpha + \beta_1 AGE + \beta_2 LIQUIDITY + \beta_3 PROFITABILITY + \beta_4 TANGIBILITY + \beta_5 RISK + \beta_6 SIZE + \beta_7 GROWTH$$

$$TD = \alpha + \beta_1 AGE + \beta_2 LIQUIDITY + \beta_3 PROFITABILITY + \beta_4 TANGIBILITY + \beta_5 RISK + \beta_6 SIZE + \beta_7 GROWTH$$

**Where:**

- STD** : is the ratio of STD to TD, STD includes all types of debt that mature in less than one year.
- LTD** : is the ratio of LTD to TD, LTD includes all types of debt that mature beyond one year.
- TD** : is the ratio of TD to TA, TD is both LTD and STD.
- $\beta s$**  : are the coefficients for every independent variable
- Age** : Date of Birth
- Liquidity** : is defined as a ratio of current assets to current liability
- Profitability** : Earnings before interest and tax to total assets
- Tangibility** : Fixed assets to Total assets
- Risk** : Sales to operating income.
- Size** : refers to the size of the firm and is measured by the natural logarithm of assets.
- Growth** : Market to Book ratio (M/B).

## 5.2 Descriptive analysis for dependent variables capital structure (LTD, STD, TD)

Table (7) shows the Descriptive statistics for Banking sector, Industries sector, Insurance sector, Investing sector and Services sector: The maximum ratio were STD in services sector 1.279, STD ranges in services sector from 0.006 to 1.279 with mean of 0.373 and standard deviation 0.283, The minimum ratio were LTD also in services sector -0.334.

Insurance sector have maximum ratio in LTD 0.577, and TD 1.057, In Insurance sector LTD ranges from 0 to 0.557 with mean of 0.061 and standard deviation 0.108, TD ranges from 0.619 to 1.057 with mean of 0.75 and standard deviation 0.135.

Industries sector have minimum ratio in STD 0.002, and TD 0.003, in industries sector STD ranges from 0.002 to 0.586 with mean of 0.213 and standard deviation 0.152, TD ranges from 0.003 to 0.648 with mean of 0.26 and standard deviation 0.175.

**Table (7) : Descriptive analysis for dependent variables capital structure (LTD, STD, TD)**

Sectors		Descriptive analysis			
		Mean	Maximum	Minimum	Std. Deviation
BANKING SECTOR	STD	0.662	1.074	0.245	0.242
	LTD	0.0363	0.1757	-0.0626	0.0364
	TD	0.6713	0.8946	0.2758	0.2499
INDUSTRIES SECTOR	STD	0.213	0.586	0.002	0.152
	LTD	0.047	0.252	-0.136	0.057
	TD	0.26	0.648	0.003	0.175
INSURANCE SECTOR	STD	0.688	0.979	0.156	0.172
	LTD	0.061	0.557	0	0.108
	TD	0.75	1.057	0.619	0.135
INVESTING SECTOR	STD	0.122	0.371	0.006	0.105
	LTD	0.068	0.229	0.002	0.069
	TD	0.19	0.399	0.009	0.145
SERVICES SECTOR	STD	0.373	1.279	0.006	0.283
	LTD	0.089	0.337	-0.334	0.115
	TD	0.388	0.78	0.013	0.186

**Descriptive analysis for independent variables (Age, Liquidity, Profitability, Tangibility, Risk, Size and Growth ).**

**Descriptive statistics for Banking sector**

Table (8) shows the Descriptive statistics for Banking sector, Risk have maximum ratio 98.7 in banking sector, Risk ranges from -5.63 to 98.7 with mean of 7.29 and standard deviation 16, Profitability have minimum ratio -0.01, PROF ranges from -0.01 to 0.03 with mean 0.01 and standard deviation 0.01

**Table (8): Descriptive analysis for independent variables (Age, Liquidity, Profitability, Tangibility, Risk, Size and Growth ) - BANKING SECTOR**

Descriptive analysis	BANKING SECTOR						
	Age	LQ	PROF	TANG	Risk	Size	Growth
Mean	20.6	1.72	0.01	0.08	7.29	19.8	0.96
Maximum	54	3.9	0.03	0.15	98.7	21.6	2.21
Minimum	4	0.84	-0.01	0.02	-5.63	18.7	0.6
Std. Deviation	13.5	0.92	0.01	0.03	16	0.74	0.41

**Descriptive statistics for Industries sector**

Table (9) shows the Descriptive statistics for Industries sector, Risk have maximum and minimum ratios, ranges from -229.5 to 196.22 with mean of 10.64 and standard deviation 52.34.

**Table (9): Descriptive analysis for independent variables (Age, Liquidity, Profitability, Tangibility, Risk, Size and Growth ) - INDUSTRIES SECTOR**

Descriptive analysis	INDUSTRIES SECTOR						
	Age	LQ	PROF	TANG	Risk	Size	Growth
Mean	30.5	5.37	0.07	0.54	10.64	16.9	1.57
Maximum	61	110.14	0.26	0.92	196.22	22.5	4.25
Minimum	10	0.26	-0.18	0.19	-229.5	15.1	0.59
Std. Deviation	15.8	14.73	0.08	0.17	52.34	1.23	0.77

### Descriptive statistics for Insurance sector

Table (10) shows the Descriptive statistics for Insurance sector, Risk have maximum and minimum ratios, ranges from 39.05 to -12.6 with mean of 5.69 and standard deviation 10.58.

**Table (10) : Descriptive analysis for independent variables (Age, Liquidity, Profitability, Tangibility, Risk, Size and Growth ) - INSURANCE SECTOR**

Descriptive analysis	INSURANCE SECTOR						
	Age	LQ	PROF	TANG	Risk	Size	Growth
Mean	18.5	0.92	0.03	0.45	5.69	17.7	0.72
Maximum	22	3.93	0.1	0.64	39.05	18.4	2.43
Minimum	15	0.37	-0.1	0.24	-12.6	16.4	-5.4
Std. Deviation	2.02	0.68	0.05	0.12	10.58	0.62	1.77

### Descriptive statistics for Investing sector

Table (11) shows the Descriptive statistics for Investing sector, Liquidity have maximum ratio 74.26 in investing sector, LQ ranges from 0.23 to 74.26 with mean of 10.19 and standard deviation 10.19, Risk have minimum ratio -7.87, Risk ranges from -7.87 to 36 with mean 4.31. and standard deviation 6.97

**Table (11): Descriptive analysis for independent variables (Age, Liquidity, Profitability, Tangibility, Risk, Size and Growth ) - INVESTING SECTOR**

Descriptive analysis	INVESTING SECTOR						
	Age	LQ	PROF	TANG	Risk	Size	Growth
Mean	21.1	10.19	0.03	0.76	4.31	16.6	1.07
Maximum	61	74.26	0.11	0.99	36	19	2.74
Minimum	1	0.23	-0.11	0.55	-7.87	13.3	0.34
Std. Deviation	16.3	17.45	0.04	0.13	6.97	1.68	0.65

### Descriptive statistics for Services sector

Table (12) shows the Descriptive statistics for Services sector, Risk have maximum and minimum ratios, ranges from -1015.1 to 473.72 with mean of 5.69 and standard deviation 10.58.

**Table (12) : Descriptive analysis for independent variables (Age, Liquidity, Profitability, Tangibility, Risk, Size and Growth ) - SERVICES SECTOR**

Descriptive analysis	SERVICES SECTOR						
	Age	LQ	PROF	TANG	Risk	Size	Growth
Mean	12.5	2.01	0	0.61	-18.02	17.1	1.2
Maximum	24	25.09	0.18	0.98	473.72	20.8	2.95
Minimum	1	0.15	-0.31	0.16	-1015.1	14.3	0.24
Std. Deviation	5.98	3.96	0.11	0.26	170.31	1.71	0.59

## 5.3 Building Regression Models for the data

### 5.3.1 First: BANKING SECTOR

#### 5.3.1.1 Regression Model for STD:

Table (13) shows the ANOVA result, regression coefficients and their P-values (Sig.).

- The Analysis of Variance for the regression model shows that  $F=70.681$ , P-value (Sig.) = 0.000, so there is a significant relationship between the dependent variable STD and all of the independent variables AGE, LIQUIDITY, PROFITABILITY, TANGIBILITY, RISK, SIZE and GROWTH.
- The multiple regression analysis shows that, the adjusted coefficient of determination, R-Square = 0.957%. This means 0.957% of the variability in dependent variable STD is explained by all of the independent variables together, AGE, LIQUIDITY, PROFITABILITY, TANGIBILITY, RISK, SIZE and GROWTH.
- For the variable " AGE ", the t-test = -0.989056, the P-value (Sig.) = 0.3311, which is greater than 0.05, hence this variable is statistically insignificant. Since the sign of the test is negative, then there is insignificant negative effect of the variable AGE on STD.
- For the variable " LIQUIDITY ", the t-test = -5.191878, the P-value (Sig.) = 0.0000, which is smaller than 0.05, hence this variable is statistically significant. Since the sign of the test is negative, then there is negative effect of the variable LIQUIDITY on STD.
- For the variable " PROFITABILITY ", the t-test = -1.288042, the P-value (Sig.) = 0.2083, which is greater than 0.05, hence this variable is statistically insignificant. Since the sign of the test is negative, then there is insignificant negative effect of the variable PROFITABILITY on STD.
- For the variable " TANGIBILITY ", the t-test = 0.004012, the P-value (Sig.) = 0.9968, which is greater than 0.05, hence this variable is statistically insignificant. Since the sign of the test is negative, then there is insignificant negative effect of the variable TANGIBILITY on STD.
- For the variable " RISK ", the t-test = 0.668541, the P-value (Sig.) = 0.5093, which is greater than 0.05, hence this variable is statistically insignificant. Since the sign of the test is positive, then there is insignificant positive effect of the variable RISK on STD.

- For the variable " SIZE ", the t-test =1.156935, the P-value (Sig.) =0.2571, which is greater than 0.05, hence this variable is statistically insignificant. Since the sign of the test is positive, then there is insignificant positive effect of the variable SIZE on STD.
- For the variable " GROWTH ", the t-test =-1.318166, the P-value (Sig.) =0.1981, which is greater than 0.05, hence this variable is statistically insignificant. Since the sign of the test is negative, then there is insignificant negative effect of the variable GROWTH on STD.
- In addition, based on the P-value (Sig.), the most significant independent variable is LIQUIDITY, then GROWTH, then PROFITABILITY, then SIZE , then AGE , then RISK and TANGIBILITY.

**The regression equation is:**

$$STD = -0.038 - 0.012 * (AGE) - 0.220 * (LIQUIDITY) - 2.622 * (PROFITABILITY) + 0.003 * (TANGIBILITY) + 0.000 * (RISK) + 0.073 * (SIZE) - 0.101 * (GROWTH).$$

**Table (13): The Regression Analysis: STD - BANKING SECTOR**

Variable	Coefficient	T-Statistic	Prob.
Constant	-0.038180	-0.038098	0.9699
AGE	-0.011862	-0.989056	0.3311
LIQUIDITY	-0.220135	-5.191878	0.0000*
PROFITABILITY	-2.621845	-1.288042	0.2083
TANGIBILITY	0.002821	0.004012	0.9968
RISK	0.000430	0.668541	0.5093
SIZE	0.072954	1.156935	0.2571
GROWTH	-0.101097	-1.318166	0.1981
F= 70.681 P-value (Sig.) = 0.000 R-Square = 0.957			

\* The variable is statistically significant at 0.05 level

### 5.3.1.2 Regression Model for LTD:

Table (14) shows the ANOVA result, regression coefficients and their P-values (Sig.).

- The Analysis of Variance for the regression model shows that  $F=3.749$ , P-value (Sig.) = 0.003, so there is a significant relationship between the dependent variable LTD and all of the independent variables AGE, LIQUIDITY, PROFITABILITY, TANGIBILITY, RISK, SIZE and GROWTH.
- The multiple regression analysis shows that, the adjusted coefficient of determination, R-Square = 0.485%. This means 0.485 % of the variability in dependent variable LTD is explained by all of the independent variables together, AGE, LIQUIDITY, PROFITABILITY, TANGIBILITY, RISK, SIZE and GROWTH.
- For the variable " AGE ", the t-test = -0.711569, the P-value (Sig.) = 0.4839, which is greater than 0.05, hence this variable is statistically insignificant. Since the sign of the test is negative, then there is insignificant negative effect of the variable AGE on LTD.
- For the variable " LIQUIDITY ", the t-test = 4.231092, the P-value (Sig.) = 0.0003, which is smaller than 0.05, hence this variable is statistically significant. Since the sign of the test is positive, then there is positive effect of the variable LIQUIDITY on LTD.
- For the variable " PROFITABILITY ", the t-test = 1.811662, the P-value (Sig.) = 0.0421, which is smaller than 0.05, hence this variable is statistically significant. Since the sign of the test is positive, then there is positive effect of the variable PROFITABILITY on LTD.
- For the variable " TANGIBILITY ", the t-test = -0.149220, the P-value (Sig.) = 0.8827, which is greater than 0.05, hence this variable is statistically insignificant. Since the sign of the test is negative, then there is insignificant negative effect of the variable TANGIBILITY on LTD.
- For the variable " RISK ", the t-test = -0.877206, the P-value (Sig.) = 0.3894, which is greater than 0.05, hence this variable is statistically insignificant. Since the sign of the test is negative, then there is insignificant negative effect of the variable RISK on LTD.
- For the variable " SIZE ", the t-test = 1.074062, the P-value (Sig.) = 0.2939, which is greater than 0.05, hence this variable is statistically insignificant. Since the sign of

the test is positive, then there is insignificant positive effect of the variable SIZE on LTD.

- For the variable " GROWTH ", the t-test =0.476996, the P-value (Sig.) =0.6379, which is greater than 0.05, hence this variable is statistically insignificant. Since the sign of the test is positive, then there is insignificant positive effect of the variable GROWTH on LTD.
- In addition, based on the P-value (Sig.), the most significant independent variable is LIQUIDITY, then PROFITABILITY, then SIZE, then RISK, then AGE, then GROWTH and TANGIBILITY.

**The regression equation is:**

$$LTD = -1.433 - 0.006 * (AGE) + 0.109 * (LIQUIDITY) + 2.121 * (PROFITABILITY) - 0.006 * (TANGIBILITY) - 0.000 * (RISK) + 0.069 * (SIZE) + 0.022 * (GROWTH).$$

**Table (14): The Regression Analysis: LTD - BANKING SECTOR**

Variable	Coefficient	T-Statistic	Prob.
Constant	-1.433331	-1.266227	0.2181
AGE	-0.005901	-0.711569	0.4839
LIQUIDITY	0.108774	4.231092	0.0003*
PROFITABILITY	2.120657	1.811662	0.0421*
TANGIBILITY	-0.063133	-0.149220	0.8827
RISK	-0.000295	-0.877206	0.3894
SIZE	0.068730	1.074062	0.2939
GROWTH	0.021831	0.476996	0.6379
F= 3.749 P-value (Sig.) = 0.003 R-Square = 0.485			

\* The variable is statistically significant at 0.05 level

### 5.3.1.3 Regression Model for TD:

Table (15) shows the ANOVA result, regression coefficients and their P-values (Sig.).

- The Analysis of Variance for the regression model shows that  $F=1864.228$ , P-value (Sig.) = 0.000, so there is a significant relationship between the dependent variable TD and all of the independent variables AGE, LIQUIDITY, PROFITABILITY, TANGIBILITY, RISK, SIZE and GROWTH.
- The multiple regression analysis shows that, the adjusted coefficient of determination, R-Square = 0.998%. This means 0.998 % of the variability in dependent variable TD is explained by all of the independent variables together, AGE, LIQUIDITY, PROFITABILITY, TANGIBILITY, RISK, SIZE and GROWTH.
- For the variable " AGE ", the t-test = -0.369830, the P-value (Sig.) = 0.7149, which is greater than 0.05, hence this variable is statistically insignificant. Since the sign of the test is negative, then there is insignificant negative effect of the variable AGE on TD.
- For the variable " LIQUIDITY ", the t-test = -2.609951, the P-value (Sig.) = 0.0157, which is smaller than 0.05, hence this variable is statistically significant. Since the sign of the test is negative, then there is negative effect of the variable LIQUIDITY on TD.
- For the variable " PROFITABILITY ", the t-test = -1.334688, the P-value (Sig.) = 0.1950, which is greater than 0.05, hence this variable is statistically insignificant. Since the sign of the test is negative, then there is insignificant negative effect of the variable PROFITABILITY on TD.
- For the variable " TANGIBILITY ", the t-test = -0.767041, the P-value (Sig.) = 0.4509, which is greater than 0.05, hence this variable is statistically insignificant. Since the sign of the test is negative, then there is insignificant negative effect of the variable TANGIBILITY on TD.
- For the variable " RISK ", the t-test = 0.176959, the P-value (Sig.) = 0.8611, which is greater than 0.05, hence this variable is statistically insignificant. Since the sign of the test is positive, then there is insignificant positive effect of the variable RISK on TD.
- For the variable " SIZE ", the t-test = 3.859944, the P-value (Sig.) = 0.0008, which is smaller than 0.05, hence this variable is statistically significant. Since the sign of the test is positive, then there is positive effect of the variable SIZE on TD.

