

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

**Islamic University – Gaza**

**Deanship of Post Graduate Studies**

**Faculty of Commerce**

**Department of Accounting and Finance**



## **The Change in the Stock Price Based on the Information Resulting from the Financial Ratios**

### **"Evidence from Palestine Stock Exchange "**

*Prepared by:*

***Shakir Osama Alghalayini***

*Supervisor by:*

***Prof. Fares Abu-Moumer***

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## A Holy Qur'an Verse



قال تعالى في محكم كتابه العزيز :

{ وَقُلْ اعْمَلُوا فَسَيَرَى اللَّهُ عَمَلَكُمْ وَرَسُولُهُ وَالْمُؤْمِنُونَ طَوِيلٌ وَسَتَرَدُونَ إِلَى عَالِمِ الْغَيْبِ وَالشَّهَادَةِ فَيُنَبِّئُكُمْ بِمَا كُنْتُمْ تَعْمَلُونَ }

صدق الله العظيم

سورة التوبة – الآية 105

## **ملخص الدراسة**

هدفت الدراسة إلى التنبؤ بأسعار الأسهم في سوق فلسطين للأوراق المالية من خلال اختبار مجموعة من النسب المالية وإيجاد النموذج الكمي الذي يمكن الاعتماد عليه في التنبؤ بأسعار الأسهم لكل قطاع. هذا النموذج سوف يساعد المستثمرين في اتخاذ قرارات رشيدة في حال قيامهم باتخاذ قرار الاستثمار بالسوق المالي. ولتحقيق هذا الهدف تم اختبار 17 نسبة مالية لعينة من 35 شركة والمتوفّر بياناتها للفترة 2009-2013.

وتم تحليل هذه النسب باستخدام الانحدار المتعدد للتوصيل إلى أفضل نموذج كمي لكل قطاع من قطاعات سوق فلسطين للأوراق المالية. العديد من النسب المالية ممكن استخدامها للتنبؤ بسعر السهم في قطاع الصناعة وهي ( العائد على السهم، القيمة السوقية على القيمة الدفترية، متوسط فترة التحصيل ، معدل دوران الأصول الثابتة، نسبة هامش الربح و العائد على حقوق الملكية). في قطاع الاستثمار النسب التالية (القيمة السوقية على القيمة الدفترية، معدل دوران الأصول، القيمة السوقية للسهم على تدفق النقد ومعدل دوران الأصول الثابتة) ممكن استخدامها في التنبؤ بسعر السهم. بالإضافة إلى ذلك، النسب التي يمكن من خلاله التنبؤ بسعر السهم في قطاع الخدمات (العائد على السهم ،القيمة السوقية على القيمة الدفترية والعائد على حقوق الملكية). في قطاع التأمين النسب (العائد على السهم، العائد على الأصول، نسبة الديون و معدّل دوران الأصول) يمكن استخدامه للتنبؤ بسعر السهم. أخيراً، النسب المستخدمة في التنبؤ بسعر السهم في قطاع البنوك هي (القيمة السوقية على القيمة الدفترية للسهم، العائد على السهم، معدل دوران الأصول الثابتة، العائد على حقوق الملكية، قوة الكسب الأساسية والقيمة السوقية على عائد السهم).

كما أوصت الدراسة بضرورة زيادة الاهتمام بدقة البيانات المننشرة بالقوائم المالية وشفافيتها والعمل على اعدادها حسب المعايير الموضوعة من قبل السوق المالي الفلسطيني، وأنه بإمكان المستثمرين الاعتماد على التحليل المالي للقوائم المالية عند اتخاذ القرارات الاستثمارية.

## **Abstract**

This study aimed to predict stock prices in Palestine Stock Exchange (PEX) by testing group of financial ratios and find a quantitative model, in which can be relied upon to predict the stock price for each sector. This model will help investors make rational decisions when they make investment decision in the financial market. To achieve this purpose, (17) financial ratios from (35) listed companies were tested using the available data for period 2009-2013.

These ratios were analyzed using multiple regression to find the best model for each sector of (PEX). Several financial ratios can be used to predict the stock price in the industry sector, which are (earning per stock, market price on book value, days sales outstanding, fixed assets turnover, return on equity and profit margin). In the investment sector, the following ratios (market price on book value, assets turnover, market price on cash flow and fixed assets turnover) can be used to predict the stock price. Adding to that, the ratios of (earning per stock, market price on book value and return on equity) can predict the stock price of service sector. In the insurance sector, the ratios of (earning per stock, return on assets, debt ratio and assets turnover) can be used in predicting stock price. Finally, the ratios of (market price on book value, earning per stock, return on equity, basic earning power and fixed assets turnover) predicting the banking sector stock price.

The study recommended the need to increase attention and caring when preparing the financial statements and must be prepared according to the Palestinian Stock Exchange standards, and the investors can rely on financial analysis of the financial statements when making financial investment decisions.

## **Deduction**

To my Parent, who scarify for our benefits, and make us what we are now.

To my Brothers and Sister, who we grew together.

To my Professors and Lecturers, who gave me their knowledge and experience.

To my Friends, who support me all the time.

To my Lovely country PALESTINE.

To my Fellow student, who will together build the country.

To our Palestinian martyrs, who scarify themselves for holy land.

## Acknowledgment

First and above all, I praise God, the almighty for providing me this opportunity and granting me the capability to proceed successfully. This study appears in its current form due to the assistance and guidance of several people. I would therefore like to offer my sincere thanks to all of them.

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Besides my supervisor, I would like to thank the rest of my study committee: Prof. **Salem Helles** and Prof. **Yousif Ashour** for their encouragement, insightful comments, and hard questions.

Finally, thanks my family for the support they provided me through my entire life and in particular, I must acknowledge all my friends, without whose love, encouragement and editing assistance, I would not have finished this study.