- For the variable " GROWTH ", the t-test =3.569187, the P-value (Sig.) =0.0016, which is smaller than 0.05, hence this variable is statistically significant. Since the sign of the test is positive, then there is positive effect of the variable GROWTH on TD.
- In addition, based on the P-value (Sig.), the most significant independent variable is SIZE, then GROWTH, then LIQUIDITY, then PROFITABILITY, then TANGIBILITY, then AGE and RISK.

**The regression equation is:**

$$TD = -1.158 - 0.001 * (AGE) - 0.025 * (LIQUIDITY) - 0.590 * (PROFITABILITY) - 0.123 * (TANGIBILITY) + 0.000 * (RISK) + 0.093 * (SIZE) + 0.062 * (GROWTH).$$

**Table (15): The Regression Analysis: TD - BANKING SECTOR**

Variable	Coefficient	T-Statistic	Prob.
Constant	-1.157747	-2.706314	0.0126
AGE	-0.001159	-0.369830	0.7149
LIQUIDITY	-0.025357	-2.609951	0.0157*
PROFITABILITY	-0.590436	-1.334688	0.1950
TANGIBILITY	-0.122644	-0.767041	0.4509
RISK	0.00002	0.176959	0.8611
SIZE	0.093346	3.859944	0.0008*
GROWTH	0.061736	3.569187	0.0016*
F= 1864.228 P-value (Sig.) = 0.000 R-Square = 0.998			

\* The variable is statistically significant at 0.05 level

#### **5.3.1.4 Discussion of Banking sector results**

The results showed an insignificant negative effect of the variable AGE on STD, LTD, TD in the banking sector, The interpretation of this result is due to the varying ages of banks listed in PEX and their debt ratios. This finding was supported by the studies of both Mosa (2012) and Abu Mouamer (2011). The logical explanation for this result is that firms which have long ages have the ability to raise their funds. Therefore, borrowing will be less. But the study of Ramadan & Alokdeh, (2011) found a different result which showed a significant relationship between a firm's age and debt ratios (leverage). This means that the

older companies are, the more they tend to rely on borrowing sources to finance their projects.

The LQ result in the banking sector showed a significant negative effect on STD and TD, and a significant positive effect on LTD. This relationship was due to the difference in the information and nature of work environments between banks in the study. However, banks with greater liquidities may use them to finance their investments. In this case debt ratios will be reduced. This is consistent with results reported in (Masoud, 2014), which found liquidity as being consistently negative and significant with both the book and market value leverages and (Sbeiti, 2010) study which found liquidity as being consistently negative and highly significant.

A negative relationship was found between PROF and STD and TD, which is consistent with the pecking order theory which argues that highly profitable firms prefer to finance new investment with internally available funds rather than through debt finance. This means that good profitability reduces the need for external debt. This finding supports several previous ones including Masoud (2014) and (Sbeiti, 2010) studies. It is found that profitability is negatively related to the leverage ratios. This study found a positive relationship between PROF and LTD. This result differs with Abu Mouamer (2011)'s study which found it to be negatively related to LTD and positively related to STD.

Tangibility is negatively related to LTD, TD and positively related to STD but statically insignificant. This means most fixed assets are financed by STD. This result differs with Abu Mouamer (2011) which found a positive relationship between fixed assets (TANG) and LTD and a negative relationship between fixed assets and STD.

Risk variable is insignificantly negative in LTD. So, increases in a firm's riskiness reduce the level of LTD in its capital structure but have an insignificant positive effect on STD and TD. This is consistent with the view that firms that are viewed as risky by creditors find it more difficult to borrow long-term. This result agrees with the (Bülent et al., 2013) study and differs with (Emad & Alokdeh, 2011) which found significant a positive relationship with leverage.

The size variable has an insignificant positive relationship with STD and LTD and a significant positive relationship with TD. This implies that firms employ more debt as their size increases then reduce their debt. This result agrees with Masoud (2014) study which found a positive correlation with both book and market value leverage ratios, and with

Khrawish, (2010) which found a significant positive relationship between leverage ratio and size.

The growth variable has an insignificant positive relationship with STD and LTD and a highly significant positive relationship with TD. This means that banks tend to increase their TD to increase their growth and after growth they can cover these debts. This result agrees with Abu Mouamer (2011) which found that the growth opportunities variables (G) correlated positively with both the ratio of STD and LTD.

## 5.3.2 Second: INDUSTRIES SECTOR

### 5.3.2.1 Regression Model for STD:

Table (16) shows the ANOVA result, regression coefficients and their P-values (Sig.).

- The Analysis of Variance for the regression model shows that  $F=60.830$ , P-value (Sig.) = 0.000, so there is a significant relationship between the dependent variable STD and all of the independent variables AGE, LIQUIDITY, PROFITABILITY, TANGIBILITY, RISK, SIZE and GROWTH.
- The multiple regression analysis shows that, the adjusted coefficient of determination, R-Square = 0.967%. This means 0.967% of the variability in dependent variable STD is explained by all of the independent variables together, AGE, LIQUIDITY, PROFITABILITY, TANGIBILITY, RISK, SIZE and GROWTH.
- For the variable " AGE ", the t-test =2.147698, the P-value (Sig.) =0.0228, which is smaller than 0.05, hence this variable is statistically significant. Since the sign of the test is positive, then there is positive effect of the variable AGE on STD.
- For the variable " LIQUIDITY ", the t-test = 0.158591, the P-value (Sig.) =0.8758, which is greater than 0.05, hence this variable is statistically insignificant. Since the sign of the test is positive, then there is insignificant positive effect of the variable LIQUIDITY on STD.
- For the variable " PROFITABILITY ", the t-test =-0.924834, the P-value (Sig.) =0.3673, which is greater than 0.05, hence this variable is statistically insignificant. Since the sign of the test is negative, then there is insignificant negative effect of the variable PROFITABILITY on STD.
- For the variable " TANGIBILITY ", the t-test =-2.798137, the P-value (Sig.) =0.0119, which is smaller than 0.05, hence this variable is statistically significant. Since the sign of the test is negative, then there is negative effect of the variable TANGIBILITY on STD.
- For the variable " RISK ", the t-test =0.755747, the P-value (Sig.) =0.4596, which is greater than 0.05, hence this variable is statistically insignificant. Since the sign of the test is positive, then there is insignificant positive effect of the variable RISK on STD.
- For the variable " SIZE ", the t-test =-0.204001, the P-value (Sig.) =0.8406, which is greater than 0.05, hence this variable is statistically insignificant. Since the sign of

the test is negative, then there is insignificant negative effect of the variable SIZE on STD.

- For the variable " GROWTH ", the t-test =-1.658059, the P-value (Sig.) =0.1146, which is greater than 0.05, hence this variable is statistically insignificant. Since the sign of the test is negative, then there is insignificant negative effect of the variable GROWTH on STD.
- In addition, based on the P-value (Sig.), the most significant independent variable is TANGIBILITY, then AGE, then GROWTH, then PROFITABILITY , then RISK , then SIZE and LIQUIDITY.

**The regression equation is:**

$$STD = 0.331 + 0.012 * (AGE) + 0.000 * (LIQUIDITY) - 0.091 * (PROFITABILITY) - 0.552 * (TANGIBILITY) + 0.000 * (RISK) - 0.008 * (SIZE) - 0.029 * (GROWTH).$$

**Table (16): The Regression Analysis: STD - INDUSTRIES SECTOR**

Variable	Coefficient	T-Statistic	Prob.
Constant	0.330907	0.524904	0.6061
AGE	0.012028	2.147698	0.0228*
LIQUIDITY	0.000298	0.158591	0.8758
PROFITABILITY	-0.091066	-0.924834	0.3673
TANGIBILITY	-0.552147	-2.798137	0.0119*
RISK	0.000101	0.755747	0.4596
SIZE	-0.008429	-0.204001	0.8406
GROWTH	-0.029229	-1.658059	0.1146
F= 60.830 P-value (Sig.) = 0.000 R-Square = 0.967			

\* The variable is statistically significant at 0.05 level

### 5.3.2.2 Regression Model for LTD:

Table (17) shows the ANOVA result, regression coefficients and their P-values (Sig.).

- The Analysis of Variance for the regression model shows that F=5.678, P-value (Sig.) = 0.000, so there is a significant relationship between the dependent variable LTD and all of the independent variables AGE, LIQUIDITY, PROFITABILITY, TANGIBILITY, RISK, SIZE and GROWTH.
- The multiple regression analysis shows that, the adjusted coefficient of determination, R-Square = 0.570%. This means 0.570% of the variability in dependent variable LTD is explained by all of the independent variables together,

AGE, LIQUIDITY, PROFITABILITY, TANGIBILITY, RISK, SIZE and GROWTH.

- For the variable " AGE ", the t-test =-0.072902, the P-value (Sig.) =0.9423, which is greater than 0.05, hence this variable is statistically insignificant. Since the sign of the test is negative, then there is insignificant negative effect of the variable AGE on LTD.
- For the variable " LIQUIDITY ", the t-test =-0.291068, the P-value (Sig.) =0.7726, which is greater than 0.05, hence this variable is statistically insignificant. Since the sign of the test is negative, then there is insignificant negative effect of the variable LIQUIDITY on LTD.
- For the variable " PROFITABILITY ", the t-test =-2.377869, the P-value (Sig.) =0.0225, which is smaller than 0.05, hence this variable is statistically significant. Since the sign of the test is negative, then there is negative effect of the variable PROFITABILITY on LTD.
- For the variable " TANGIBILITY ", the t-test =-3.535281, the P-value (Sig.) =0.0011, which is smaller than 0.05, hence this variable is statistically significant. Since the sign of the test is negative, then there is negative effect of the variable TANGIBILITY on LTD.
- For the variable " RISK ", the t-test =-0.993533, the P-value (Sig.) =0.3267, which is greater than 0.05, hence this variable is statistically insignificant. Since the sign of the test is negative, then there is insignificant negative effect of the variable RISK on LTD.
- For the variable " SIZE ", the t-test =0.501302, the P-value (Sig.) =0.6191, which is greater than 0.05, hence this variable is statistically insignificant. Since the sign of the test is positive, then there is insignificant positive effect of the variable SIZE on LTD.
- For the variable " GROWTH ", the t-test =0.878762, the P-value (Sig.) =0.3851, which is greater than 0.05, hence this variable is statistically insignificant. Since the sign of the test is positive, then there is insignificant positive effect of the variable GROWTH on LTD.
- In addition, based on the P-value (Sig.), the most significant independent variable is TANGIBILITY, then PROFITABILITY, then RISK, then GROWTH, then SIZE, then LIQUIDITY and AGE.

**The regression equation is:**

$$LTD = -0.001 - 0.000 * (AGE) - 0.000 * (LIQUIDITY) - 0.230 * (PROFITABILITY) - 0.444 * (TANGIBILITY) - 0.000 * (RISK) + 0.019 * (SIZE) + 0.001 * (GROWTH).$$

**Table (17): The Regression Analysis: LTD - INDUSTRIES SECTOR**

Variable	Coefficient	T-Statistic	Prob.
Constant	-0.009736	-0.017952	0.9858
AGE	-0.000264	-0.072902	0.9423
LIQUIDITY	-0.000453	-0.291068	0.7726
PROFITABILITY	-0.230183	-2.377869	0.0225*
TANGIBILITY	-0.444176	-3.535281	0.0011*
RISK	-0.000121	-0.993533	0.3267
SIZE	0.018264	0.501302	0.6191
GROWTH	0.009586	0.878762	0.3851
F= 5.678 P-value (Sig.) = 0.000 R-Square = 0.570			

\* The variable is statistically significant at 0.05 level

### 5.3.2.3 Regression Model for TD:

Table (18) shows the ANOVA result, regression coefficients and their P-values (Sig.).

- The Analysis of Variance for the regression model shows that F=35.733, P-value (Sig.) = 0.000, so there is a significant relationship between the dependent variable TD and all of the independent variables AGE, LIQUIDITY, PROFITABILITY, TANGIBILITY, RISK, SIZE and GROWTH.
- The multiple regression analysis shows that, the adjusted coefficient of determination, R-Square = 0.907%. This means 0.907% of the variability in dependent variable TD is explained by all of the independent variables together, AGE, LIQUIDITY, PROFITABILITY, TANGIBILITY, RISK, SIZE and GROWTH.
- For the variable " AGE ", the t-test =0.170832, the P-value (Sig.) =0.8653, which is greater than 0.05, hence this variable is statistically insignificant. Since the sign of the test is positive, then there is insignificant positive effect of the variable AGE on TD.
- For the variable " LIQUIDITY ", the t-test =-1.563613, the P-value (Sig.) =0.1262, which is greater than 0.05, hence this variable is statistically insignificant. Since the sign of the test is negative, then there is insignificant negative effect of the variable LIQUIDITY on TD.

- For the variable " PROFITABILITY ", the t-test =-3.318542, the P-value (Sig.) =0.0020, which is smaller than 0.05, hence this variable is statistically significant. Since the sign of the test is negative, then there is negative effect of the variable PROFITABILITY on TD.
- For the variable " TANGIBILITY ", the t-test =-3.187910, the P-value (Sig.) =0.0029, which is smaller than 0.05, hence this variable is statistically significant. Since the sign of the test is negative, then there is negative effect of the variable TANGIBILITY on TD.
- For the variable " RISK ", the t-test =-1.711478, the P-value (Sig.) =0.0475, which is smaller than 0.05, hence this variable is statistically significant. Since the sign of the test is negative, then there is negative effect of the variable RISK on TD.
- For the variable " SIZE ", the t-test =1.100954, the P-value (Sig.) =0.2778, which is greater than 0.05, hence this variable is statistically insignificant. Since the sign of the test is positive, then there is insignificant positive effect of the variable SIZE on TD.
- For the variable " GROWTH ", the t-test =1.811670, the P-value (Sig.) =0.0389, which is smaller than 0.05, hence this variable is statistically significant. Since the sign of the test is positive, then there is positive effect of the variable GROWTH on TD.
- In addition, based on the P-value (Sig.), the most significant independent variable is PROFITABILITY, then TANGIBILITY, then GROWTH, then RISK, then AGE, then LIQUIDITY and SIZE.

**The regression equation is:**

$$\text{TD} = -0.410 - 0.001 * (\text{AGE}) - 0.003 * (\text{LIQUIDITY}) - 0.454 * (\text{PROFITABILITY}) - 0.566 * (\text{TANGIBILITY}) - 0.000 * (\text{RISK}) + 0.056 * (\text{SIZE}) + 0.028 * (\text{GROWTH}).$$

**Table (18): The Regression Analysis: TD - INDUSTRIES SECTOR**

Variable	Coefficient	T-Statistic	Prob.
Constant	-0.409883	-0.534599	0.5960
AGE	0.000876	0.170832	0.8653
LIQUIDITY	-0.003444	-1.563613	0.1262
PROFITABILITY	-0.454159	-3.318542	0.0020*
TANGIBILITY	-0.566255	-3.187910	0.0029*
RISK	-0.000296	-1.711478	0.0475*
SIZE	0.056708	1.100954	0.2778
GROWTH	0.027939	1.811670	0.0389*
F= 35.733 P-value (Sig.) = 0.000 R-Square = 0.907			

\* The variable is statistically significant at 0.05 level

### **5.3.2.4 Discussion of Industries Sector Results**

The result showed a significant positive effect of the variable AGE on STD, an insignificant negative effect on LTD and an insignificant positive effect on TD in the industries sector. This result means that increasing the age of a firm will decrease LTD but will raise STD and TD. The interpretation of this result is the varying ages of industry firms listed in PEX and their debt ratios. This finding in STD is supported by the study of Ramadan & Alokdeh, (2011) which found a significant relationship between a firm's age and debt ratios (leverage). It is also supported by Mosa (2012) in LTD and TD which found no significant relationship between a firm's age and its capital structure. But the result agrees with Abu Mouamer (2011) in LTD and disagrees with his result in STD.

The liquidity result in the industries sector showed a significant negative effect on LTD, an insignificant positive effect on STD and an insignificant negative effect on TD. This result suggests that firms with higher liquidity tend to avoid raising LTD. As discussed previously, a negative relationship may indicate that firms operating in industries firms finance their activities according to the financing order of the pecking order theory. The results were supported by (Masoud, 2014), (Sbeiti, 2010) and Mosa (2012) in LTD, which found liquidity as being consistently negative and significant with LTD but differ with these studies in STD and TD.

There is a significant negative relationship between PROF and LTD and TD but an insignificant negative one with STD. The negative relationships between profits and market leverage were also found by Osaretin & Michael, (2014). This means that profitable firms reinvest their profits, and thus, need less borrowed funds for their operations or investments. These results indicate and support to a large extent conclusions applied by previous studies and therefore reducing STD, LTD or TD will lead to increased annual profitability rates.

Tangibility is negatively significant relating to STD and TD but negatively insignificant relating to LTD. The first relationship might indicate that small manufacturing companies in terms of fixed assets access debt in order to ensure close monitoring from lenders. This result differs with Abu Mouamer (2011) which found a positive relationship between fixed assets (TANG) and LTD but agrees with a negative relationship between the fixed assets and STD in his study.