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## **List of Abbreviations**

B/M	Book to Market Ratio
EPS	Earning Per Stock
GDP	Gross Domestic Product
LQ	Liquidity Ratio
LTD	Long Term Debt
P/EPS	Price on Earning Per Stock
PEX	Palestine Stock Exchange
ROA	Return on Assets
ROE	Return on Equity
ROI	Return on Investment
ROR	Rate of Return
SPSS	Statistical Package for the Social Sciences
STD	Short Term Debt
TD	Total Debt

# **Chapter 1**

## **The Study Background**

## 1.1 Introduction

In modern economy a variety of tools have been established to cope with the development of this economy, the financial markets are clear example of this tools as it works as a mechanism of deploying money in the form of stocks and bonds and other financial instruments to collect preferably a considerable return, this happens by going to guaranteed investment and risky ones in a parallel lines so the expectations and desires of the investors are met, the determinant of how healthy is this investment is the figure you see on the screen at the time of sale known widely as the price of stock, whenever it's higher than the purchase price it proves that a sound investing decision has been made (Hunjra & et al, 2014 ).

Stock price is not a sole indicator for decision makers, otherwise a careful planning process takes place by what is called financial analysis, a plenty of definitions have been set to describe this important term and one of these agreed upon definitions the one that define it as "processing of financial data available on the institution in order to obtain such information used in making decisions and in evaluating the performance of business and industry in the past and the present as well as in the diagnosis of any problem exists, financial or operational and anticipate what will be the situation in the future" (Al-Quudah, 2013). One technique for financial analysis is to calculate financial ratios which have a predetermined formula and then interpret the results to obtain an overview of the firm position and decide on a logical investment strategy.

However, the financial ratios (liquidity, activity, debt, profitability and market) still kept its classical and fundamental power either as part of these financial and accounting models or as another important supportive analysis with it. Because of the proven power of the ratio analysis in the practical financial and planning analysis, this study will investigates the relationship between financial ratios and stock price by using five categories of commonly used financial ratios including Liquidity, Activity, Debt, Profitability and Market ratios.

The Palestine Exchange (PEX) was established in 1995 to promote investment in Palestine as a private stockholding company and transformed into a public stockholding 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. There are 49 listed companies as of 16/11/2014 with market capitalization of about \$3.088 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.

## **1.2 The study Problem**

Companies' investors don't rely on the financial ratios (liquidity, activity, debt, profitability and market) when they invest or think to invest on them, and (67.08%) of investors in the financial market affected by rumors during trading to make investment decisions, so the investment decisions are risky, that requires the provision of confidence in the financial information contained in the financial reports (Alnamrouti & Alaoise, 2012) & (Shahen, 2007). The problem can be formulated as the follow:

**What is the role of information resulting from the analysis of financial ratios on the change in stock prices?**

**Sub-questions:**

- **What is the role of Liquidity ratios on the change in stock prices?**
- **What is the role of Activity ratios on the change in stock prices?**
- **What is the role of Debt ratios on the change in stock prices?**
- **What is the role of Profitability ratios on the change in stock prices?**
- **What is the role of Market ratios on the change in stock prices?**

## **1.3 The study Importance**

The importance of this study is looking at the process of financial analysis for companies that are trading their stocks in the financial market and because the activity the financial market in any country reflects the economic activity in it, so there are economic and political factors affect the behavior of investors, and the performance of the financial market, so the study comes to confirm the importance of financial analysis and its role in predicting stock prices.

## **1.4 The study Objectives**

**The study aimed to:**

- To identify the dimensions of the financial analysis and its importance in predicting stock price of the Palestine Exchange sectors.
- The formulation of the intellectual aspects of financial analysis and use it to develop the concept and standards to change and predict stock prices of the Palestine Exchange sectors.
- To prepare a quantitative model that can be relied upon to determine the stock price of each sector of the Palestine Exchange sectors.

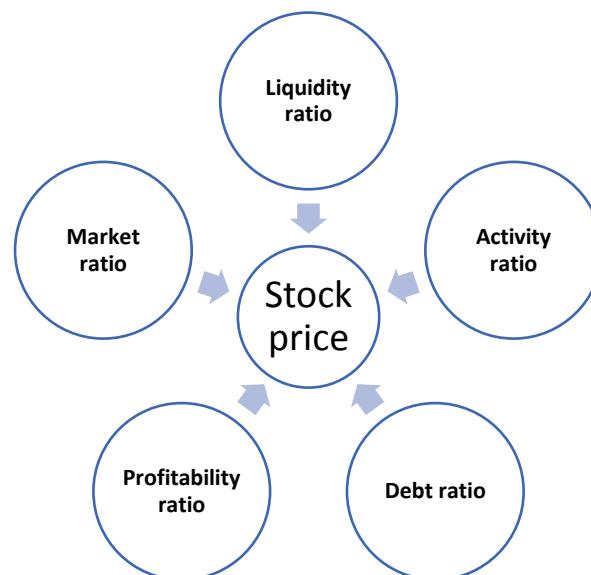
## 1.5 The study hypothesis

- There is a significant relationship between the Liquidity ratios and stock price of the listed companies in Palestine Stock Exchange.
- There is a significant relationship between the Activity ratios and stock price of the listed companies in Palestine Stock Exchange.
- There is a significant relationship between the Debt ratios and stock price of the listed companies in Palestine Stock Exchange.
- There is a significant relationship between the Profitability ratios and stock price of the listed companies in Palestine Stock Exchange.
- There is a significant relationship between the Market ratios and stock price of the listed companies in Palestine Stock Exchange.

## 1.6 The study Variables

**1.6.1 Dependent Variable:** is the **stock price** of the companies listed in Palestine Stock Exchange.

**1.6.2 Independent Variables:** the financial ratios of the companies listed in Palestine Stock Exchange to measure their contribution in stock price.



**Figure No (1)**

## **1.7 The literature Reviews**

**Al-Qudah (2013), Study: The Importance of Financial Analysis for Published Financial Information to Predict the Stocks Behavior (Case study-ASE –Industrial Sector Jordan)**

This study aimed to identify the dimensions of the financial analysis and its advantages and how to benefit from it; in predicting stock prices by testing group of financial ratios and find a model quantitatively can be relied upon to predict the price per stock of the industrial sector in the Amman Stock Exchange in order to help investors make rational decisions. To achieve this purpose three financial ratios has been tested for a sample of 30 companies. These ratios have been analyzed using the multiple regression to find the best model for the industrial sector of the financial market. The results of the study that the industry sector was affected by several variables affect the stock price of this sector are (market value to book value, earning per share and the market price to earnings per share). The study recommended increased attention to the financial statements and transparency in the preparation and disclosure of the data and prepared according to international accounting standards, and it can an investor rely on financial analysis of the financial statements when making investment decisions.

**Karami and Talaei (2013), Study: The Predictability of stock returns using financial ratios in the companies listed in Tehran Stock Exchange**

The study aimed to assess correlation between financial ratios and their impact on predicting stock returns for the companies listed in the Tehran Stock Exchange covers four financial ratios including price to earnings, book to market value, dividend yield, and capital gain. In order to test the hypotheses, the historical data over a ten year period during 1998-2007 for the sample (66 companies) under study were extracted from the respective data bases. The study used E-views Software as well as simple and multiple linear regression in data analysis book value to market value and capital gain significantly affect stock return predictability and that stock return can be predicted by analyzing these variables. The study recommended that there is an effective relationship between the ratio of price to earnings and the ratio of book value to market value of the stock returns, the stockholders are recommended to pay close attention to these ratios when forming their portfolios.

**Pourkand and Babayazar (2013), Study: The Relation between Stocks Returns and Financial Ratios Changes**

The aim of this investigation is examination relationship between financial ratios changes and stock returns changes in accepted companies in stock security exchange of Tehran. The statistical community of this investigation are accepted company in stock market of Tehran and the statistical sample is consist of 53 active company of different industries during 2007 until 2011. Hypothesis are experimented by Smirnoff – Calmogorof tests, independent and parsons cohesiveness. The study used the regression model in analysis. The results of the study that there is significant and weak cohesiveness between cash ratios changes (current and quick ratios) and profitability ratios changes (gross profit/sales and profit/sales) with stock output in stock exchange. And indicated that other important factors can make an effect stock returns, such factors are economics status of commercial unites, type of industry, inflation price and the effect of other stimulus in stock returns of Iranian company such as rumor, political affairs and pricing less than fact stock in first supply to public.

**Placido and Menaje (2012), Study: The Impact of Selected Financial Variables on Stock Price of Publicly Listed Firms in the Philippines**

This study aimed to determine whether earnings per stock (EPS) and return on assets (ROA) have significant influence on stock price of publicly listed firms in the Philippines. Using the 0.05 level of significance, the study tested whether or not EPS and ROA have significant impact on the stock price of 50 publicly listed firms in the Philippines for the year 2009 with the null hypothesis that EPS and ROA have no significant impact on stock price. Result of the Spearman Rank order Correlation disclosed strong positive correlation of EPS with stock price. ROA disclosed a weak negative correlation with stock price. Multiple regression results showed that the chosen model was able to explain 73% of the average change in stock price. The study recommend the continued use of EPS as a predictor of share price, Future researches on this topic should cover a longer period and greater number of respondents if the researcher intends to use panel or pooled data.

**Kabajeh, AL Nu'aimat and Dahmash (2012), Study: The Relationship between the ROA, ROE and ROI Ratios with Jordanian Insurance Public Companies Market Share Prices**

The purpose of this study is to examine the relationship between the ROA, ROE and ROI ratios together and separately with Jordanian insurance public companies stock prices. The population of this study consisted of all the Jordanian insurance public companies listed in Amman Security Exchange from the period between 2002 and 2007 which were (28) public companies. Based on the empirical evidence, the results showed a

positive relationship between the ROA, ROE and ROI ratios together with Jordanian insurance public companies stock prices. The results also showed a positive but low relationship between each of ROA ratio separately and ROI ratio separately with Jordanian insurance public companies stock prices. However, the results showed no relationship between the ROE ratio separately with Jordanian insurance public companies market stock prices.

**Kohansal et al. (2012), Study: The Relationship between Financial Ratios and Stock Prices for the Food Industry Firms in Stock Exchange of Iran**

The main subject of the relationship between financial ratios and stock prices of companies listed on the Stock Exchange of food. The data from the years 1992 to 2010 were used to stock the food of choice for companies. Financial variables including liquidity ratios (current ratio), the ratio of activity (asset turnover), the profitability (rate of return on assets and return on equity) and financial leverage (debt) and equity prices food stock. Some results indicate that there is a positive and significant response in food prices due to stocks of the current ratio, return on assets and return on equity rate. The results of this analysis also show that in the first period of greatest change in the current ratio is explained by this variable. But this stock has been declining gradually. Variance of decomposition of the asset turnover ratio fluctuations in their asset turnover ratio on the performance. Analysis of financial leverage financial leverage on the shock of their impact is an important variable. As was shown, during this period of the shock on their first reaction is positive and significant but fluctuating after that.

**Khan (2012), Study: The Effect of Dividends on Stock Prices– A Case of Chemical and Pharmaceutical Industry of Pakistan.**

This study will help to ameliorate dividend decisions of corporate sector through felicitously appropriate implementation of their dividend policies. This paper is an attempt to explicate the affect of dividend announcements on stock prices of chemical and pharmaceutical industry of Pakistan. A sample of twenty nine companies listed at KSE-100 Index is taken from the period of 2001 to 2010. Results of this study is predicated on Fixed and Random Effect Model which is applied on Panel data to explicate the relationship between dividends and stock prices after controlling the variables like Earnings per Stock, Profit after Tax and Return on Equity. The Results show that Stock Dividend, Earnings per Stock and Profit after Tax have a significant positive relation to stock market prices and significantly explicates the variations in the stock prices of chemical and pharmaceutical sector of Pakistan while Retention Ratio and Return on Equity have the negative insignificant relation with stock prices. This paper

further shows that Dividend Irrelevance Theory is not applicable in case of chemical and pharmaceutical industry of Pakistan.