Risk variable is insignificantly negative in LTD. So, increases in an industries firm's riskiness reduce the level of LTD in its capital structure but has an insignificant negative effect on TD and an insignificant positive effect on STD. This result agrees with Al-Shubiri, (2010) which found insignificant coefficients associated between business risk and leverage for every year and all years and differs with (Emad & Alokdeh, 2011) which found a significant positive relationship with leverage.

The size variable has an insignificantly positive relationship with STD, LTD and TD but a negative relationship with STD. This implies that firms employ more LTD and TD as their size increases then reduce their debt. This result agrees with Masoud (2014) study which found a positive correlation with both book and market value leverage ratios, and with Khrawish, (2010) which found a significant positive relationship between leverage ratio and size.

The growth variable has an insignificantly negative relationship with STD, a positive relationship with LTD but a significant positive relationship with TD. This means that firms tend to increase their TD to increase their growth and after growth they can cover these debts. This result agrees with Abu Mouamer (2011) which found that the growth opportunities variables (G) correlated positively with both the ratio of STD and LTD.

### 5.3.3 Third: INSURANCE SECTOR

#### 5.3.3.1 Regression Model for STD:

Table (19) shows the ANOVA result, regression coefficients and their P-values (Sig.).

- The Analysis of Variance for the regression model shows that  $F=200.155$ , P-value (Sig.) = 0.000, so there is a significant relationship between the dependent variable STD and all of the independent variables AGE, LIQUIDITY, PROFITABILITY, TANGIBILITY, RISK, SIZE and GROWTH.
- The multiple regression analysis shows that, the adjusted coefficient of determination, R-Square = 0.991%. This means 0.991% of the variability in dependent variable STD is explained by all of the independent variables together, AGE, LIQUIDITY, PROFITABILITY, TANGIBILITY, RISK, SIZE and GROWTH.
- For the variable " AGE ", the t-test =3.158437, the P-value (Sig.) =0.0134, which is smaller than 0.05, hence this variable is statistically significant. Since the sign of the test is positive, then there is positive effect of the variable AGE on STD.
- For the variable " LIQUIDITY ", the t-test = -12.61867, the P-value (Sig.) =0.0000, which is smaller than 0.05, hence this variable is statistically significant. Since the sign of the test is negative, then there is negative effect of the variable LIQUIDITY on STD.
- For the variable " PROFITABILITY ", the t-test =-2.092559, the P-value (Sig.) =0.0349, which is smaller than 0.05, hence this variable is statistically significant. Since the sign of the test is negative, then there is negative effect of the variable PROFITABILITY on STD.
- For the variable " TANGIBILITY ", the t-test =-11.56704, the P-value (Sig.) =0.0000, which is smaller than 0.05, hence this variable is statistically significant. Since the sign of the test is negative, then there is negative effect of the variable TANGIBILITY on STD.
- For the variable " RISK ", the t-test =-0.274937, the P-value (Sig.) =0.7903, which is greater than 0.05, hence this variable is statistically insignificant. Since the sign of the test is negative, then there is insignificant negative effect of the variable RISK on STD.

- For the variable " SIZE ", the t-test =-3.584865, the P-value (Sig.) =0.0036, which is smaller than 0.05, hence this variable is statistically significant. Since the sign of the test is negative, then there is negative effect of the variable SIZE on STD.
- For the variable " GROWTH ", the t-test =-2.098123, the P-value (Sig.) =0.0346, which is smaller than 0.05, hence this variable is statistically significant. Since the sign of the test is negative, then there is negative effect of the variable GROWTH on STD.
- In addition, based on the P-value (Sig.), the most significant independent variable is LIQUIDITY, then TANGIBILITY, then SIZE, then AGE, then GROWTH , then PROFITABILITY and RISK.

**The regression equation is:**

$$STD = 3.799 + 0.013 * (AGE) - 0.951 * (LIQUIDITY) - 0.383 * (PROFITABILITY) - 1.214 * (TANGIBILITY) - 0.000 * (RISK) - 0.113 * (SIZE) - 0.009 * (GROWTH).$$

**Table (19) : The Regression Analysis: STD - INSURANCE SECTOR**

Variable	Coefficient	T-Statistic	Prob.
Constant	3.798556	6.984813	0.0001*
AGE	0.012548	3.158437	0.0134*
LIQUIDITY	-0.950808	-12.61867	0.0000*
PROFITABILITY	-0.383477	-2.092559	0.0349*
TANGIBILITY	-1.213692	-11.56704	0.0000
RISK	-0.000118	-0.274937	0.7903
SIZE	-0.112906	-3.584865	0.0036*
GROWTH	-0.008505	-2.098123	0.0346*
F= 200.155 P-value (Sig.) = 0.000 R-Square = 0.991			

\* The variable is statistically significant at 0.05 level

### 5.3.3.2 Regression Model for LTD:

Table (20) shows the ANOVA result, regression coefficients and their P-values (Sig.).

- The Analysis of Variance for the regression model shows that F=119.9612, P-value (Sig.) = 0.000, so there is a significant relationship between the dependent variable LTD and all of the independent variables AGE, LIQUIDITY, PROFITABILITY, TANGIBILITY, RISK, SIZE and GROWTH.
- The multiple regression analysis shows that, the adjusted coefficient of determination, R-Square = 0.981%. This means 0.981% of the variability in dependent variable LTD is explained by all of the independent variables together,

AGE, LIQUIDITY, PROFITABILITY, TANGIBILITY, RISK, SIZE and GROWTH.

- For the variable " AGE ", the t-test =-1.894956, the P-value (Sig.) =0.0403, which is smaller than 0.05, hence this variable is statistically significant. Since the sign of the test is negative, then there is negative effect of the variable AGE on LTD.
- For the variable " LIQUIDITY ", the t-test =27.00161, the P-value (Sig.) =0.0000, which is smaller than 0.05, hence this variable is statistically significant. Since the sign of the test is positive, then there is positive effect of the variable LIQUIDITY on LTD.
- For the variable " PROFITABILITY ", the t-test =0.756978, the P-value (Sig.) =0.4626, which is greater than 0.05, hence this variable is statistically insignificant. Since the sign of the test is positive, then there is insignificant positive effect of the variable PROFITABILITY on LTD.
- For the variable " TANGIBILITY ", the t-test =3.359961, the P-value (Sig.) =0.0036, which is smaller than 0.05, hence this variable is statistically significant. Since the sign of the test is positive, then there is positive effect of the variable TANGIBILITY on LTD.
- For the variable " RISK ", the t-test =1.036977, the P-value (Sig.) =0.3187, which is greater than 0.05, hence this variable is statistically insignificant. Since the sign of the test is positive, then there is insignificant positive effect of the variable RISK on LTD.
- For the variable " SIZE ", the t-test =-0.720907, the P-value (Sig.) =0.4837, which is greater than 0.05, hence this variable is statistically insignificant. Since the sign of the test is negative, then there is insignificant negative effect of the variable SIZE on LTD.
- For the variable " GROWTH ", the t-test =-1.648054, the P-value (Sig.) =0.1233, which is greater than 0.05, hence this variable is statistically insignificant. Since the sign of the test is negative, then there is insignificant negative effect of the variable GROWTH on LTD.
- In addition, based on the P-value (Sig.), the most significant independent variable is LIQUIDITY, then TANGIBILITY, then AGE, then GROWTH, then RISK , then PROFITABILITY and SIZE.

The regression equation is:

$$LTD = 0.270 - 0.005 * (AGE) + 0.169 * (LIQUIDITY) + 0.136 * (PROFITABILITY) + 0.298 * (TANGIBILITY) - 0.000 * (RISK) - 0.023 * (SIZE) - 0.006 * (GROWTH).$$

**Table (20): The Regression Analysis: LTD - INSURANCE SECTOR**

Variable	Coefficient	T-Statistic	Prob.
Constant	0.270303	0.496378	0.6279
AGE	-0.005470	-1.894956	0.0403*
LIQUIDITY	0.168661	27.00161	0.0000*
PROFITABILITY	0.136309	0.756978	0.4626
TANGIBILITY	0.298050	3.359961	0.0036*
RISK	0.000443	1.036977	0.3187
SIZE	-0.022711	-0.720907	0.4837
GROWTH	-0.006834	-1.648054	0.1233
F= 119.9612 P-value (Sig.) = 0.000 R-Square = 0.981			

\* The variable is statistically significant at 0.05 level

### 5.3.3.3 Regression Model for TD:

Table (21) shows the ANOVA result, regression coefficients and their P-values (Sig.).

- The Analysis of Variance for the regression model shows that F=23.525, P-value (Sig.) = 0.000, so there is a significant relationship between the dependent variable TD and all of the independent variables AGE, LIQUIDITY, PROFITABILITY, TANGIBILITY, RISK, SIZE and GROWTH.
- The multiple regression analysis shows that, the adjusted coefficient of determination, R-Square = 0.907%. This means 0.907% of the variability in dependent variable TD is explained by all of the independent variables together, AGE, LIQUIDITY, PROFITABILITY, TANGIBILITY, RISK, SIZE and GROWTH.
- For the variable " AGE ", the t-test =-2.398596, the P-value (Sig.) =0.0322, which is smaller than 0.05, hence this variable is statistically significant. Since the sign of the test is negative, then there is negative effect of the variable AGE on TD.
- For the variable " LIQUIDITY ", the t-test =0.294032, the P-value (Sig.) =0.7734, which is greater than 0.05, hence this variable is statistically insignificant. Since the sign of the test is positive, then there is insignificant positive effect of the variable LIQUIDITY on TD.

- For the variable " PROFITABILITY ", the t-test =-0.623853, the P-value (Sig.) =0.5435, which is greater than 0.05, hence this variable is statistically insignificant. Since the sign of the test is negative, then there is insignificant negative effect of the variable PROFITABILITY on TD.
- For the variable " TANGIBILITY ", the t-test =-1.510919, the P-value (Sig.) =0.1547, which is greater than 0.05, hence this variable is statistically insignificant. Since the sign of the test is negative, then there is insignificant negative effect of the variable TANGIBILITY on TD.
- For the variable " RISK ", the t-test =-0.788958, the P-value (Sig.) =0.4443, which is greater than 0.05, hence this variable is statistically insignificant. Since the sign of the test is negative, then there is insignificant negative effect of the variable RISK on TD.
- For the variable " SIZE ", the t-test =-0.852146, the P-value (Sig.) =0.4096, which is greater than 0.05, hence this variable is statistically insignificant. Since the sign of the test is negative, then there is insignificant negative effect of the variable SIZE on TD.
- For the variable " GROWTH ", the t-test =-1.642435, the P-value (Sig.) =0.1245, which is greater than 0.05, hence this variable is statistically insignificant. Since the sign of the test is negative, then there is insignificant negative effect of the variable GROWTH on TD.
- In addition, based on the P-value (Sig.), the most significant independent variable is AGE, then GROWTH, then TANGIBILITY, then SIZE, then RISK, then PROFITABILITY and LIQUIDITY.

**The regression equation is:**

$$TD = 2.609 - 0.019 * (AGE) + 0.005 * (LIQUIDITY) - 0.311 * (PROFITABILITY) - 0.371 * (TANGIBILITY) - 0.001 * (RISK) - 0.074 * (SIZE) - 0.019 * (GROWTH).$$

**Table (21): The Regression Analysis: TD - INSURANCE SECTOR**

Variable	Coefficient	T-Statistic	Prob.
Constant	2.609094	1.730257	0.1072
AGE	-0.019173	-2.398596	0.0322*
LIQUIDITY	0.005086	0.294032	0.7734
PROFITABILITY	-0.311074	-0.623853	0.5435
TANGIBILITY	-0.371140	-1.510919	0.1547
RISK	-0.000934	-0.788958	0.4443
SIZE	-0.074340	-0.852146	0.4096
GROWTH	-0.018859	-1.642435	0.1245
F= 23.525 P-value (Sig.) = 0.000 R-Square = 0.907			

#### **5.3.3.4 Discussion of Insurance Sector Results**

The result showed a significant negative effect of the variable AGE on LTD and TD but a significant positive effect on STD in the insurance sector. This result means that increasing the age of a firm will decrease LTD and TD but will raise STD. The interpretation of this result is the varying ages of insurance firms listed in PEX and their debt ratios. This finding was supported by Ramadan & Alokdeh, (2011) who found a significant relationship between a firm's age and its debt ratios (leverage) and differed with both Mosa (2012) and Abu Mouamer (2011). This means that the company's age affects the size of the debt in insurance companies.

Liquidity in the insurance sector showed a significantly negative effect on STD, a significant positive effect on LTD and an insignificant positive effect on TD. This relationship was due to the difference in the information and the nature of the work environments between insurance firms in the study. This result suggests that firms with higher liquidity tend to avoid raising short term loans. As discussed earlier, a negative relationship may indicate that firms operating in these sectors finance their activities according to the financing hierarchy of the pecking order theory. This is consistent with results reported in Sbeiti, (2010).

A significant negative relationship was found between PROF and STD, an insignificant negative relationship with TD and an insignificant positive relationship with LTD, In the insurance sector, this means that STD is only affected by profitability. This finding was supported by Ghosh, Petrova, & Wang, (2012).

Tangibility is negatively related to STD and TD but positively related to LTD. Statically, STD and LTD are significant but TD is insignificant. This means that most fixed assets are financed by LTD. This result was supported by Abu Mouamer (2011) which found a positive relationship between fixed assets (TANG) and LTD and a negative relationship between the fixed assets and STD.

Risk variable is insignificantly negative in STD, LTD and TD, except that LTD has a positive relationship. This means that capital structure in the insurance sector is not affected directly by risk. This result was supported by Bülent et al, (2013) study and differs with Caglayan & Rashid, (2014).

The size and growth variables have insignificantly negative relationships with STD, LTD and TD except that STD is statistically significant. This mean that STD is affected adversely by size and growth. This result can be explained in that the increases in size of companies and their growth make them avoid getting short-term loans. This result is supported by Akinlo, (2011) and differs with Masoud (2014).

### 5.3.4 Fourth: INVESTING SECTOR

#### 5.3.4.1 Regression Model for STD:

Table (22) shows the ANOVA result, regression coefficients and their P-values (Sig.).

- The Analysis of Variance for the regression model shows that  $F=41.877$ , P-value (Sig.) = 0.000, so there is a significant relationship between the dependent variable STD and all of the independent variables AGE, LIQUIDITY, PROFITABILITY, TANGIBILITY, RISK, SIZE and GROWTH.
- The multiple regression analysis shows that, the adjusted coefficient of determination, R-Square = 0.928%. This means 0.928% of the variability in dependent variable STD is explained by all of the independent variables together, AGE, LIQUIDITY, PROFITABILITY, TANGIBILITY, RISK, SIZE and GROWTH.
- For the variable " AGE ", the t-test =1.359544, the P-value (Sig.) =0.1848, which is greater than 0.05, hence this variable is statistically insignificant. Since the sign of the test is positive, then there is insignificant positive effect of the variable AGE on STD.
- For the variable " LIQUIDITY ", the t-test =-1.896892, the P-value (Sig.) =0.0341, which is smaller than 0.05, hence this variable is statistically significant. Since the sign of the test is negative, then there is negative effect of the variable LIQUIDITY on STD.
- For the variable " PROFITABILITY ", the t-test =-2.944082, the P-value (Sig.) =0.0064, which is smaller than 0.05, hence this variable is statistically significant. Since the sign of the test is negative, then there is negative effect of the variable PROFITABILITY on STD.
- For the variable " TANGIBILITY ", the t-test =-1.948866, the P-value (Sig.) =0.0307, which is smaller than 0.05, hence this variable is statistically significant. Since the sign of the test is negative, then there is negative effect of the variable TANGIBILITY on STD.
- For the variable " RISK ", the t-test =-0.399856, the P-value (Sig.) =0.6923, which is greater than 0.05, hence this variable is statistically insignificant. Since the sign of the test is negative, then there is insignificant negative effect of the variable RISK on STD.

- For the variable " SIZE ", the t-test =2.407437, the P-value (Sig.) =0.0115, which is smaller than 0.05, hence this variable is statistically significant. Since the sign of the test is positive, then there is positive effect of the variable SIZE on STD.
- For the variable " GROWTH ", the t-test =-0.924830, the P-value (Sig.) =0.3630, which is greater than 0.05, hence this variable is statistically insignificant. Since the sign of the test is negative, then there is insignificant negative effect of the variable GROWTH on STD.
- In addition, based on the P-value (Sig.), the most significant independent variable is PROFITABILITY, then SIZE, then TANGIBILITY, then LIQUIDITY, then AGE , then GROWTH and RISK.

**The regression equation is:**

$$STD = -1.618 + 0.004 * (AGE) - 0.001 * (LIQUIDITY) - 0.448 * (PROFITABILITY) - 0.265 * (TANGIBILITY) - 0.000 * (RISK) + 0.115 * (SIZE) - 0.027 * (GROWTH).$$

**Table (22): The Regression Analysis: STD - INVESTING SECTOR**

Variable	Coefficient	T-Statistic	Prob.
Constant	-1.617989	-2.037719	0.0255*
AGE	0.004481	1.359544	0.1848
LIQUIDITY	-0.001319	-1.896892	0.0341*
PROFITABILITY	-0.447533	-2.944082	0.0064*
TANGIBILITY	-0.264856	-1.948866	0.0307*
RISK	-0.000303	-0.399856	0.6923
SIZE	0.114738	2.407437	0.0115*
GROWTH	-0.026518	-0.924830	0.3630
F= 41.877 P-value (Sig.) = 0.000 R-Square = 0.928			

\* The variable is statistically significant at 0.05 level

#### **5.3.4.2 Regression Model for LTD:**

Table (23) shows the ANOVA result, regression coefficients and their P-values (Sig.).