**Abu Mouamer (2011), Study: The determinants of capital structure of Palestine listed companies.**

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.

**Ibrahim, Kheradyar & Nor (2011), Study: The Stock Return Predictability with Financial Ratios.**

This study aimed to examine whether financial ratios can predict stock returns. This study comprised a period of 10 years, starting from January 2000 to December 2009, and the units of analysis include 960 companies at the end of 2009 that are listed on Malaysia stock exchange (Bursa Malaysia). The study select three financial ratios include dividend yield, earning yield and book-to-market ratio (B/M) that have been documented to predict stock returns. This study applies generalized least squares techniques to estimate the predictive regressions in form of simple and multiple models of panel data sets. The obtained results reveal that the financial ratios can predict stock return, as the B/M has the higher predictive power than DY and EY respectively. Furthermore, the financial ratios are able to enhance stock return predictability when the ratios are combined in the multiple predictive regression models.

**Taani and Banykhaled (2011), Study: The Effect of Financial Ratios, Firm Size and Cash Flows from Operating Activities on Earnings per Share: (an Applied Study: on Jordanian Industrial Sector)**

The aim of this study is to examine the effect of accounting information on earning per stock (EPS) by using five categories of financial ratios. A sample of 40 companies

listed in the Amman Stock Market was selected. To measure the impact of financial ratios on EPS multiple regression method and stepwise regression models are used by taking profitability, liquidity, debit to equity, market ratio, size which is derived from firm's total assets, and cash flow from operation activities as independent variables ,and EPS (Earning Per Stock) as dependent variable. The results showed that the profitability ratio (ROE), Market ratio (PBV), cash flow from operation/sales, and leverage ratio (DER) has significant impact on earnings per stock. This research also exposes that the movement of earning per share is affected much by factors other than firm's financial performance. From all models used in this research, the highest R2 is only 42%.

**Aono and Iwaisako,T (2010), Study: The Forecasting Japanese Stock Returns with Financial Ratios and Other Variables**

This paper extends the previous analyses of the forecast ability of Japanese stock market returns in two directions. First, the study carefully construct smoothed market price-earnings ratios and examine their predictive ability. The study find that the empirical performance of the price-earnings ratio in forecasting stock returns in Japan is generally weaker than both the price-earnings ratio in comparable US studies and the price dividend ratio. Second, also it examined the performance of several other forecasting variables, including lagged stock returns and interest rates. The study find that both variables are useful in predicting aggregate stock returns when using Japanese data. However, while the study find that the interest rate variable is useful in early subsamples in this regard, it loses its predictive ability in more recent subsamples. This is because of the extremely limited variability in interest rates associated with operation of the Bank of Japanese zero interest policy since the late 1990s. In contrast, the importance of lagged returns increases in subsamples starting from the 2000s. Overall, a combination of logged price dividend ratios, lagged stock returns, and interest rates yield the most stable performance when forecasting Japanese stock market returns.

**Roux (2010), Study: The Investigating the relationship between the Price-Earnings ratio and future stock returns in the South African market**

This study replicates the statistical study conducted by *Vivek Bhargava and D. K. Malhotra* to determine whether P/E ratios drive future stock earnings or drive future stock prices on various international markets. Statistical analysis is conducted on indices on the South African market, in order to determine if P/E ratios drive subsequent closing prices or closing prices adjusted for total return. The study is extended by constructing two trading models, to practically test the possible benefits of using the P/E ratio value as a predicting and trading measure in the South African market. Although Johansen co-integration tests reveal that co-integration relationships exist between the P/E ratio and subsequent closing prices and adjusted closing prices for total return, the VAR and VECM models used to estimate these relations do not yield significant results. Granger

causality tests show very weak causal relation between the P/E ratio values and future closing prices and closing prices adjusted for total return.

**Martani, Mulyono and Khairurizka (2009), Study: the effect of financial ratios, firm size, and cash flow from operating activities in the interim report to the stock return.**

The aim of this study is to examine the value relevance of accounting information in explaining stock return. The study uses profitability, liquidity, leverage, market ratio, size and cash flow as proxies of accounting information. Cumulative abnormal return and market adjusted return are used as stock return variables. The samples of the study are listed companies in manufacturing industries that actively trading between (2003-2006) in Indonesia Stock Market. The study finds that profitability (net profit margin), assets turnover and market ratio (book value to market price) has significant impact to the stock return. It shows that from investors' point of view financial ratios are useful in making decision on investment. This research also exposes that the movement of stock price is affected much by factors other than firm's financial performance.

**Al Gergawi (2008), Study: The role of financial analysis of financial information published in the financial statements to predict the prices of shares: applied study on the companies listed on the Palestine Securities Exchange.**

This study aimed to identify the dimensions of financial analysis, its characteristics and how to benefit from it in predicting stock prices through test a set of financial ratios for each sector in the Palestinian securities exchange market. The sample of study included 10 companies (2 companies from each sector). These ratios were analyzed using statistical technique known as multiple regressions to reach the best model for each segment of the market. The results of this study that there is many variables that have a significant relationship with market price. In the insurance sector (ROA, ROE, EPR & P/B), in the banking sector (P/B & P/EPR), in the investment sector (current ratio, ROA, RPE, EPR and P/B), in the service sector (ROA, ROE, profit margin, fixed assets turnover, EPR and P/B) and in the industry sector (current ratio, ROA, ROE, profit margin, fixed assets turnover and P/B). This study recommended that it could rely on a set of financial ratios for each sector to predict the stock price.

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

Name of study	Place	Objectives	Methodology		Sample	Findings	Recommendations
			Statistic	# of ratios			
Al-Qudah (2013)	Jordan	aimed to identify the dimensions of the financial analysis and its advantages and how to benefit from it; in predicting stock prices by testing group of financial ratios and find a model quantitatively can be relied upon to predict the price per stock of the industrial sector	correlation and multiple regression	3	30 firm	the industry sector was affected by several variables affect the stock price of this sector are (market value to book value, earning per share and the market price to earnings per share)	The investors can rely on financial analysis of the financial statements when making investment decisions.
Karami and Talaeei (2013)	Tehran	aimed to assess correlation between financial ratios and their impact on predicting stock returns	simple and multiple linear regression	4	66 firm	book value to market value and capital gain significantly affect stock return predictability and that stock return can be predicted by analyzing these variables	the stockholders are recommended to pay close attention to these ratios when forming their portfolios
Pourkand and Babayazar (2013)	Tehran	The aim of this investigation is examination relationship between financial ratios changes and stock returns changes in accepted companies	Smirnoff – Calmogorof tests, parsons cohesiveness and regression model	8	53 firm	There is significant and weak cohesiveness between cash ratios changes (current and quick ratios) and profitability ratios changes (gross profit/sales and profit/sales) with stock output in stock exchange.	Financial analyst is active in market to analysis information from different dimensions that stock market of Tehran is near to work market. The stock market is established, so that, necessary information are used by investors, analyst to analysis it and special group does not used this information

Placido and Menaje (2012)	Philippines	aimed to determine whether earnings per stock and return on assets have significant influence on stock price	Multiple regression	2	50 firm	that the chosen model was able to explain 73% of the average change in stock price	The study recommend the continued use of EPS as a predictor of share price
Kabajeh, AL Nu'aimat and Dahmash (2012)	Jordan	To examine the relationship between the ROA, ROE and ROI ratios together and separately with Jordanian insurance public companies stock prices.	correlation and multiple regression	3	28 firm	the results showed a positive relationship between the ROA, ROE and ROI ratios together	
Kohansal et (2012) al.	Iran	The main subject of the relationship between financial ratios and stock prices of companies listed on the Stock Exchange of food.	correlation and multiple regression	4	All food sector	That the greatest change in the current ratio is explained by this variable. But this stock has been declining gradually and Analysis of financial leverage on the shock of their impact is an important variable. As was shown, during this period of the shock on their first reaction is positive and significant but fluctuating after that.	
Khan (2012)	Pakistan	This study will help to ameliorate dividend decisions of corporate sector through felicitously appropriate implementation of their dividend policies	Panel data	3	29 firm	that Stock Dividend, Earnings per Stock and Profit after Tax have a significant positive relation to stock market prices and while Retention Ratio and Return on Equity have the negative insignificant relation with stock prices	that this study will help the future researchers to explore other sectors of Pakistan with small and large firm size
Abu Mouamer (2011)	Palestine	The purpose of this paper is to examine the relationship between capital structure and debt lifetime among listed companies in Palestine stock market	Correlation and regression	4	15 firm	There is 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.	
Ibrahim, Kheradyar	Malaysia	aimed to examine whether financial ratios	Multiple	3	960	That the financial ratios can predict stock return, as the B/M has the higher	Stakeholders can rely on financial ratios to enhance

& Nor (2011)		can predict stock returns	regression		firm	predictive power than DY and EY respectively.	stock return predictability when the ratios are combined in the multiple predictive regression models
Taani and Banykhaled (2011)	Jordan	The aim of this study is to examine the effect of accounting information on earning per stock (EPS) by using five categories of financial ratios	Multiple regression	5	40 firm	that the profitability ratio (ROE), Market ratio (PBV), cash flow from operation/sales, and leverage ratio (DER) has significant impact on earnings per stock	suggested to increase the sample in both number of firms and observation period for the next research
Aono and Iwaisako,T (2010)	Japan	This paper extends the previous analyses of the forecast ability of Japanese stock market returns in two directions: the study carefully construct smoothed market price-earnings ratios and examine their predictive ability	Multiple regression	3	228 firm	The study find that the empirical performance of the price-earnings ratio in forecasting stock returns in Japan is generally weaker than both the price-earnings ratio in comparable US studies and the price dividend ratio	
(2010) Roux	South African	This study replicates the statistical study conducted by Vivek Bhargava and D. K. Malhotra to determine whether P/E ratios drive future stock earnings or drive future stock prices on various international markets	Vivek Bhargava and D. K. Malhotra test	1	40 firm	That co-integration relationships exist between the P/E ratio and subsequent closing prices and show very weak causal relation between the P/E ratio values and future closing prices.	
Martani, Mulyono and Khairurizka (2009)	Indonesia	The aim of this study is to examine the value relevance of accounting information in explaining stock return	Multiple regression	3	780 firm	that profitability (net profit margin), assets turnover and market ratio (book value to market price) has significant impact to the stock return	financial ratios are useful in making decision on investment
Al Gergawi (2008)	Palestine	Aimed to identify the dimensions of financial analysis, its characteristics and how to benefit from it in predicting stock prices through test a set of financial ratios for each sector in the Palestinian securities	Correlation and multiple regressions	12	10 firm	That there is many variables that have a significant relationship with market price. In the insurance sector (ROA, ROE, EPR & P/B), in the banking sector (P/B & P/EPR), in the investment sector (current	Financial ratio could rely on a set of financial ratios for each sector to predict the stock price.

		exchange market.				ratio, ROA, RPE, EPR and P/B), in the service sector (ROA, ROE, profit margin, fixed assets turnover, EPR and P/B) and in the industry sector (current ratio, ROA, ROE, profit margin, fixed assets turnover and P/B).	
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Table (2): Summery of the current study

Name of study	Place	Objectives	Methodology		Sample	Findings	Recommendations
			Statistic	# of ratios			
current study	Palestine	This study aimed to predict stock prices in Palestine Stock Exchange (PEX) by testing group of financial ratios and find a quantitative model, in which can be relied upon to predict the stock price for each sector.	Correlation and multiple regression	17	35 firm	There are Several financial ratios can be used to predict the stock price, investment sector (earning per stock, market price on book value, days sales outstanding, fixed assets turnover, return on equity and profit margin). Investment sector (market price market ,on book value, assets turnover price on cash flow and fixed assets turnover). Service sector (earning per stock, return on assets, debt ratio and assets turnover). banking sector(market price on book value, earning per stock, return on equity, basic earning power and fixed assets turnover)	The study recommended the need to increase attention and caring when preparing the financial statements and must be prepared according to the Palestinian Stock Exchange standards, and the investors can rely on financial analysis of the financial statements when making financial investment decisions.