- The Analysis of Variance for the regression model shows that F=40.393, P-value (Sig.) = 0.000, so there is a significant relationship between the dependent variable LTD and all of the independent variables AGE, LIQUIDITY, PROFITABILITY, TANGIBILITY, RISK, SIZE and GROWTH.
- The multiple regression analysis shows that, the adjusted coefficient of determination, R-Square = 0.925%. This means 0.925% of the variability in dependent variable LTD is explained by all of the independent variables together,

AGE, LIQUIDITY, PROFITABILITY, TANGIBILITY, RISK, SIZE and GROWTH.

- For the variable " AGE ", the t-test =-0.327733, the P-value (Sig.) =0.7456, which is greater than 0.05, hence this variable is statistically insignificant. Since the sign of the test is negative, then there is insignificant negative effect of the variable AGE on LTD.
- For the variable " LIQUIDITY ", the t-test =0.682774, the P-value (Sig.) =0.5004, which is smaller than 0.05, hence this variable is statistically significant. Since the sign of the test is positive, then there is positive effect of the variable LIQUIDITY on LTD.
- For the variable " PROFITABILITY ", the t-test =0.025774, the P-value (Sig.) =0.9796, which is greater than 0.05, hence this variable is statistically insignificant. Since the sign of the test is positive, then there is insignificant positive effect of the variable PROFITABILITY on LTD.
- For the variable " TANGIBILITY ", the t-test =2.045501, the P-value (Sig.) =0.0353, which is smaller than 0.05, hence this variable is statistically significant. Since the sign of the test is positive, then there is positive effect of the variable TANGIBILITY on LTD.
- For the variable " RISK ", the t-test =-0.397563, the P-value (Sig.) =0.6940, which is greater than 0.05, hence this variable is statistically insignificant. Since the sign of the test is negative, then there is insignificant negative effect of the variable RISK on LTD.
- For the variable " SIZE ", the t-test =-0.610240, the P-value (Sig.) =0.5466, which is greater than 0.05, hence this variable is statistically insignificant. Since the sign of the test is positive, then there is insignificant positive effect of the variable SIZE on LTD.
- For the variable " GROWTH ", the t-test =-1.130743, the P-value (Sig.) =0.2678, which is greater than 0.05, hence this variable is statistically insignificant. Since the sign of the test is negative, then there is insignificant negative effect of the variable GROWTH on LTD.
- In addition, based on the P-value (Sig.), the most significant independent variable is TANGIBILITY, then GROWTH, then LIQUIDITY, then SIZE, then RISK , then AGE and PROFITABILITY.

**The regression equation is:**

$$LTD = -0.358 - 0.001 * (AGE) + 0.000 * (LIQUIDITY) + 0.003 * (PROFITABILITY) + 0.185 * (TANGIBILITY) - 0.000 * (RISK) + 0.019 * (SIZE) - 0.021 * (GROWTH).$$

**Table (23): The Regression Analysis: LTD - INVESTING SECTOR**

Variable	Coefficient	T-Statistic	Prob.
Constant	-0.357730	-0.676662	0.5042
AGE	-0.000719	-0.327733	0.7456
LIQUIDITY	0.000316	0.682774	0.5004
PROFITABILITY	0.002609	0.025774	0.9796
TANGIBILITY	0.185089	2.045501	0.0353*
RISK	-0.000200	-0.397563	0.6940
SIZE	0.019365	0.610240	0.5466
GROWTH	-0.021587	-1.130743	0.2678
F= 40.393 P-value (Sig.) = 0.000 R-Square = 0.925			

\* The variable is statistically significant at 0.05 level

### 5.3.4.3 Regression Model for TD:

Table (24) shows the ANOVA result, regression coefficients and their P-values (Sig.).

- The Analysis of Variance for the regression model shows that F=76.137, P-value (Sig.) = 0.000, so there is a significant relationship between the dependent variable TD and all of the independent variables AGE, LIQUIDITY, PROFITABILITY, TANGIBILITY, RISK, SIZE and GROWTH.
- The multiple regression analysis shows that, the adjusted coefficient of determination, R-Square = 0.960%. This means 0.960% of the variability in dependent variable TD is explained by all of the independent variables together, AGE, LIQUIDITY, PROFITABILITY, TANGIBILITY, RISK, SIZE and GROWTH.
- For the variable " AGE ", the t-test =1.107902, the P-value (Sig.) =0.2773, which is greater than 0.05, hence this variable is statistically insignificant. Since the sign of the test is positive, then there is insignificant positive effect of the variable AGE on TD.
- For the variable " LIQUIDITY ", the t-test =-1.400044, the P-value (Sig.) =0.1725, which is greater than 0.05, hence this variable is statistically insignificant. Since the

sign of the test is negative, then there is insignificant negative effect of the variable LIQUIDITY on TD.

- For the variable " PROFITABILITY ", the t-test =-2.841184, the P-value (Sig.) =0.0042, which is smaller than 0.05, hence this variable is statistically significant. Since the sign of the test is negative, then there is negative effect of the variable PROFITABILITY on TD.
- For the variable " TANGIBILITY ", the t-test =-0.569750, the P-value (Sig.) =0.5734, which is greater than 0.05, hence this variable is statistically insignificant. Since the sign of the test is negative, then there is insignificant negative effect of the variable TANGIBILITY on TD.
- For the variable " RISK ", the t-test =-0.645092, the P-value (Sig.) =0.5241, which is greater than 0.05, hence this variable is statistically insignificant. Since the sign of the test is negative, then there is insignificant negative effect of the variable RISK on TD.
- For the variable " SIZE ", the t-test =2.731321, the P-value (Sig.) =0.0108, which is smaller than 0.05, hence this variable is statistically significant. Since the sign of the test is positive, then there is positive effect of the variable PROFITABILITY on TD.
- For the variable " GROWTH ", the t-test =-1.628549, the P-value (Sig.) =0.1146, which is greater than 0.05, hence this variable is statistically insignificant. Since the sign of the test is negative, then there is insignificant negative effect of the variable GROWTH on TD.
- In addition, based on the P-value (Sig.), the most significant independent variable is PROFITABILITY, then SIZE, then GROWTH, then LIQUIDITY, then AGE, then RISK and TANGIBILITY.

**The regression equation is:**

$$TD = -1.976 + 0.003 * (AGE) - 0.001 * (LIQUIDITY) - 0.445 * (PROFITABILITY) - 0.080 * (TANGIBILITY) - 0.000 * (RISK) + 0.134 * (SIZE) - 0.048 * (GROWTH).$$

**Table (24): The Regression Analysis: TD - INVESTING SECTOR**

Variable	Coefficient	T-Statistic	Prob.
Constant	-1.975719	-2.415363	0.0225*
AGE	0.003761	1.107902	0.2773
LIQUIDITY	-0.001003	-1.400044	0.1725
PROFITABILITY	-0.444924	-2.841184	0.0042*
TANGIBILITY	-0.079767	-0.569750	0.5734
RISK	-0.000503	-0.645092	0.5241
SIZE	0.134103	2.731321	0.0108*
GROWTH	-0.048105	-1.628549	0.1146
F= 76.137 P-value (Sig.) = 0.000 R-Square = 0.960			

\* The variable is statistically significant at 0.05 level

#### 5.3.4.4 Discussion of Investing Sector Results

The results showed an insignificant positive effect of the variable AGE on STD and TD but an insignificant negative effect on LTD in the investing sector. This result means that increasing the age of a firm will decrease LTD but will raise STD and TD. The interpretation of this result is the varying ages of investing firms listed in PEX and their debt ratios. But the study of Ramadan & Alokdeh, (2011) found a different result which showed a significant relationship between a firm's age and its debt ratios (leverage).

Liquidity result in the industries sector showed a significant negative effect on STD, an insignificant positive effect on LTD and an insignificant negative effect on TD. This result means that firms reduce their STD when their liquidity rises so they may avoid financing their investments by debt. This is consistent with results reported in Masoud, (2014) and Sbeiti, (2010).

Profitability and size have a significant relationship with STD and TD and an insignificant relationship with LTD. This means that the debt affects the company's profitability and size. This result can be explained that companies in the investment sector use short-term debt and total debt to increase their profitability size and will cover this debt after achieving profit. This finding supports several previous ones including Masoud (2014) and (Sbeiti, 2010) but differs with Abu Mouamer (2011).

Tangibility is negatively related to STD and TD whereas LTD has a positive relationship. Statistically, STD and LTD are significant but TD is insignificant. This means most fixed assets are financed by LTD. This result is supported by Abu Mouamer (2011) which found a positive relationship between fixed assets (TANG) and LTD and a negative relationship between the fixed assets and STD.

Risk and growth variables have an insignificantly negative effect on STD, LTD and TD. So, increases in an investing firm's riskiness and growth will reduce the level of capital structure. This result differs with Emad & Alokdeh, (2011) and Abu Mouamer (2011).

### 5.3.5 Fifth: SERVICES SECTOR

#### 5.3.5.1 Regression Model for STD:

Table (25) shows the ANOVA result, regression coefficients and their P-values (Sig.).

- The Analysis of Variance for the regression model shows that  $F=33.117$ , P-value (Sig.) = 0.000, so there is a significant relationship between the dependent variable STD and all of the independent variables AGE, LIQUIDITY, PROFITABILITY, TANGIBILITY, RISK, SIZE and GROWTH.
- The multiple regression analysis shows that, the adjusted coefficient of determination, R-Square = 0.905%. This means 0.905% of the variability in dependent variable STD is explained by all of the independent variables together, AGE, LIQUIDITY, PROFITABILITY, TANGIBILITY, RISK, SIZE and GROWTH.
- For the variable " AGE ", the t-test =0.853509, the P-value (Sig.) =0.3995, which is greater than 0.05, hence this variable is statistically insignificant. Since the sign of the test is positive, then there is insignificant positive effect of the variable AGE on STD.
- For the variable " LIQUIDITY ", the t-test =-1.896892, the P-value (Sig.) =0.0332, which is smaller than 0.05, hence this variable is statistically significant. Since the sign of the test is negative, then there is negative effect of the variable LIQUIDITY on STD.
- For the variable " PROFITABILITY ", the t-test =-1.234685, the P-value (Sig.) =0.2257, which is greater than 0.05, hence this variable is statistically insignificant. Since the sign of the test is negative, then there is insignificant negative effect of the variable PROFITABILITY on STD.
- For the variable " TANGIBILITY ", the t-test =-2.754865, the P-value (Sig.) =0.0095, which is smaller than 0.05, hence this variable is statistically significant. Since the sign of the test is negative, then there is negative effect of the variable TANGIBILITY on STD.
- For the variable " RISK ", the t-test =0.757250, the P-value (Sig.) =0.4543, which is greater than 0.05, hence this variable is statistically insignificant. Since the sign of the test is positive, then there is insignificant positive effect of the variable RISK on STD.

- For the variable " SIZE ", the t-test =1.399100, the P-value (Sig.) =0.1711, which is greater than 0.05, hence this variable is statistically insignificant. Since the sign of the test is positive, then there is insignificant positive effect of the variable SIZE on STD.
- For the variable " GROWTH ", the t-test =-1.047300, the P-value (Sig.) =0.3026, which is greater than 0.05, hence this variable is statistically insignificant. Since the sign of the test is negative, then there is insignificant negative effect of the variable GROWTH on STD.
- In addition, based on the P-value (Sig.), the most significant independent variable is TANGIBILITY, then LIQUIDITY, then SIZE, then PROFITABILITY, then GROWTH , then AGE and RISK.

**The regression equation is:**

$$STD = -1.373 + 0.007 * (AGE) - 0.010 * (LIQUIDITY) - 0.401 * (PROFITABILITY) - 0.859 * (TANGIBILITY) + 0.000 * (RISK) + 0.131 * (SIZE) - 0.047 * (GROWTH).$$

**Table (25): The Regression Analysis: STD - SERVICES SECTOR**

Variable	Coefficient	T-Statistic	Prob.
Constant	-1.373081	-0.809044	0.4243
AGE	0.007641	0.853509	0.3995
LIQUIDITY	-0.010430	-1.891779	0.0332*
PROFITABILITY	-0.401455	-1.234685	0.2257
TANGIBILITY	-0.858948	-2.754865	0.0095*
RISK	0.00006	0.757250	0.4543
SIZE	0.131578	1.399100	0.1711
GROWTH	-0.047130	-1.047300	0.3026
F= 33.117 P-value (Sig.) = 0.000 R-Square = 0.905			

\* The variable is statistically significant at 0.05 level

### 5.3.5.2 Regression Model for LTD:

Table (26) shows the ANOVA result, regression coefficients and their P-values (Sig.).

- The Analysis of Variance for the regression model shows that F=2.640, P-value (Sig.) = 0.011, so there is a significant relationship between the dependent variable LTD and all of the independent variables AGE, LIQUIDITY, PROFITABILITY, TANGIBILITY, RISK, SIZE and GROWTH.
- The multiple regression analysis shows that, the adjusted coefficient of determination, R-Square = 0.328%. This means 0.328% of the variability in

dependent variable LTD is explained by all of the independent variables together, AGE, LIQUIDITY, PROFITABILITY, TANGIBILITY, RISK, SIZE and GROWTH.

- For the variable " AGE ", the t-test =0.071953, the P-value (Sig.) =0.9431, which is greater than 0.05, hence this variable is statistically insignificant. Since the sign of the test is positive, then there is insignificant positive effect of the variable AGE on LTD.
- For the variable " LIQUIDITY ", the t-test =1.270146, the P-value (Sig.) =0.2129, which is smaller than 0.05, hence this variable is statistically significant. Since the sign of the test is positive, then there is positive effect of the variable LIQUIDITY on LTD.
- For the variable " PROFITABILITY ", the t-test =-1.125369, the P-value (Sig.) =0.2686, which is greater than 0.05, hence this variable is statistically insignificant. Since the sign of the test is negative, then there is insignificant negative effect of the variable PROFITABILITY on LTD.
- For the variable " TANGIBILITY ", the t-test =0.934193, the P-value (Sig.) =0.3570, which is greater than 0.05, hence this variable is statistically insignificant. Since the sign of the test is positive, then there is insignificant positive effect of the variable TANGIBILITY on LTD.
- For the variable " RISK ", the t-test =0.720966, the P-value (Sig.) =0.4760, which is greater than 0.05, hence this variable is statistically insignificant. Since the sign of the test is positive, then there is insignificant positive effect of the variable RISK on LTD.
- For the variable " SIZE ", the t-test =0.695107, the P-value (Sig.) =0.4919, which is greater than 0.05, hence this variable is statistically insignificant. Since the sign of the test is positive, then there is insignificant positive effect of the variable SIZE on LTD.
- For the variable " GROWTH ", the t-test =-0.039206, the P-value (Sig.) =0.9690, which is greater than 0.05, hence this variable is statistically insignificant. Since the sign of the test is negative, then there is insignificant negative effect of the variable GROWTH on LTD.
- In addition, based on the P-value (Sig.), the most significant independent variable is LIQUIDITY, then PROFITABILITY, then TANGIBILITY, then RISK, then SIZE , then AGE and GROWTH.

The regression equation is:

$$LTD = -1.331 + 0.000 * (AGE) + 0.007 * (LIQUIDITY) - 0.395 * (PROFITABILITY) + 0.314 * (TANGIBILITY) + 0.000 * (RISK) + 0.071 * (SIZE) - 0.002 * (GROWTH).$$

**Table (26): The Regression Analysis: LTD - SERVICES SECTOR**

Variable	Coefficient	T-Statistic	Prob.
Constant	-1.331245	-0.726664	0.4726
AGE	0.000695	0.071953	0.9431
LIQUIDITY	0.007559	1.270146	0.2129
PROFITABILITY	-0.394981	-1.125369	0.2686
TANGIBILITY	0.314415	0.934193	0.3570
RISK	0.00007	0.720966	0.4760
SIZE	0.070564	0.695107	0.4919
GROWTH	-0.001904	-0.039206	0.9690
F= 2.640 P-value (Sig.) = 0.011 R-Square = 0.328			

\* The variable is statistically significant at 0.05 level

### 5.3.5.3 Regression Model for TD:

Table (27) shows the ANOVA result, regression coefficients and their P-values (Sig.).