The main differences between the previous studied and current study

- The current study was used (17) financial ratios. While the previous studies between were used (1-12) financial ratio.
- The current study used many financial ratios (Inventory turnover, Days sales outstanding, time interest earning and price/cash flow), but all previous studies didn't used it.
- The current study applied the ratios on all companies listed in (PEX) that have available data.
- The study of Al Gergawi implemented in PEX between (1996-2006). While the current study implemented in the period of (2009 – 2013), taking in to considerations that there were many events occurred in this period.
- The current study was benefited from previous studies in the construction of theoretical and practical framework.

## **Chapter 2**

# **Financial Analysis & Stock Valuations**

## **2.1 Introduction**

The financial environment of any economy consists of typically many components namely: money, financial instruments, financial institutions (included financial markets), rules and regulations and. The financial markets plays an increasingly active role in country's economic growth (Dhanabhakyam & Kavitha, 2012).

Financial statement analysis is very important part of the broader field of business analysis. Business analysis is the process of evaluating a company's economic prospects and risks. This includes analyzing a company's business environment, its strategies, and its financial position and performance. Business analysis is useful in a wide range of business decisions such as whether to invest in equity or in debt securities, whether to extend credit through short- or long-term loans, how to value a business in an initial public offering, and how to evaluate Re-structuring including mergers, acquisitions, and divestitures (Ungreanu, 2010). And also it reduces reliance on hunches, guesses, and intuition for business decisions. It decreases the uncertainty of business analysis. This is the role of financial statement analysis. Through it, an analyst will better understand and interpret both qualitative and quantitative financial information so that reliable inferences are drawn about company prospects and risks (Babalola & Abilola, 2013). Financial statement analyses are a requisite step in investment decisions and financial ratio analyses are an integral part of financial statement analyses (Chunhui, et al 2013).

Ratio analysis is a study of relationship among various financial factors in a business (Bragg, 2012). Thus, it seeks to measure the value of the entity and purpose which it pursues, financial analysis develops the steps of collecting, shaping and treatment of a range of management information which may clarify the wanted diagnosis and prognosis. Rose and Hudgins (2006) state that the performance of a financial firm refers to how adequately that firm meets the needs of its stockholders, employees, depositors and other creditors, and borrowing customers. At the same time, financial firms must find a way to keep government regulators satisfied that their operating policies, loans and investments are sound, and protecting the public interest.

## **2.2 Financial Analysis**

Financial analysis is the selection, evaluation, and interpretation of financial data, along with other pertinent information, to assist in investment and financial decision-making. Moreover, it is also the process of identifying financial strengths and weaknesses of the firm by properly establishing relationship between the items of the balance sheet and the profit and loss account (Drake, 2010).

Moreover, the financial analysis is the use of financial statements to analyze a company's financial position and performance, and to assess future financial performance. It also supports equity decisions by providing quantified evidence regarding the financial position and performance of the company (Subramanyam and Wild, 2009). And according to Brigham and Houston (2009) financial analysis involves comparing the firm's performance to that of other firms in the same industry and evaluating trends in the firm's financial position over time.

### **2.3 The important of financial analysis:**

Financial analysis is an important tool of measuring the performance of a business organization. It is based on financial statements of business hence; it is also known as financial statement analysis. Hence, it is related to the viability, stability and profitability of a business organization in a period of time. It is used to make several managerial decisions according to Tailor (2013) such as:

- Continue or discontinue the business.
- Make or buy certain materials for producing products.
- Acquire or lease certain machineries and plants.
- Issue stocks or negotiate for a bank loan to increase working capital.
- Make decision related to capital investment for future growth.

### **2.4 Financial Ratio Analysis:**

Financial ratio analysis is a useful measure to provide a snapshot of a firm's financial position (Muresan and Wolitzer 2004) at any particular moment of time or to provide a comprehensive idea about the financial performance of the company over a particular period of time. Use of financial ratios in finance is multi-dimensional. It is not only useful for judging the financial health or performance of a particular firm over time, it is also a useful tool for comparing a firm's financial position and performance with respect to others in the same or different industry to pinpoint problem areas or to identify areas of further improvements (De, Bandyopadhyay and Chakraborty 2010).

Ratio analysis is a mathematical relationship between one numbers to another number. Ratio is used as an index for evaluating the financial performance of the business concern. An accounting ratio shows the mathematical relationship between two figures, which have meaningful relation with each other. Ratio can be classified into

various types. Classification from the point of view of financial management is as follows, (Paramasivan and Subramanian, 2009):

- Liquidity Ratios
- Activity Ratios
- Debt Ratios
- Profitability Ratios
- Market ratios

## **2.5 The types of financial ratio:**

### **2.5.1 Liquidity Ratios:**

The liquidity ratios refer to the assets of an entity most liquid/easily to be turned into cash, and indicate the possibility of an economic entity to take up its debts on time (Breuer & et al, 2012). Liquidity ratio is an important element of business continuity. The liquidity of a firm is measured by its ability to satisfy its short-term obligations as they come due. Liquidity refers to the solvency of the firm's overall financial position- the ease with which it can pay its bills. Because a common precursor to financial distress and bankruptcy is low or declining liquidity, these ratios can provide early signs of cash flow problems and impending business failure. The two basic measures of liquidity are the current ratio and the quick ratio,(Gitman and Zutter, 2012). The liquidity structure thus reflects the ability to cover liabilities and pay all outstanding claims. Sufficient liquidity is especially important for carriers, because fuel, wages, road charges, partnerships and other expenditures have to be financed, often before receiving final payments. Optimized liquidity management is therefore a requirement for operating efficiently (Hofmann & Lampe, 2013).

### **2.5.2 Activity ratios:**

Activity ratios measure the speed with which various accounts are converted into sales or cash—infows or outflows. In a sense, activity ratios measure how efficiently a firm operates along a variety of dimensions such as inventory management, disbursements, and collections. A number of ratios are available for measuring the activity of the most important current accounts, which include inventory, accounts receivable, and accounts payable. The efficiency with which total assets are used can also be assessed,(Gitman and Zutter, 2012). Activity Ratios measure how effectively a firm is managing its assets. If a company has excessive investments in assets, then its operating capital will be unduly high, this will reduce its free cash flow and ultimately its stock price. On the other hand, if a company does not have enough assets then it will lose sales, which will hurt profitability, free cash flow, and the stock price (Brigham & Ehrhardt, 2013).

### **2.5.3 Debt Ratios:**

Show how effectively the organization uses other people's money and whether it is using a lot of borrowed money (Lasher, 2005). The debt-to-equity ratio indicates the level of financial risk that the company is exposed to (Correia et al., 2011; Nadarajah & Kotz, 2007). Assets are usually funded by debt or equity (Lin, Liang & Chen, 2011). The debt position of a firm indicates the amount of other people's money being used to generate profits. In general, the financial analyst is most concerned with long-term debts because these commit the firm to a stream of contractual payments over the long run. The more debt a firm has, the greater its risk of being unable to meet its contractual debt payments. Because creditor's claims must be satisfied before the earnings can be distributed to stockholders, current and prospective stockholders pay close attention to the firm's ability to repay debts. Lenders are also concerned about the firm's indebtedness. In general, the more debt a firm uses in relation to its total assets, the greater its financial leverage. Financial leverage is the magnification of risk and return through the use of fixed-cost financing, such as debt and preferred stock. The more fixed-cost debt a firm uses, the greater will be its expected risk and return,(Gitman and Zutter, 2012).

### **2.5.4 Profitability Ratios:**

There are many measures of profitability. As a group, these measures enable analysts to evaluate the firm's profits with respect to a given level of sales, a certain level of assets, or the owners' investment. Without profits, a firm could not attract outside capital. Owners, creditors, and management pay close attention to boosting profits because of the great importance the market places on earnings (Huang and Song, 2006). A profitability measure favored by Gardner and Mills (1994) is the measure, the profit margin (net income/total operating income). It reflects the percentage of each dollar of revenue remaining after all costs and expenses are paid. An institution with a relatively high cost structure has a lower profit margin than a more efficient institution. Morrison (2000) used the yield on earning assets as a profitability measure. It is a measure of the gross rate of return on earning assets.

### **2.5.5 Market ratios:**

Market ratios relate the firm's market value, as measured by its current stock price, to certain accounting values. These ratios give insight into how investors in the marketplace feel the firm is doing in terms of risk and return. They tend to reflect, on a relative basis, the common stockholders' assessment of all aspects of the firm's past and expected future performance. Here we consider two widely quoted market ratios, one that focuses on earnings and another that considers book value, (Saied & Khandozi, 2011). Market value ratios relate a firm's stock price to its earnings, cash flow, and book value per

stock. Market value ratios are a way to measure the value of a company's stock relative to that of another company (Brigham & Ehrhardt, 2013).

## **2.6 Potential problems and limitations of financial ratio analysis:**

Ratio analysis is used by three main groups: (1) managers who employ ratios to help analyze, control, and thus improve the firm's operations; (2) credit analysts, such as bank loan officers or credit managers, who analyze ratios to help ascertain a company's ability to pay its debts; and (3) stock analysts, who are interested in a company's efficiency and growth prospects.

Thought ratio analysis can provide useful information concerning a company's operations and financial condition. Although the use of financial ratios is widespread, they do have their limitations, which can be summarized as follows: *Firstly*, there is considerable subjectivity involved as there is no theory as to what should be the right number for the various ratios. *Secondly*, ratios may not be accurately comparable across different companies due to a variety of factors such as different accounting practices, different financial year. *Thirdly*, ratios are based on financial statements that reflect the past only and are not an indication of the future. *Fourthly*, financial statements provide an estimation of the costs and not values. The *fifth* limitation is that financial statements do not include all items. The *sixth* limitation is that accounting standards and practices vary across countries and this hampers meaningful global comparisons. The *seventh* limitation relates to decision making; management decision making is a dynamic process in a constantly changing environment, whereas ratios analysis is static because it is based on historical data. *Finally*, the linkages between different ratios are not always immediately obvious (Lesáková, 2007) & (Lermack, 2003).

Ratio analysis is useful, but analysts should be aware of these problems. Ratio analysis applied in a mechanical, unthinking manner is dangerous; however, used intelligently and with good judgments, it can provide useful insights into a firm's operations.

## **2.7 Stock valuation:**

A valuation model is a mechanism that converts a set of forecasts of (or observations on) a series of company and economic variables into a forecast of market value for the company's stock. The valuation model can be considered a formalization of the relationship that is expected to exist between a set of corporate and economic factors and the market's valuation of these factors (Elton & et al, 2011). Valuation is the process of forecasting the present value of the expected payoffs to stockholders. Lee (1999) says

that the valuation models are merely “pro form accounting systems” that constitutes the tools for articulating the assessment of future events typically in terms of accounting constructs. Barker (2001) argues that a good understanding of valuation methods requires two main things; the first is an analytical review of the models. The second is an evaluation of the data that are available for use of these models. It is because of this there is a significant relationship between the choice of valuation models and the available data.

Classical stock valuation is based on a number of simplifying assumptions. These are that stocks pay dividends, growth rates are constant, and growth rates are less than Kr, “the required rate of return for a stock”. However, even with these assumptions and limitations, classical methods of computing stock value and yield can add insight into investment decision making, (David, 2003).

### **2.7.1 Dividend Yield:**

The “dividend yield” or “price-dividend ratio” is useful in explaining the behaviors of stock prices (Campbell & MacKinlay, 1997). Most companies pay some level of dividend to its stockholders. It is usually done on an annual basis. The dividend-yield is basically the total amount of dividend the company pays in relation to the market capitalization of the company, or dividend per stock over price per stock (Broberg & Lindh, 2012).