- The Analysis of Variance for the regression model shows that F=12.121, P-value (Sig.) = 0.000, so there is a significant relationship between the dependent variable **TD** and all of the independent variables AGE, LIQUIDITY, PROFITABILITY, TANGIBILITY, RISK, SIZE and GROWTH.
- The multiple regression analysis shows that, the adjusted coefficient of determination, R-Square = 0.811%. This means 0.811% of the variability in dependent variable **TD** is explained by all of the independent variables together, AGE, LIQUIDITY, PROFITABILITY, TANGIBILITY, RISK, SIZE and GROWTH.
- For the variable " AGE ", the t-test =0.545592, the P-value (Sig.) =0.5904, which is greater than 0.05, hence this variable is statistically insignificant. Since the sign of the test is positive, then there is insignificant positive effect of the variable AGE on **TD**.
- For the variable " LIQUIDITY ", the t-test =0.005049, the P-value (Sig.) =0.9960, which is greater than 0.05, hence this variable is statistically insignificant. Since the sign of the test is positive, then there is insignificant positive effect of the variable LIQUIDITY on **TD**.
- For the variable " PROFITABILITY ", the t-test =-1.381947, the P-value (Sig.) =0.1797, which is greater than 0.05, hence this variable is statistically insignificant.

Since the sign of the test is negative, then there is insignificant negative effect of the variable PROFITABILITY on **TD**.

- For the variable " TANGIBILITY ", the t-test =-0.707189, the P-value (Sig.) =0.4863, which is greater than 0.05, hence this variable is statistically insignificant. Since the sign of the test is negative, then there is insignificant negative effect of the variable TANGIBILITY on **TD**.
- For the variable " RISK ", the t-test =1.800364, the P-value (Sig.) =0.0422, which is smaller than 0.05, hence this variable is statistically significant. Since the sign of the test is positive, then there is positive effect of the variable RISK on **TD**.
- For the variable " SIZE ", the t-test =-0.173943, the P-value (Sig.) =0.8634, which is greater than 0.05, hence this variable is statistically insignificant. Since the sign of the test is negative, then there is insignificant negative effect of the variable SIZE on **TD**.
- For the variable " GROWTH ", the t-test =-1.208214, the P-value (Sig.) =0.2387, which is greater than 0.05, hence this variable is statistically insignificant. Since the sign of the test is negative, then there is insignificant negative effect of the variable GROWTH on **TD**.
- In addition, based on the P-value (Sig.), the most significant independent variable is PROFITABILITY, then SIZE, then GROWTH, then LIQUIDITY, then AGE, then RISK and TANGIBILITY.

**The regression equation is:**

$$\mathbf{TD = 1.046 + 0.008 * (AGE) + 0.000 * (LIQUIDITY) - 0.414 * (PROFITABILITY) - 0.278 * (TANGIBILITY) + 0.000 * (RISK) - 0.028 * (SIZE) - 0.069 * (GROWTH).}$$

Table (27): The Regression Analysis: TD - SERVICES SECTOR

Variable	Coefficient	T-Statistic	Prob.
Constant	1.045746	0.371034	0.7139
AGE	0.008060	0.545592	0.5904
LIQUIDITY	0.00008	0.005049	0.9960
PROFITABILITY	-0.413849	-1.381947	0.1797
TANGIBILITY	-0.278455	-0.707189	0.4863
RISK	0.000151	1.800364	0.0422*
SIZE	-0.028003	-0.173943	0.8634
GROWTH	-0.068869	-1.208214	0.2387
F= 12.121 P-value (Sig.) = 0.000 R-Square = 0.811			

\* The variable is statistically significant at 0.05 level

#### **5.3.5.4 Discussion of Services Sector Results**

In this sector the result differs than the other variables: (Age, Liquidity, Profitability, Tangibility, Risk, Size and Growth) There are insignificant relationships with STD, LTD and TD. Liquidity and tangibility have negative significance with STD. Risk has positive significance with TD. This means that capital structure in the service sector can be determined by liquidity and tangibility but other factors cannot.

There is a negative significant relationship between liquidity and STD which confirms the three theories: Trade-off Model, Pecking Order Theory, Agency Theories. This result suggests that firms with higher earnings will tend to borrow less. In addition, when firms have low earnings volatility they prefer long-term debt to keep a relatively constant structure of capital. This is consistent with results reported in Masoud, (2014) and Sbeiti, (2010).

There is a negative significant relationship between tangibility and STD, which confirms the agency theory which states that small services firms, in terms of fixed assets, access debt in order to ensure close monitoring from lenders. This result is supported by Abu Moumer (2011).

Risk is positively related to TD, rejecting the trade-off assumption. In general, companies facing high risk should choose a capital structure with low proportion of debt in order to meet their financial obligations. This result differs with Emad & Alokdeh, (2011) and Abu Mouamer (2011).

## Summary of Testing hypothesis

H1: There is negative significant relationship between Age and Capital Structure (LTD, STD, TD).

H2: There is negative significant relationship between Liquidity and Capital Structure (LTD, STD, TD).

H3: There is negative significant relationship between Profitability and Capital Structure (LTD, STD, TD).

H4: There is a negative significant relationship between Tangibility Opportunities and Capital Structure (LTD, STD, TD).

H5: There is negative significant relationship between Risk and Capital Structure (LTD, STD, TD).

H6: There is positive significant relationship between size and Capital Structure (LTD, STD, TD).

H7: There is negative significant relationship between Growth and Capital Structure (LTD, STD, TD).

**Table (28) : Summary of Testing hypothesis**

Variable	BANKING SECTOR			INDUSTRIES SECTOR			INSURANCE SECTOR			INVESTING SECTOR			SERVICES SECTOR		
	STD	LTD	TD	STD	LTD	TD	STD	LTD	TD	STD	LTD	TD	STD	LTD	TD
Age	Insig -	Insig -	Insig -	Sig +	Insig -	Insig +	Sig +	Sig -	Sig -	Insig +	Insig -	Insig +	Insig +	Insig +	Insig +
Liquidity	Sig -	Sig +	Sig -	Insig +	Sig -	Insig -	Sig -	Sig +	Insig +	Sig -	Insig +	Insig -	Sig -	Insig +	Insig +
Profitability	Insig -	Sig +	Insig -	Insig -	Sig -	Sig -	Sig -	Insig +	Insig -	Sig -	Insig +	Sig -	Insig -	Insig -	Insig -
Tangibility	Insig +	Insig -	Insig -	Sig -	Insig -	Sig -	Sig -	Sig +	Insig -	Sig -	Sig +	Insig -	Sig -	Insig +	Insig -
Risk	Insig +	Insig -	Insig +	Insig +	Insig -	Sig -	Insig -	Insig +	Insig -	Insig -	Insig -	Insig -	Insig +	Insig +	Sig +
Size	Insig +	Insig +	Sig +	Insig -	Insig +	Insig +	Sig -	Insig -	Insig -	Sig +	Insig +	Sig +	Insig +	Insig +	Insig -
Growth	Insig -	Insig +	Sig +	Insig -	Insig +	Sig +	Sig -	Insig -	Insig -	Insig -	Insig -	Insig -	Insig -	Insig -	Insig -
All variable	Sig	Sig	Sig	Sig	Sig	Sig	Sig	Sig	Sig	Sig	Sig	Sig	Sig	Sig	Sig

(+) : Positive effect

(-) : Negative effect

(Sig) : Significant relationship

(Insig): Insignificant relationship

## **Chapter 6**

### **Results And Recommendation**

## **6 Results And Recommendation**

### **6.1 The results**

After the analysis and testing of hypotheses the study reached to the following results:

#### **6.1.1 Banking Sector:**

- Significant relationship between liquidity and capital structure.
- Significant relationship between profitability and long-term debt
- Significant relationship between size and total debt

#### **6.1.2 Industries Sector:**

- Significant relationship between age, tangibility with STD
- Significant relationship between liquidity, profitability with LTD.
- Significant relationship between profitability, tangibility, growth with TD

#### **6.1.3 Insurance Sector:**

- Significant relationship between all variables except for size with STD.
- Significant relationship between age, tangibility, liquidity and LTD
- Significant relationship between age and TD.

#### **6.1.4 Investing Sector:**

- Significant relationship between liquidity, profitability, size , Tangibility with STD.

#### **6.1.5 Services Sector:**

- Significant relationship between liquidity, tangibility with STD
- Significant relationship between risk with TD.

## **6.2 The recommendations**

The study provides useful recommendations for policy direction and management of firms. It can propose a set of recommendations related to the identification and practical framework of financial decision-making in the process of determining the optimal mix of the capital structure, which achieves better expected returns for companies listed on the Palestine Exchange:

- There is an inverse relationship between liquidity and short-term debt for all sectors which calls for companies to finance the future expansion of their investment.
- Based on the result of age with capital structure, The study advises companies to maintain a good reputation throughout all stages of their lives to retain the advantage of access to debt and take advantage of the leverage in time of need.
- Improve the level of performance of companies in the services sector by focusing on the factors that have been affected by the results of this study: tangibility, liquidity and risk.
- Large companies are highly leveraged because this might be due to the fact that they are able to reduce the risk of bankruptcy. Their greater degree of diversification enables them to obtain debt more easily than smaller companies. So, the researcher advises directors to register their firms as large companies.

## **6.3 Future studies:**

- Examine the variables in this study in other period in the future.

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<http://www.pex.ps/PSEWebSite/AboutPSE.aspx?TabIndex=0>

<http://www.fxnewstoday.ae/arab-markets>

# Appendix

**Table (29): Companies Name (Sample)**

No.	Symbol	Name	Establish Date
<b><i>Services sector</i></b>			
1.	PALTEL	Palestinian Telecommunication Group	1997
2.	PLAZA	Arab Palestinian Shopping Center	1999
3.	WASSEL	Wassel Group	2005
4.	PEC	Palestine Electric Company	1999
5.	AHC	The Arab Hotels Company	1996
6.	ARE	Arab Real Estate Establishment Company	1986
7.	GCOM	Globalcom Telecommunications	2008
8.	NSC	Nablus Specialty Hospital	2000
<b><i>Banks and financial services sector</i></b>			
9.	AIB	Arab Islamic Bank	1995
10.	ISBK	Palestine Islamic Bank	1995
11.	PCB	Palestine Commercial Bank	1992
12.	PIBC	Palestine Investment Bank	1994
13.	TNB	The National Bank	2005
14.	QUDS	Quds Bank	1995
15.	BOP	Bank Of Palestine	1960
<b><i>Insurance sector</i></b>			
16.	NIC	National Insurance Company	1992
17.	AIG	Ahlia Insurance	1994
18.	MIC	Al Mashreq Insurance Co.	1992
19.	TRUST	Trust Palestine	1994
<b><i>Industry sector</i></b>			
20.	APC	Arab Company for Paint Products	1989
21.	JPH	Jerusalem Pharmaceuticals Co Ltd	1969
22.	NCI	The National Carton Industry	1989
23.	BPC	Birzeit Pharmaceuticals Company	1974
24.	AZIZA	Palestine Poultry Company L.T.D	1997
25.	JCC	Jerusalem Cigarette Co. LTD	1964
26.	LADAEN	Palestine Plastic Industrial Company	1999
27.	VOIC	The Vegetable Oil Industries Company	1953
28.	GMC	Golden Wheat Mills	1995
<b><i>Investment sector</i></b>			
29.	UCI	Union Construction And investment	2008
30.	PID	Palestine Investment & development Co.	1993
31.	JREI	Jerusalem Real Estate Investment Co.	1996
32.	ARAB	Arab Investors Co. LTD	1994
33.	PIIC	Palestine Industrial Investment Company	1953
34.	PRICO	The Palestine Real Estate Investment	1994
35.	PADICO	Padico Holding	1993



## First: Statistical Analysis

### First: BANKING SECTOR

Dependent Variable: STD?

Method: Pooled Least Squares

Date: 07/29/15 Time: 10:00

Sample: 2009 2014

Included observations: 6

Cross-sections included: 7

Total pool (balanced) observations: 42

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.038180	1.002137	-0.038098	0.9699
AGE?	-0.011862	0.011994	-0.989056	0.3311
LIQUIDITY?	-0.220135	0.042400	-5.191878	0.0000
PROFITABILITY?	-2.621845	2.035527	-1.288042	0.2083
TANGIBILITY?	0.002821	0.703235	0.004012	0.9968
RISK?	0.000430	0.000643	0.668541	0.5093
SIZE?	0.072954	0.063058	1.156935	0.2571
GROWTH?	-0.101097	0.076695	-1.318166	0.1981
Fixed Effects				
(Cross)				
_ISBK--C	-0.086096			
_AIB--C	-0.156578			
_BOP--C	0.448553			
_PCB--C	0.010781			
_PIBC--C	-0.068543			
_QUDS--C	-0.011093			
_TNB--C	-0.137023			

### Effects Specification

#### Cross-section fixed (dummy variables)

R-squared	0.970429	Mean dependent var	0.661986
Adjusted R-squared	0.956699	S.D. dependent var	0.242037
S.E. of regression	0.050365	Akaike info criterion	-2.877830
Sum squared resid	0.071026	Schwarz criterion	-2.298607
Log likelihood	74.43443	Hannan-Quinn criter.	-2.665522
F-statistic	70.68138	Durbin-Watson stat	2.807885
Prob(F-statistic)	0.000000		

Dependent Variable: LTD?  
 Method: Pooled Least Squares  
 Date: 07/26/15 Time: 11:44  
 Sample: 2009 2014  
 Included observations: 6  
 Cross-sections included: 6  
 Total pool (balanced) observations: 36

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-1.433331	1.131970	-1.266227	0.2181
AGE?	-0.005901	0.008293	-0.711569	0.4839
LIQUIDITY?	0.108774	0.025708	4.231092	0.0003
PROFITABILITY?	2.120657	1.170559	1.811662	0.0831
TANGIBILITY?	-0.063133	0.423086	-0.149220	0.8827
RISK?	-0.000295	0.000336	-0.877206	0.3894
SIZE?	0.068730	0.063991	1.074062	0.2939
GROWTH?	0.021831	0.045769	0.476996	0.6379
Fixed Effects				
(Cross)				
_AIB--C	-0.201040			
_BOP--C	-0.140255			
_PCB--C	0.095441			
_PIBC--C	0.152293			
_QUDS--C	0.071517			
_TNB--C	0.022044			
Effects Specification				
Cross-section fixed (dummy variables)				
R-squared	0.661728	Mean dependent var	0.036347	
Adjusted R-squared	0.485238	S.D. dependent var	0.036429	
S.E. of regression	0.026137	Akaike info criterion	-4.176751	
Sum squared resid	0.015712	Schwarz criterion	-3.604924	
Log likelihood	88.18151	Hannan-Quinn criter.	-3.977168	
F-statistic	3.749388	Durbin-Watson stat	2.562350	
Prob(F-statistic)	0.003164			

Dependent Variable: TD?  
 Method: Pooled Least Squares  
 Date: 07/26/15 Time: 11:47  
 Sample: 2009 2014  
 Included observations: 6  
 Cross-sections included: 6  
 Total pool (balanced) observations: 36

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-1.157747	0.427795	-2.706314	0.0126
AGE?	-0.001159	0.003134	-0.369830	0.7149
LIQUIDITY?	-0.025357	0.009716	-2.609951	0.0157
PROFITABILITY?	-0.590436	0.442378	-1.334688	0.1950
TANGIBILITY?	-0.122644	0.159893	-0.767041	0.4509
RISK?	2.25E-05	0.000127	0.176959	0.8611
SIZE?	0.093346	0.024183	3.859944	0.0008
GROWTH?	0.061736	0.017297	3.569187	0.0016
Fixed Effects				
(Cross)				
_AIB--C	-0.308588			
_BOP--C	-0.286049			
_PCB--C	0.043815			
_PIBC--C	0.239146			
_QUDS--C	0.127304			
_TNB--C	0.184372			

#### Effects Specification

##### Cross-section fixed (dummy variables)

R-squared	0.998973	Mean dependent var	0.671319
Adjusted R-squared	0.998437	S.D. dependent var	0.249851
S.E. of regression	0.009878	Akaike info criterion	-6.122895
Sum squared resid	0.002244	Schwarz criterion	-5.551068
Log likelihood	123.2121	Hannan-Quinn criter.	-5.923312
F-statistic	1864.228	Durbin-Watson stat	1.844347
Prob(F-statistic)	0.000000		

## Second: INDUSTRIES SECTOR

Dependent Variable: STD?

Method: Pooled Least Squares

Date: 07/26/15 Time: 12:30

Sample (adjusted): 2011 2014

Included observations: 4 after adjustments

Cross-sections included: 9

Total pool (balanced) observations: 36

Convergence achieved after 16 iterations

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.330907	0.630415	0.524904	0.6061
AGE?	0.012028	0.005600	2.147698	0.0456
LIQUIDITY?	0.000298	0.001882	0.158591	0.8758
PROFITABILITY?	-0.091066	0.098468	-0.924834	0.3673
TANGIBILITY?	-0.552147	0.197327	-2.798137	0.0119
RISK?	0.000101	0.000134	0.755747	0.4596
SIZE?	-0.008429	0.041320	-0.204001	0.8406
GROWTH?	-0.029229	0.017628	-1.658059	0.1146
AR(1)	0.336276	0.198868	1.690945	0.1081
AR(2)	-0.420141	0.122820	-3.420782	0.0030
Fixed Effects				
(Cross)				
_JPH--C	-0.263111			
_APC--C	0.028678			
_BPC--C	-0.207622			
_NCI--C	-0.114890			
_VOICE--C	-0.364888			
_LADAEN--C	0.268406			
_AZIZA--C	0.503469			
_JCC--C	0.091078			
_GMC--C	0.058880			

### Effects Specification

#### Cross-section fixed (dummy variables)

R-squared	0.982892	Mean dependent var	0.211898
Adjusted R-squared	0.966734	S.D. dependent var	0.153049
S.E. of regression	0.027915	Akaike info criterion	-4.012478
Sum squared resid	0.014026	Schwarz criterion	-3.220718
Log likelihood	90.22460	Hannan-Quinn criter.	-3.736132
F-statistic	60.83026	Durbin-Watson stat	2.473378

Prob(F-statistic) 0.000000

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Dependent Variable: LTD?  
Method: Pooled Least Squares  
Date: 07/26/15 Time: 12:16  
Sample: 2009 2014  
Included observations: 6  
Cross-sections included: 9  
Total pool (balanced) observations: 54

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Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.009736	0.542322	-0.017952	0.9858
AGE?	-0.000264	0.003627	-0.072902	0.9423
LIQUIDITY?	-0.000453	0.001558	-0.291068	0.7726
PROFITABILITY?	-0.230183	0.096802	-2.377869	0.0225
TANGIBILITY?	-0.444176	0.125641	-3.535281	0.0011
RISK?	-0.000121	0.000122	-0.993533	0.3267
SIZE?	0.018264	0.036433	0.501302	0.6191
GROWTH?	0.009586	0.010908	0.878762	0.3851
Fixed Effects				
(Cross)				
_JPH--C	-0.008526			
_APC--C	-0.119288			
_BPC--C	-0.022890			
_NCI--C	-0.044522			
_VOICE--C	0.096912			
_LADAEN--C	0.020324			
_AZIZA--C	0.123578			
_JCC--C	-0.005963			
_GMC--C	-0.039625			

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Effects Specification

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Cross-section fixed (dummy variables)

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R-squared	0.691483	Mean dependent var	0.046817
Adjusted R-squared	0.569700	S.D. dependent var	0.057327
S.E. of regression	0.037605	Akaike info criterion	-3.482175
Sum squared resid	0.053737	Schwarz criterion	-2.892846
Log likelihood	110.0187	Hannan-Quinn criter.	-3.254894
F-statistic	5.677984	Durbin-Watson stat	2.812722
Prob(F-statistic)	0.000007		

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Dependent Variable: TD?  
 Method: Pooled Least Squares  
 Date: 07/26/15 Time: 12:33  
 Sample: 2009 2014  
 Included observations: 6  
 Cross-sections included: 9  
 Total pool (balanced) observations: 54

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.409883	0.766711	-0.534599	0.5960
AGE?	0.000876	0.005128	0.170832	0.8653
LIQUIDITY?	-0.003444	0.002203	-1.563613	0.1262
PROFITABILITY?	-0.454159	0.136855	-3.318542	0.0020
TANGIBILITY?	-0.566255	0.177626	-3.187910	0.0029
RISK?	-0.000296	0.000173	-1.711478	0.0951
SIZE?	0.056708	0.051508	1.100954	0.2778
GROWTH?	0.027939	0.015422	1.811670	0.0779
Fixed Effects				
(Cross)				
_JPH--C	-0.126476			
_APC--C	-0.007013			
_BPC--C	-0.174047			
_NCI--C	-0.103950			
_VOICE--C	-0.037985			
_LADAEN--C	0.085960			
_AZIZA--C	0.245335			
_JCC--C	0.250283			
_GMC--C	-0.132108			

#### Effects Specification

##### Cross-section fixed (dummy variables)

R-squared	0.933797	Mean dependent var	0.260266
Adjusted R-squared	0.907664	S.D. dependent var	0.174958
S.E. of regression	0.053164	Akaike info criterion	-2.789674
Sum squared resid	0.107404	Schwarz criterion	-2.200345
Log likelihood	91.32120	Hannan-Quinn criter.	-2.562393
F-statistic	35.73291	Durbin-Watson stat	2.225772
Prob(F-statistic)	0.000000		

### Third: INSURANCE SECTOR

Dependent Variable: STD?  
 Method: Pooled Least Squares  
 Date: 07/26/15 Time: 16:39  
 Sample (adjusted): 2010 2014  
 Included observations: 5 after adjustments  
 Cross-sections included: 4  
 Total pool (balanced) observations: 20  
 Convergence achieved after 3 iterations

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	3.798556	0.543831	6.984813	0.0001
AGE?	0.012548	0.003973	3.158437	0.0134
LIQUIDITY?	-0.950808	0.075349	-12.61867	0.0000
PROFITABILITY?	-0.383477	0.183257	-2.092559	0.0697
TANGIBILITY?	-1.213692	0.104927	-11.56704	0.0000
RISK?	-0.000118	0.000428	-0.274937	0.7903
SIZE?	-0.112906	0.031495	-3.584865	0.0071
GROWTH?	-0.008505	0.004054	-2.098123	0.0691
AR(1)	0.000436	0.007767	0.056153	0.9566
Fixed Effects				
(Cross)				
_AIG--C	-0.005026			
_MIC--C	-0.136684			
_NIC--C	0.104451			
_TRUST--C	0.037259			
Effects Specification				
Cross-section fixed (dummy variables)				
R-squared	0.996380	Mean dependent var	0.711731	
Adjusted R-squared	0.991402	S.D. dependent var	0.138178	
S.E. of regression	0.012813	Akaike info criterion	-5.593016	
Sum squared resid	0.001313	Schwarz criterion	-4.995577	
Log likelihood	67.93016	Hannan-Quinn criter.	-5.476390	
F-statistic	200.1549	Durbin-Watson stat	2.436691	
Prob(F-statistic)	0.000000			

Dependent Variable: LTD?  
 Method: Pooled Least Squares  
 Date: 07/26/15 Time: 16:49  
 Sample: 2009 2014  
 Included observations: 6  
 Cross-sections included: 4  
 Total pool (balanced) observations: 24

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.270303	0.544550	0.496378	0.6279
AGE?	-0.005470	0.002887	-1.894956	0.0806
LIQUIDITY?	0.168661	0.006246	27.00161	0.0000
PROFITABILITY?	0.136309	0.180070	0.756978	0.4626
TANGIBILITY?	0.298050	0.088706	3.359961	0.0051
RISK?	0.000443	0.000427	1.036977	0.3187
SIZE?	-0.022711	0.031504	-0.720907	0.4837
GROWTH?	-0.006834	0.004147	-1.648054	0.1233
Fixed Effects				
(Cross)				
_AIG--C	-0.005579			
_MIC--C	0.009846			
_NIC--C	0.009633			
_TRUST--C	-0.013900			
Effects Specification				
Cross-section fixed (dummy variables)				
R-squared	0.989279	Mean dependent var	0.061474	
Adjusted R-squared	0.981033	S.D. dependent var	0.107547	
S.E. of regression	0.014812	Akaike info criterion	-5.283254	
Sum squared resid	0.002852	Schwarz criterion	-4.743312	
Log likelihood	74.39905	Hannan-Quinn criter.	-5.140007	
F-statistic	119.9612	Durbin-Watson stat	2.085383	
Prob(F-statistic)	0.000000			

Dependent Variable: TD?  
 Method: Pooled Least Squares  
 Date: 07/26/15 Time: 16:56  
 Sample: 2009 2014  
 Included observations: 6  
 Cross-sections included: 4  
 Total pool (balanced) observations: 24

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	2.609094	1.507923	1.730257	0.1072
AGE?	-0.019173	0.007993	-2.398596	0.0322
LIQUIDITY?	0.005086	0.017297	0.294032	0.7734
PROFITABILITY?	-0.311074	0.498633	-0.623853	0.5435
TANGIBILITY?	-0.371140	0.245639	-1.510919	0.1547
RISK?	-0.000934	0.001183	-0.788958	0.4443
SIZE?	-0.074340	0.087238	-0.852146	0.4096
GROWTH?	-0.018859	0.011482	-1.642435	0.1245
Fixed Effects				
(Cross)				
_AIG--C	-0.028515			
_MIC--C	0.132302			
_NIC--C	-0.059053			
_TRUST--C	-0.044735			
Effects Specification				
Cross-section fixed (dummy variables)				
R-squared	0.947634	Mean dependent var	0.749752	
Adjusted R-squared	0.907353	S.D. dependent var	0.134749	
S.E. of regression	0.041015	Akaike info criterion	-3.246197	
Sum squared resid	0.021869	Schwarz criterion	-2.706256	
Log likelihood	49.95437	Hannan-Quinn criter.	-3.102951	
F-statistic	23.52544	Durbin-Watson stat	1.798553	
Prob(F-statistic)	0.000001			

#### Fourth: INVESTING SECTOR

Dependent Variable: STD?

Method: Pooled Least Squares

Date: 07/26/15 Time: 17:17

Sample: 2009 2014

Included observations: 6

Cross-sections included: 7

Total pool (balanced) observations: 42

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-1.617989	0.794019	-2.037719	0.0511
AGE?	0.004481	0.003296	1.359544	0.1848
LIQUIDITY?	-0.001319	0.000695	-1.896892	0.0682
PROFITABILITY?	-0.447533	0.152011	-2.944082	0.0064
TANGIBILITY?	-0.264856	0.135902	-1.948866	0.0614
RISK?	-0.000303	0.000757	-0.399856	0.6923
SIZE?	0.114738	0.047660	2.407437	0.0229
GROWTH?	-0.026518	0.028673	-0.924830	0.3630
Fixed Effects				
(Cross)				
_JREI--C	0.165425			
_UCI--C	-0.179191			
_ARAB--C	-0.015066			
_PIIC--C	-0.261092			
_PRICO--C	-0.200675			
_PADICO--C	0.396784			
_PID--C	0.093816			

#### Effects Specification

##### Cross-section fixed (dummy variables)

R-squared	0.951083	Mean dependent var	0.121998
Adjusted R-squared	0.928372	S.D. dependent var	0.105424
S.E. of regression	0.028215	Akaike info criterion	-4.036720
Sum squared resid	0.022291	Schwarz criterion	-3.457497
Log likelihood	98.77112	Hannan-Quinn criter.	-3.824412
F-statistic	41.87688	Durbin-Watson stat	1.965876
Prob(F-statistic)	0.000000		

Dependent Variable: LTD?  
Method: Pooled Least Squares  
Date: 07/26/15 Time: 17:23  
Sample: 2009 2014  
Included observations: 6  
Cross-sections included: 7  
Total pool (balanced) observations: 42

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.357730	0.528669	-0.676662	0.5042
AGE?	-0.000719	0.002194	-0.327733	0.7456
LIQUIDITY?	0.000316	0.000463	0.682774	0.5004
PROFITABILITY?	0.002609	0.101211	0.025774	0.9796
TANGIBILITY?	0.185089	0.090486	2.045501	0.0503
RISK?	-0.000200	0.000504	-0.397563	0.6940
SIZE?	0.019365	0.031733	0.610240	0.5466
GROWTH?	-0.021587	0.019091	-1.130743	0.2678
Fixed Effects				
(Cross)				
_JREI--C	-0.022561			
_UCI--C	-0.077716			
_ARAB--C	-0.092986			
_PIIC--C	0.022062			
_PRICO--C	-0.001699			
_PADICO--C	0.158090			
_PID--C	0.014810			

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.949377	Mean dependent var	0.068186
Adjusted R-squared	0.925874	S.D. dependent var	0.069000
S.E. of regression	0.018786	Akaike info criterion	-4.850211
Sum squared resid	0.009882	Schwarz criterion	-4.270988
Log likelihood	115.8544	Hannan-Quinn criter.	-4.637903
F-statistic	40.39324	Durbin-Watson stat	1.692357
Prob(F-statistic)	0.000000		

Dependent Variable: TD?  
 Method: Pooled Least Squares  
 Date: 07/26/15 Time: 17:27  
 Sample: 2009 2014  
 Included observations: 6  
 Cross-sections included: 7  
 Total pool (balanced) observations: 42

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-1.975719	0.817980	-2.415363	0.0225
AGE?	0.003761	0.003395	1.107902	0.2773
LIQUIDITY?	-0.001003	0.000716	-1.400044	0.1725
PROFITABILITY?	-0.444924	0.156598	-2.841184	0.0083
TANGIBILITY?	-0.079767	0.140004	-0.569750	0.5734
RISK?	-0.000503	0.000780	-0.645092	0.5241
SIZE?	0.134103	0.049098	2.731321	0.0108
GROWTH?	-0.048105	0.029539	-1.628549	0.1146
Fixed Effects				
(Cross)				
_JREI--C	0.142864			
_UCI--C	-0.256907			
_ARAB--C	-0.108052			
_PIIC--C	-0.239030			
_PRICO--C	-0.202374			
_PADICO--C	0.554874			
_PID--C	0.108626			
Effects Specification				
Cross-section fixed (dummy variables)				
R-squared	0.972489	Mean dependent var	0.190185	
Adjusted R-squared	0.959716	S.D. dependent var	0.144819	
S.E. of regression	0.029066	Akaike info criterion	-3.977260	
Sum squared resid	0.023656	Schwarz criterion	-3.398036	
Log likelihood	97.52245	Hannan-Quinn criter.	-3.764951	
F-statistic	76.13667	Durbin-Watson stat	1.770546	
Prob(F-statistic)	0.000000			

**Fifth: SERVICES SECTOR**

Dependent Variable: STD?  
 Method: Pooled Least Squares  
 Date: 07/26/15 Time: 17:40  
 Sample: 2009 2014  
 Included observations: 6  
 Cross-sections included: 8  
 Total pool (balanced) observations: 48

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-1.373081	1.697164	-0.809044	0.4243
AGE?	0.007641	0.008952	0.853509	0.3995
LIQUIDITY?	-0.010430	0.005513	-1.891779	0.0673
PROFITABILITY?	-0.401455	0.325148	-1.234685	0.2257
TANGIBILITY?	-0.858948	0.311793	-2.754865	0.0095
RISK?	6.80E-05	8.98E-05	0.757250	0.4543
SIZE?	0.131578	0.094045	1.399100	0.1711
GROWTH?	-0.047130	0.045001	-1.047300	0.3026
Fixed Effects				
(Cross)				
_GCOM--C	0.271808			
_AHC--C	-0.022131			
_ARE--C	0.047581			
_PALTEL--C	-0.472730			
_PLAZA--C	0.081858			
_WASSAL--C	-0.069727			
_NSC--C	0.465575			
_PEC--C	-0.302233			
Effects Specification				
Cross-section fixed (dummy variables)				
R-squared	0.933552	Mean dependent var	0.372783	
Adjusted R-squared	0.905362	S.D. dependent var	0.282813	
S.E. of regression	0.087003	Akaike info criterion	-1.795452	
Sum squared resid	0.249792	Schwarz criterion	-1.210702	
Log likelihood	58.09086	Hannan-Quinn criter.	-1.574474	
F-statistic	33.11645	Durbin-Watson stat	2.301810	
Prob(F-statistic)	0.000000			

Dependent Variable: LTD?  
 Method: Pooled Least Squares  
 Date: 07/27/15 Time: 09:38  
 Sample: 2009 2014  
 Included observations: 6  
 Cross-sections included: 8  
 Total pool (balanced) observations: 48

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-1.331245	1.831995	-0.726664	0.4726
AGE?	0.000695	0.009664	0.071953	0.9431
LIQUIDITY?	0.007559	0.005951	1.270146	0.2129
PROFITABILITY?	-0.394981	0.350979	-1.125369	0.2686
TANGIBILITY?	0.314415	0.336564	0.934193	0.3570
RISK?	6.99E-05	9.70E-05	0.720966	0.4760
SIZE?	0.070564	0.101516	0.695107	0.4919
GROWTH?	-0.001904	0.048577	-0.039206	0.9690
Fixed Effects				
(Cross)				
_GCOM--C	-0.197160			
_AHC--C	-0.066339			
_ARE--C	0.154906			
_PALTEL--C	-0.205872			
_PLAZA--C	0.063383			
_WASSAL--C	0.182917			
_NSC--C	0.111357			
_PEC--C	-0.043192			
Effects Specification				
Cross-section fixed (dummy variables)				
R-squared	0.528299	Mean dependent var	0.088966	
Adjusted R-squared	0.328183	S.D. dependent var	0.114579	
S.E. of regression	0.093914	Akaike info criterion	-1.642558	
Sum squared resid	0.291058	Schwarz criterion	-1.057808	
Log likelihood	54.42140	Hannan-Quinn criter.	-1.421580	
F-statistic	2.639965	Durbin-Watson stat	1.743853	
Prob(F-statistic)	0.010884			

Dependent Variable: TD?  
 Method: Pooled Least Squares  
 Date: 07/27/15 Time: 09:34  
 Sample (adjusted): 2010 2014  
 Included observations: 5 after adjustments  
 Cross-sections included: 8  
 Total pool (balanced) observations: 40  
 Convergence achieved after 44 iterations

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1.045746	2.818467	0.371034	0.7139
AGE?	0.008060	0.014773	0.545592	0.5904
LIQUIDITY?	8.21E-05	0.016269	0.005049	0.9960
PROFITABILITY?	-0.413849	0.299468	-1.381947	0.1797
TANGIBILITY?	-0.278455	0.393749	-0.707189	0.4863
RISK?	0.000151	8.39E-05	1.800364	0.0844
SIZE?	-0.028003	0.160987	-0.173943	0.8634
GROWTH?	-0.068869	0.057001	-1.208214	0.2387
AR(1)	0.278435	0.143764	1.936754	0.0646
Fixed Effects				
(Cross)				
_GCOM--C	-0.261649			
_AHC--C	0.057346			
_ARE--C	-0.018804			
_PALTEL--C	0.082600			
_PLAZA--C	0.135122			
_WASSAL--C	0.187523			
_NSC--C	-0.129096			
_PEC--C	-0.053042			
Effects Specification				
Cross-section fixed (dummy variables)				
R-squared	0.883396	Mean dependent var	0.411655	
Adjusted R-squared	0.810519	S.D. dependent var	0.181590	
S.E. of regression	0.079045	Akaike info criterion	-1.948421	
Sum squared resid	0.149955	Schwarz criterion	-1.272869	
Log likelihood	54.96842	Hannan-Quinn criter.	-1.704163	
F-statistic	12.12166	Durbin-Watson stat	1.777301	
Prob(F-statistic)	0.000000			

## 7.1 Second: Financial Analysis

### First: Banking Sector:

Bank	Year	STD	LTD	TD	Age	Liquidity	Profitability	Tangibility	Risk	Size	Growth
ISBK	2009	0.244853512	0.030986975	0.275840487	14	3.897248289	0.001239371	0.045745068	26.46217544	19.51640254	0.741127973
	2010	0.277067806	0.031534854	0.30860266	15	3.428420072	0.006972208	0.050095172	5.106653513	19.69422928	0.797418129
	2011	0.305514527	0.03006376	0.335578287	16	3.064096874	0.0127938	0.063873893	3.245565274	19.78849513	0.744486896
	2012	0.280512409	0.029862834	0.310375242	17	3.3762335	0.016975425	0.052924609	2.403595147	19.86314105	0.678856051
	2013	0.282808865	0.036427786	0.319236651	18	3.356870352	0.017842924	0.050647306	2.360946952	20.03461221	0.871890168
	2014	0.338448474	0.027887704	0.366336177	19	2.799195988	0.015836215	0.05261639	2.650662419	20.2045087	0.966098858
AIB	2009	0.315240271	0.019038937	0.334279208	14	2.86476484	0.008938975	0.096910755	3.675590621	19.49793796	1.021893997
	2010	0.297501022	0.020040457	0.317541479	15	3.024941854	-0.005961311	0.100076707	-5.625655414	19.47055057	0.873338876
	2011	0.281316252	0.02368027	0.304996522	16	3.218780149	0.004590895	0.094504832	7.165033843	19.51958819	0.677799958
	2012	0.298596778	0.030964629	0.329561407	17	2.990184305	0.002778335	0.107140601	11.81854163	19.74301274	0.638874771
	2013	0.43236027	-0.062558555	0.369801715	18	2.068998629	0.010562596	0.105447194	2.7948424	19.96784892	0.772622431
	2014	0.287415617	0.092898217	0.380313834	19	3.195107691	0.01019496	0.081676151	2.87683914	20.14684881	0.823739214
BOP	2009	0.860531006	0.021762464	0.88229347	49	1.123712351	0.02694277	0.03301068	1.335690782	20.97155495	2.209816219
	2010	0.851518426	0.042410236	0.893928662	50	1.139712983	0.024421473	0.029513395	1.639003549	21.15831436	2.143281005
	2011	0.833201824	0.049262277	0.882464101	51	1.1614847	0.025313947	0.032248829	1.814791725	21.22643869	1.935701958
	2012	0.84355688	0.046203879	0.889760758	52	1.151074965	0.024927431	0.029002794	1.674729753	21.41865754	1.686820562
	2013	0.842474964	0.050193672	0.892668636	53	1.155543092	0.022588142	0.026483875	1.878268685	21.57684931	1.748380263
	2014	0.860848923	0.023632442	0.884481365	54	1.128304452	0.021304776	0.028700328	1.985030352	21.60900415	1.68316885
PCB	2009	0.678412094	0.116101823	0.794513917	17	1.38097898	0.018957389	0.063127158	1.720403425	18.69854888	0.842032409
	2010	0.661700701	0.175745127	0.837445828	18	1.431903932	0.012573627	0.052508164	2.497332031	18.96006827	0.774598577
	2011	0.798319789	0.035413325	0.833733113	19	1.187928033	0.004931849	0.051653544	7.005251563	18.94424668	0.788100763
	2012	0.812370673	0.036859768	0.849230441	20	1.172996836	0.000333927	0.047091772	98.74180835	19.04216656	0.811811052

Bank	Year	STD	LTD	TD	Age	Liquidity	Profitability	Tangibility	Risk	Size	Growth
	2013	0.853229136	0.026980328	0.880209464	21	1.098788904	0.000840849	0.062481293	32.94815817	19.28481886	0.76204164
	2014	0.838054021	0.031952278	0.870006299	22	1.169838639	0.005505652	0.019612024	5.643413751	19.44798335	0.602563328
PIBC	2009	0.733707748	0.017610528	0.751318276	15	1.192528708	0.019606666	0.125032447	1.789668711	19.31929828	0.909716012
	2010	0.671791117	0.094759679	0.766550796	16	1.370735262	0.007785315	0.079152226	5.121948081	19.39352132	0.865612909
	2011	0.711815278	0.023660667	0.735475945	17	1.22364307	0.012429454	0.128992168	3.28296384	19.31052536	0.825660162
	2012	0.716835542	0.028285696	0.745121238	18	1.189506981	0.009820984	0.147319118	3.979097359	19.37114008	0.722775085
	2013	0.73762581	0.026799957	0.764425767	19	1.214974339	0.00994603	0.103803569	4.095912827	19.47991089	0.695557129
	2014	0.757202493	0.028933907	0.786136401	20	1.16738855	0.011832656	0.116050479	3.118600271	19.58637136	0.781587185
	2009	0.839265692	0.019095665	0.858361357	14	1.086190849	0.012970298	0.088397285	2.935317229	19.61500377	0.945441122
QUDS	2010	0.858277782	0.023482604	0.881760386	15	1.062038055	0.014897189	0.088476334	2.338046994	19.87120225	1.105422706
	2011	0.865671683	0.017627313	0.883298996	16	1.074937745	0.013966369	0.069456833	3.184847226	19.96329524	0.961912903
	2012	0.858424156	0.021000117	0.879424273	17	1.07432088	0.009379554	0.077777005	4.686435404	19.99118403	0.806233456
	2013	0.854834441	0.022971207	0.877805648	18	1.054772046	0.01369621	0.098344528	3.140584399	20.09191596	0.632129861
	2014	0.877670827	0.016934387	0.894605214	19	1.016934278	0.015287545	0.107466451	2.772720725	20.32183583	0.662676123
	2009	0.804493332	0.018687217	0.823180549	4	1.135166776	0.014041634	0.086765898	2.350403978	18.90718396	0.701912122
TNB	2010	0.789191815	0.029115857	0.818307672	5	1.163177821	0.001334813	0.082029585	23.69385609	18.87898961	0.826510472
	2011	0.841558978	0.040172345	0.881731323	6	1.083398528	0.003145775	0.088256243	7.462245362	19.32651347	0.769195148
	2012	0.796826344	0.056913608	0.853739953	7	1.129887585	0.00860697	0.099675806	3.142875733	19.67598344	0.791234241
	2013	1.07432203	-0.178110029	0.896212001	8	0.835097119	0.009668151	0.102836768	2.569047016	20.08763063	0.806923468
	2014	0.638023339	0.244298207	0.882321546	9	1.436111023	0.008716447	0.08372765	2.848518059	20.33746818	1.050339022

**Second: Industries Sector:**

Firm	Year	STD	LTD	TD	Age	Liquidity	Profitability	Tangibility	Risk	Size	Growth
<b>JPH</b>	2009	0.097809608	0.046501293	0.144310901	40	6.399858858	0.076250337	0.374032311	6.133636343	17.3889574	0.959529542
	2010	0.135805685	0.072260472	0.208066157	41	4.631321448	0.09114106	0.371040216	5.050104279	17.56467545	0.902964875
	2011	0.138473885	0.12182876	0.260302645	42	4.025000444	0.058106836	0.44264255	6.856403428	17.73777418	0.918212453
	2012	0.175666738	0.134607287	0.310274025	43	2.977977832	0.016926613	0.476868348	21.84505565	17.7047872	1.088895128
	2013	0.180626739	0.120682099	0.301308838	44	3.103946577	0.046077415	0.439344251	8.859861183	17.80327312	1.23555067
	2014	0.002178565	0.001017698	0.003196263	45	110.1414143	0.000341563	0.760049789	12.0519607	22.47500966	0.94895048
<b>APC</b>	2009	0.224338877	0.023933427	0.248272304	20	3.365121741	0.123856886	0.245072367	5.950251006	15.13716696	1.178355361
	2010	0.329055774	0.02688362	0.355939394	21	2.449211712	0.191216629	0.194072745	3.839087518	15.46788836	1.45157072
	2011	0.356254887	0.027361768	0.383616655	22	2.21967666	0.130816792	0.209229342	6.585478364	15.4873251	2.049586381
	2012	0.334485521	0.030656511	0.365142032	23	2.260047849	0.133041637	0.244046719	5.993445813	15.55505676	2.431987425
	2013	0.283169349	0.034751764	0.317921112	24	2.703196445	0.185134136	0.234537623	4.625085712	15.62184965	1.963066321
	2014	0.265705609	0.038178677	0.303884286	25	2.930313656	0.134116905	0.221399225	6.907236557	15.63499891	2.586415402
<b>BPC</b>	2009	0.103659436	0.066270249	0.169929685	35	5.239394496	0.132136835	0.456887322	3.433170329	17.71977514	2.321016958
	2010	0.096109786	0.070275499	0.166385285	36	5.543315133	0.112695476	0.467233169	3.699155161	17.79215913	2.072479445
	2011	0.132060941	0.074206109	0.206267051	37	4.182293462	0.095449946	0.447682389	3.94681759	17.86676975	1.906189501
	2012	0.120426254	0.075322375	0.195748629	38	4.529056384	0.105259876	0.454582704	3.634166043	17.90916618	1.565256114
	2013	0.114241743	0.083869699	0.198111442	39	4.860103816	0.102655394	0.44477327	3.779554568	17.98609213	1.38844979
	2014	0.151707793	0.084938314	0.236646107	40	3.807862453	0.067458202	0.422317592	5.299076271	18.06062655	1.544410484
<b>NCI</b>	2009	0.110999025	0.018267654	0.12926668	20	3.657519666	-0.005337782	0.594018882	-105.4721538	15.60281368	0.589164116
	2010	0.091395089	0.01267348	0.104068569	21	6.199267732	0.027393257	0.433417375	26.18533622	15.59787739	0.822939908
	2011	0.048582901	0.016535416	0.065118317	22	12.1890624	0.004827135	0.407819983	140.9058947	15.56279815	0.97518179
	2012	0.076968475	0.017097382	0.094065857	23	7.394767393	0.020219682	0.43083603	37.92866103	15.61260461	0.75811537
	2013	0.120034474	0.018183702	0.138218176	24	4.801913753	0.099228095	0.423604809	8.693755357	15.71442987	0.837699444
	2014	0.130563639	0.021406838	0.151970477	25	4.249636599	0.073797409	0.445151981	13.2774681	15.70847191	1.221122018

Firm	Year	STD	LTD	TD	Age	Liquidity	Profitability	Tangibility	Risk	Size	Growth
<b>VOICE</b>	2009	0.124671148	0.023666366	0.148337514	56	1.830587251	0.132222267	0.771778586	2.393587541	16.51907643	1.152706337
	2010	0.10256102	0.023057684	0.125618704	57	2.623255077	0.020184274	0.730956284	13.87264399	16.66207007	1.487511427
	2011	0.044349244	0.023065739	0.067414984	58	5.662132887	0.151501547	0.748888684	1.835249681	16.70543039	1.626430908
	2012	0.035903019	0.022622833	0.058525852	59	6.829975702	0.186518147	0.754783251	1.382065703	16.84559284	1.66050865
	2013	0.035543495	0.032143186	0.067686681	60	6.453976937	0.236815765	0.770603103	1.033534884	17.23394514	1.520997875
	2014	0.054988453	0.004836764	0.059825217	61	5.044444873	0.263092287	0.722613782	0.828334476	17.10859968	2.480412116
<b>LADAEN</b>	2009	0.161437092	0.003524761	0.164961853	10	1.758574653	0.111720855	0.716100822	-2.278934579	15.79027845	0.736082578
	2010	0.220685504	0.004493794	0.225179298	11	1.520420357	-0.073021836	0.664465267	-4.322238716	15.77506093	1.208180395
	2011	0.176141771	0.006349557	0.182491328	12	1.824550221	0.109786567	0.678620493	-3.289182523	15.59542058	1.334262101
	2012	0.22572581	0.007773301	0.233499111	13	1.590747675	-0.15830687	0.640927192	-2.079509349	15.4720962	1.223212013
	2013	0.239718248	0.045047311	0.28476556	14	1.562673165	-0.181467211	0.625398726	-2.012171978	15.31520886	1.653928593
	2014	0.312778589	0.039710844	0.352489432	15	1.205032564	-0.000183286	0.623091615	-1.929854555	15.16543468	1.639712463
<b>AZIZA</b>	2009	0.301364073	0.151714212	0.453078285	12	1.061753551	0.037740154	0.680025625	28.86740479	16.80645977	1.173390401
	2010	0.367525473	0.173041861	0.540567334	13	0.933788138	-0.004527332	0.656809073	-229.4649714	16.93332923	3.164874407
	2011	0.422066657	0.177433013	0.59949967	14	0.841668859	-0.046825266	0.644759639	-26.16460888	16.91368028	4.251303013
	2012	0.396006711	0.252364455	0.648371166	15	0.79251366	-0.039311644	0.686159272	-26.59529988	16.88529575	3.807036154
	2013	0.28735223	-0.136365112	0.150987118	16	0.262388662	0.165549552	0.924602033	6.299810576	17.39490804	1.97599717
	2014	0.3282448	0.062093837	0.390338637	17	0.392736881	0.124946845	0.871086161	9.914340751	17.34356989	2.591527258
<b>JCC</b>	2009	0.551584257	0.02074697	0.572331227	45	0.78009153	0.080902006	0.569713793	24.99163394	17.55855144	2.446369915
	2010	0.586182654	0.053241741	0.639424395	46	0.869435948	0.032714096	0.490351729	59.51231299	17.85762487	1.906286802
	2011	0.50701454	0.0825332	0.58954774	47	0.986436048	0.008188284	0.499862581	196.2226825	17.90227528	1.570479298
	2012	0.462268155	0.062765054	0.525033209	48	0.952952265	0.049068272	0.559480515	42.94120614	17.95072514	0.76478581
	2013	0.511883776	0.045957502	0.557841278	49	0.763447253	0.015946604	0.609203737	119.8654439	17.98380617	0.832902968
	2014	0.553389175	0.013487037	0.566876212	50	0.759972092	0.06707828	0.579439671	18.52618986	17.78677316	0.774515791
<b>GMC</b>	2009	0.15425528	0.017892236	0.172147516	14	2.835939003	0.016988081	0.562541434	20.78423888	17.07338691	1.17833734

Firm	Year	STD	LTD	TD	Age	Liquidity	Profitability	Tangibility	Risk	Size	Growth
	2010	0.13844261	0.012627496	0.151070106	15	3.392607404	0.071589488	0.530318577	5.482255593	17.14404805	0.966204564
	2011	0.039756863	0.013569255	0.053326119	16	10.60816247	0.070427347	0.578252735	7.595267397	17.05732923	1.246218869
	2012	0.146794688	0.014102689	0.160897377	17	3.269566697	0.02896052	0.520044977	14.02959156	17.15063142	1.116176645
	2013	0.123246816	0.018046562	0.141293378	18	3.702051155	0.018617587	0.543733984	24.24682733	17.09816124	1.095713954
	2014	0.094017018	0.018866619	0.112883637	19	4.825909786	0.017107448	0.546282355	32.25708807	17.07523237	2.548531189

### Third Insurance Sector:

Firm	Year	STD	LTD	TD	Age	Liquidity	Profitability	Tangibility	Risk	Size	Growth
AIG	2009	0.708166694	0.027320196	0.73548689	15	0.669490632	0.048999166	0.525889032	1.037111124	17.71464067	2.127454582
	2010	0.73205653	0.032348519	0.764405049	16	0.731137653	0.000734694	0.464765907	8.037134048	17.72525268	1.771938014
	2011	0.70948346	0.031367965	0.740851425	17	0.647669037	0.034481602	0.54048953	0.430639508	17.7545802	0.866044332
	2012	0.724890184	0.027505854	0.752396038	18	0.804674481	-0.012488091	0.416699368	0.551717396	17.75117145	0.820426991
	2013	0.654657586	0.029735603	0.68439319	19	0.943702148	0.040321703	0.38219823	-0.640547761	17.74008433	0.473519101
	2014	0.631933874	0.034058844	0.665992718	20	0.889375868	0.049553223	0.437973262	-0.572212131	17.64674077	2.427915261
MIC	2009	0.816614912	0.084039425	0.900654338	17	0.527951821	0.061261927	0.56886667	10.62141278	16.71245108	2.263324532
	2010	0.977699171	0.079488754	1.057187925	18	0.368525651	-0.099758157	0.639692776	-7.916159017	16.54552197	-5.396906296
	2011	0.977382149	0.075953087	1.053335236	19	0.382666064	-0.056179635	0.625989019	-12.59182679	16.43791681	-3.619222804
	2012	0.978520981	0	0.978520981	20	0.526209547	-0.043872815	0.485092918	-10.81357367	16.52336741	0
	2013	0.910473125	0.03653869	0.947011815	21	0.630014268	0.013999917	0.426388941	39.04800511	16.73671377	0
	2014	0.740164201	0.03313234	0.773296541	22	0.713169454	0.019891479	0.472137501	23.31778907	17.0951635	0
NIC	2009	0.156356128	0.556664333	0.713020461	17	3.92796544	0.090151496	0.385838531	0.853491413	17.91223959	1.829290538
	2010	0.675587903	0.028532557	0.70412046	18	1.107190235	0.101939566	0.251995671	3.362478965	18.07296727	1.803999692
	2011	0.66951177	0.032265027	0.701776796	19	1.139003701	0.071441885	0.237423616	4.998078607	18.10431625	1.602304484
	2012	0.623504178	0.036945701	0.66044988	20	1.178825917	0.089709318	0.264997115	4.025415169	18.11187452	1.684450453
	2013	0.619319076	0.037931588	0.657250664	21	1.201849809	0.086361641	0.255671488	3.810943758	18.2058524	1.44598881

Firm	Year	STD	LTD	TD	Age	Liquidity	Profitability	Tangibility	Risk	Size	Growth
	2014	0.573904395	0.047334134	0.621238528	22	1.24948202	0.047628476	0.282916777	7.694569521	18.10931604	1.400390646
<b>TRUST</b>	2009	0.602911734	0.037186851	0.640098585	15	0.633660522	0.023945298	0.617958636	10.67157637	17.80856037	1.341739054
	2010	0.551181344	0.072559677	0.62374102	16	0.740611008	0.034423716	0.59178903	8.615724092	17.94158764	0.961018358
	2011	0.592696573	0.068447579	0.661144152	17	0.805752975	0.026058191	0.522432973	12.23330822	18.12943449	1.168862344
	2012	0.640873724	0.023279904	0.664153628	18	0.787332063	0.027936874	0.495419569	11.84068281	18.18750022	1.051152004
	2013	0.65254703	0.021599197	0.674146227	19	0.757297743	0.046593115	0.505827607	8.579202503	18.25516933	0.942730851
	2014	0.598233628	0.021138774	0.619372402	20	0.807522744	0.041077982	0.516912739	9.471040221	18.36151334	0.260619804

#### Fourth: Investing Sector:

Firm	Year	STD	LTD	TD	Age	Liquidity	Profitability	Tangibility	Risk	Size	Growth
<b>JREI</b>	2009	0.186600234	0.042253149	0.228853383	13	1.321390694	0.012113699	0.753428187	9.774002794	16.43354684	1.057878037
	2010	0.285809141	0.026439915	0.312249056	14	1.170681822	0.045737039	0.665408434	7.162279274	16.60778738	0.79005763
	2010	0.331366006	0.050541453	0.381907458	14	1.094278886	0.033715936	0.637393177	9.573479788	16.71080546	0.861613485
	2010	0.30982985	0.053231747	0.363061597	14	0.940877189	-0.014156777	0.708488162	-7.869653183	16.61761227	0.774084951
	2010	0.370541411	0.02724985	0.397791261	14	0.673744819	-0.110675644	0.750349644	0	16.56608665	0.742976905
	2010	0.318451815	0.080462748	0.398914563	14	0.507886358	-0.060720781	0.838262667	-0.056104071	16.42467582	0.685655151
<b>UCI</b>	2009	0.028610172	0.016529995	0.045140167	1	14.89400428	0.051906454	0.573879972	2.646685698	17.768915	0.506429718
	2010	0.024701225	0.018069731	0.042770957	2	14.13578107	0.038675118	0.650828886	3.73030162	17.73218624	0.5330876
	2011	0.012884982	0.024741404	0.037626387	3	29.78108399	0.039810087	0.616271261	3.067216086	17.75818947	0.509909517
	2012	0.023228238	0.015163507	0.038391745	4	14.86250622	0.017923847	0.654770171	5.233503792	17.53730221	0.544987931
	2013	0.02994341	0.007062762	0.037006172	5	10.91382609	0.010174775	0.673202832	5.965978651	17.53354385	0.441579534
	2014	0.047210647	0.008808323	0.05601897	6	7.458308791	0.01211298	0.647888418	11.52002667	17.56430992	0.335903067
<b>ARAB</b>	2009	0.037019185	0.00529024	0.042309425	15	0.77381397	0.004132311	0.971354037	5.417151864	16.19013853	1.130111626
	2010	0.04773719	0.004223022	0.051960212	16	0.392504605	0.011129283	0.981262933	1.429684535	16.53825259	0.965788768

Firm	Year	STD	LTD	TD	Age	Liquidity	Profitability	Tangibility	Risk	Size	Growth
	2011	0.056957666	0.004976475	0.061934141	17	0.231070931	0.042385433	0.986838739	0.393363182	16.48592584	1.138813843
	2012	0.006990488	0.005929567	0.012920055	18	6.90421083	-0.006212019	0.951736199	-2.866589089	16.41363173	1.010705332
	2013	0.006797663	0.002011918	0.008809581	19	8.978313328	0.008889179	0.93896845	1.967872816	16.42456376	1.387116955
	2014	0.008240544	0.026512533	0.034753076	20	6.8766716	0.054026614	0.943332488	0.340655665	16.37163383	1.426861677
PHIC	2009	0.124092563	0.116845556	0.24093812	56	1.888457836	0.084876577	0.765656426	4.62022048	17.72524724	0.489815384
	2010	0.152339264	0.092701622	0.245040886	57	1.643652504	0.105457696	0.749607187	4.275204792	17.93015683	0.9774672
	2011	0.195832961	0.110214819	0.30604778	58	1.210986972	0.024689212	0.762848835	18.76740827	17.94214012	1.401469773
	2012	0.218665561	0.078572852	0.297238413	59	1.10860462	0.027867941	0.757586349	16.30176046	17.95736519	1.145922419
	2013	0.17495109	0.064562375	0.239513465	60	1.556101474	0.104284715	0.727758351	5.422561136	18.04776608	1.00759313
	2014	0.210691137	0.035425836	0.246116973	61	1.403360853	0.080802215	0.704324307	7.965797654	18.06496799	1.44097513
PRICO	2009	0.09771681	0.125775261	0.223492071	15	1.77400199	0.009929341	0.826650185	6.767631561	18.56761072	0.784413913
	2010	0.140371949	0.114879512	0.255251461	16	1.925138413	0.048919805	0.729764569	5.192269626	18.65076503	0.872459728
	2011	0.214963024	0.091254032	0.306217056	17	1.691329036	0.061244298	0.636426796	3.919392399	18.74144729	0.863135382
	2012	0.197155751	0.09485584	0.292011591	18	1.37652369	0.003946041	0.728610438	35.97511894	18.90545725	0.801761008
	2013	0.19530137	0.138370605	0.333671975	19	1.018603391	-0.016521916	0.801065362	-3.908039194	18.94683077	0.726971821
	2014	0.225548805	0.123699969	0.349248774	20	0.643878079	0.027349227	0.854774069	1.831788015	18.94702612	0.71567927
PADICO	2009	0.134521773	0.172625795	0.307147568	16	0.95259499	0.078265454	0.871855233	1.760980635	13.33779245	0.766029408
	2010	0.118754693	0.154701017	0.273455709	17	0.915974816	0.072974189	0.891223692	2.159871982	13.36606065	0.70610042
	2011	0.121214327	0.215224002	0.336438329	18	0.894915754	0.047795966	0.891523389	2.985373143	13.49815797	0.592069222
	2012	0.132741235	0.226454159	0.359195395	19	0.803530397	0.039112319	0.893338382	3.364306249	13.55899893	0.488668603
	2013	0.151466662	0.204803425	0.356270087	20	0.623094696	0.04496255	0.905621926	3.040209021	13.60314991	0.470640667
	2014	0.127635582	0.229001595	0.356637178	21	0.648965829	0.037757397	0.917168868	3.532507641	13.63139179	0.72951488
PID	2009	0.009851859	0.006772228	0.016624088	16	38.68465795	-0.014414089	0.618884192	-0.445916502	15.19108228	2.45804022
	2010	0.009232142	0.008108946	0.017341088	17	45.92916886	-0.033509367	0.575975392	-0.139697206	15.1582795	2.615440281
	2011	0.010280628	0.009450187	0.019730815	18	35.78985097	-0.034038749	0.632057871	-0.075219071	15.11925759	2.738583697

Firm	Year	STD	LTD	TD	Age	Liquidity	Profitability	Tangibility	Risk	Size	Growth
	2012	0.015102439	0.00954597	0.02464841	19	28.17311915	0.098605856	0.574517177	0.019183455	15.22467322	2.478890446
	2013	0.006084494	0.009988325	0.016072818	20	74.26220813	0.069767217	0.548152077	0.065426399	15.27263244	2.390932098
	2014	0.006486665	0.010499511	0.016986176	21	61.03932056	0.035883048	0.604058398	0.070955382	15.30777304	2.31164252

### Fifth: Services Sector:

Firm	Year	STD	LTD	TD	Age	Liquidity	Profitability	Tangibility	Risk	Size	Growth
GCOM	2009	0.006391349	0.006429343	0.012820692	1	25.0890034	0.104625215	0.83964742	0.050248804	15.95573377	1.328704618
	2010	0.043501006	0.01247901	0.055980016	2	0.946419228	-0.167304097	0.958829811	-0.157934828	15.89444034	1.052941233
	2011	0.389319883	-0.3339094	0.055410483	3	0.375408605	-0.192996814	0.853845966	-0.26748539	15.70729363	0.897433898
	2012	0.062840961	0.029901934	0.092742894	4	0.750815575	-0.197540796	0.952818028	-0.420587465	15.5250953	0.476822865
	2013	0.208285804	0.026048799	0.234334603	5	0.257128859	-0.311041994	0.946443709	-0.320350781	15.36804028	0.403683125
	2014	0.319073022	0.004082695	0.323155717	6	0.152979614	-0.130165181	0.951188332	-0.687753391	15.32933078	0.244094274
AHC	2009	0.155778718	0.001420633	0.157199351	13	0.155633625	-0.017541429	0.975755593	-0.067207556	17.47924549	1.072839599
	2010	0.199459085	0.138720143	0.338179228	14	0.490063548	-0.00322452	0.902252373	-9.131706513	17.72285113	1.378659733
	2011	0.146995809	0.217419444	0.364415253	15	0.471738768	-0.057339077	0.930656378	-2.829336338	17.67564355	1.302047206
	2012	0.231558122	0.165959072	0.397517194	16	0.263692358	-0.030875443	0.938939893	-11.75124532	17.64396759	1.183026957
	2013	0.298032622	0.123882365	0.421914987	17	0.226252667	-0.031999578	0.932569325	-13.90271054	17.63142909	1.006672257
	2014	0.095455824	0.320071759	0.415527582	18	0.602945049	-0.020043053	0.942445384	-95.25107459	17.60576117	1.070943198
ARE	2009	0.041306749	0.022477839	0.063784588	23	14.72484364	0.090261916	0.391764577	5.879258031	14.26329597	0.598124863
	2010	0.585576949	0.008149802	0.593726751	24	1.266326527	-0.144703944	0.258468376	-4.158630769	14.79436823	1.176072379
	2011	0.566359031	0.011703436	0.578062466	24	1.314368244	0.012986434	0.255595676	72.70186592	15.05696534	0.729419481
	2012	0.627806181	0.008876	0.636682181	24	1.263549373	0.006502977	0.206735894	136.939537	15.17889922	0.590348978
	2013	0.740356445	0.010829879	0.751186324	24	1.08337378	-0.112688946	0.197917239	-4.897095616	15.22134456	0.712354811
	2014	0.770085652	0.009508552	0.779594204	24	1.090629763	-0.065759247	0.160121667	-1.503439802	15.06341316	0.750458245

Firm	Year	STD	LTD	TD	Age	Liquidity	Profitability	Tangibility	Risk	Size	Growth
<b>PALTEL</b>	2009	0.202923184	0.136047584	0.338970768	12	1.707774078	0.135313494	0.653453046	4.383095927	20.44745587	2.953638044
	2010	0.17953746	0.110501196	0.290038657	13	2.154750839	0.164152733	0.613141506	3.738493331	20.48439388	2.518359768
	2011	0.171751542	0.082426128	0.25417767	14	1.950865998	0.175717849	0.664935756	3.664983665	20.52628072	2.283580075
	2012	0.197409334	0.058783075	0.256192409	15	1.497892479	0.171346961	0.704302043	3.463228542	20.59627789	2.073462521
	2013	0.199441019	0.046013881	0.2454549	16	1.36773538	0.183804855	0.727217462	3.064498216	20.67379344	1.900231016
	2014	0.221302642	0.082899408	0.30420205	17	1.128770323	0.131745493	0.750200145	3.598208327	20.79319827	2.064230557
<b>PLAZA</b>	2009	0.301364073	0.151714212	0.453078285	10	1.061753551	0.037740154	0.680025625	28.86740479	16.80645977	0.738153328
	2010	0.367525473	0.173041861	0.540567334	11	0.933788138	-0.004527332	0.656809073	-229.4649714	16.93332923	1.01826394
	2011	0.422066657	0.177433013	0.59949967	12	0.841668859	-0.046825266	0.644759639	-26.16460888	16.91368028	1.073989185
	2012	0.396006711	0.252364455	0.648371166	13	0.79251366	-0.039311644	0.686159272	-26.59529988	16.88529575	1.094094174
	2013	0.302389333	-0.015284953	0.28710438	14	0.770082271	-0.001435588	0.767135336	-1015.077057	16.75225671	1.164860495
	2014	0.230640635	0.137688553	0.368329188	15	0.854145945	-0.026183005	0.802999237	-55.60477177	16.82218751	2.492610966
<b>WASSAL</b>	2009	0.377616359	0.031364179	0.408980538	4	1.679614436	0.078355324	0.365750112	8.007767475	16.57442496	0.887635708
	2010	0.378882599	0.070987367	0.449869967	5	1.642804663	0.022782471	0.377569899	28.2485322	16.64762633	0.860266154
	2011	0.467647317	0.136690047	0.604337363	6	1.318495904	-0.149855711	0.383408928	-4.51767939	16.61515226	1.736972505
	2012	0.360910404	0.271969577	0.632879981	7	1.608331927	-0.026855124	0.419536275	-23.97751212	16.73075966	1.631741524
	2013	0.392248169	0.231012272	0.62326044	8	1.534481741	-0.004045871	0.398102347	-174.5358603	16.70698464	1.574599244
	2014	0.378639826	0.336849329	0.715489155	9	1.562881284	-0.18619353	0.408230902	-3.048194826	16.70642595	2.166019277
<b>NSC</b>	2009	0.911713163	0.025499713	0.288828033	9	2.081091906	0.088455707	0.451989565	5.352107524	15.7828966	0.625844981
	2010	0.885073572	0.040245108	0.350181493	10	2.054448259	0.072264031	0.363251734	6.821949351	15.94535423	1.055725069
	2011	0.887162459	0.04411955	0.391000635	11	1.982196937	0.034144948	0.312413376	11.57127804	16.06149506	1.197362572
	2012	0.878688327	0.049885639	0.411218787	12	2.052182953	0.07541511	0.258478273	5.806025449	16.21501752	1.160944367
	2013	0.892106737	0.053238606	0.493437724	13	1.763869736	0.094031386	0.223546098	4.325882081	16.47355446	0.972048024
	2014	1.279017743	-0.104372827	0.374072364	14	1.624590067	0.000967434	0.222722695	473.7243505	16.41180779	1.149751177
<b>PEC</b>	2009	0.172179123	0.268263135	0.440442258	10	1.761851122	0.069726076	0.696646019	3.190384866	18.7134258	0.719463854

Firm	Year	STD	LTD	TD	Age	Liquidity	Profitability	Tangibility	Risk	Size	Growth
	2010	0.20107998	0.19058268	0.39166266	11	1.54195516	0.066966208	0.689943687	3.551511441	18.64022257	0.831477061
	2011	0.143054377	0.193182261	0.336236637	12	2.271612371	0.081501186	0.675035909	3.115295517	18.5838782	0.881718985
	2012	0.187317726	0.096770542	0.284088268	13	1.850056216	0.082466305	0.653451677	3.251046991	18.53867833	0.921703583
	2013	0.237150918	0.092386506	0.329537423	14	0.968986789	0.043500559	0.770203894	5.347966981	18.58625538	1.024401781
	2014	0.182551288	0.064023918	0.246575206	15	1.813060078	0.022227466	0.669023548	10.51008637	18.45539956	0.951230587