### **2.7.2 Capital Gains Yield:**

Capital gains yield is the yield resulting from appreciation of the underlying security. It is independent of changes in dividends, except to the extent that increasing or decreasing dividends raises or lowers the current market value of a stock (David, 2003).

### **2.7.3 Total Return:**

Total return on a stock is the return of both dividend yield and capital gains yield, tells the investor the percentage gain or loss on an asset based upon his purchase price. In every type of investment, (Namazi & Rostami, 2006) the investor tries to gain efficiency and try to gain information about stock returns of companies in the future. In the other hand, the profit of every stock is the one of methods that it represents much information content about of inside position of company.

Total Stock Return is important to remember that for companies that pay dividends it is not only the capital gain that matters for the holding period. You have to take into account all the payments made from the investment and thus we include both capital

gains on the stock price well as dividends into our calculation of the total stock return (Broberg & Lindh, 2012).

## **2.9 Computing Stock Value:**

If one were going to buy a stock and hold it forever, its value would be the present value of the future cash flows from the stock, that is, the discounted value of the dividend stream. Techniques have been developed to discount dividend cash flows under three different scenarios: zero growth, constant growth, and changing growth.

### **2.9.1 Constant Growth dividends:**

The constant growth model is most appropriate for mature companies with a stable history of growth. Expected growth rates vary somewhat among companies, but dividend growth for most mature firms is generally expected to continue in the future at about the same rate as nominal gross domestic product (real GDP plus inflation) (Brigham and Ehrhardt, 2011). Using this Model to value the price of the stock, we sum all the company's future dividends, which in this case is assuming to grow at a constant rate. This model works best when valuating stocks for established companies, meaning that they should have increased the dividend steadily over the years. Further it is important to recognize that growth cannot exceed the market capitalization rate. If dividends were expected to grow forever at a rate faster than  $k$ , the value of the stock would be infinite (Bodie, Z, Kane, A, Marcus, A. 2008).

### **2.9.2 Non-constant Growth Stock dividends:**

(Brigham & Ehrhardt, 2011) For many companies, it is not appropriate to assume that dividends will grow at a constant rate. Firms typically go through life cycles. During their early years, their growth is much faster than that of the economy as a whole; then they match the economy's growth; and finally their growth is slower than that of the economy. Automobile manufacturers in the 1920s, software companies such as Microsoft in the 1990s, and technology firms such as Cisco in the 2000s are examples of firms in the early part of the cycle; these firms are called supernormal, or non-constant growth firms, for such a stock? We do it in several steps:

- Compute the dividends for the period of the rapid growth.
- Compute the estimated price of the stock at the end of the period of rapid growth.

- Discount the dividends for the period of rapid growth, and the expected stock price at the end of the period of rapid growth, back to the present using the required rate of return.

According to Damodaran, A (2002) many companies grow very rapidly in its first few years and then subsequently settling down to a constant growth rate. In this case we have to consider both the initial hyper growth stage and then the subsequent constant growth stage in order to value the price of the stock of a company.

### **2.9.3 Zero growth dividends:**

Since the zero growth model assumes that the dividend always stay the same, the stock price would in that case be equal to the annual dividends divided by the Rate of Return (ROR). The stockholders can therefore expect that future earnings will be flat and there will not be any further increase in the dividends payout (Josefsson & Karlsson, 2011).

## **Chapter 3**

### **The Study Methodology & Data analysis**

## **3.1 The Study Methodology**

### **3.1.1 Introduction**

This section of the study describes the methodology that will be used in this study. The adopted methodology to accomplish this study uses the following techniques: the information about the study design, the study population, the study sample, the data collection, statistical data analysis.

### **3.1.2 The study Design**

To achieve the objectives of the study were used **descriptive analytical** method which can be defined as a method of analysis based on sufficient and precise information about the phenomenon or a specific topic, and during the period or periods of time information in order to obtain practical results have been interpreted in an objective manner and in line with the data of actual phenomenon to study the variables that contribute to predict the stock price, relying on the descriptive approach in the presentation of the theoretical aspect of the study and then using the analytical method in practical application and conduct the necessary tests.

### **3.1.3 The Study Population**

The study population consists of all listed companies in Palestine Stock Exchange (PEX) and consisting of 49 companies registered in the market and practiced their activities until the year 2014.

### **3.1.4 The Study Sample**

The study selected the companies that included in the sample by determine group of criteria. And all companies that did not meet the following criteria were omitted:

1. Registered in the Palestine Stock Exchange (PEX) since 2009 or below.
2. Availability of sufficient data such as income statement, balance sheet (financial report from 2009-2013) in order to calculate financial indicators and ratios that were used in the study.

According to above criteria (14) companies from the population were omitted. So, the sample size will be (35) companies are listed in Palestine Stock Exchange and meet the criteria.

*Table (3): Describe the study population and sample*

Sector Name	No. Company in the sector	Company sample	No. Ratios
Investment	12	7	17
Service	12	8	15
Industry	9	9	17
Insurance	7	4	15
Banking	9	7	14
<b>Totals</b>	<b>49</b>	<b>35</b>	---

### **3.1.5 The Data Collection**

The task of data collection begins after a study problem has been defined and study design/plan chalked out. While deciding about the method of data collection to be used for the study, there searcher should keep in mind two types of data viz., 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).

#### **3.1.5.1 The Secondary Data**

- Publications of the Palestine Stock Exchange (PEX).
- Financial Statement by companies that listed in the Palestine Stock Exchange (PEX).
- Books and references related to the financial ration.
- Researches in specialized journals and scientific journals.
- Master and doctoral thesis relevant to the subject of study.

### **3.1.6 Data Analysis**

The independent variables were selected for all sectors of Palestine Stock Exchange to measure their contribution to predict the price per stock, as calculated value ratios of those variables. And the study used the program (SPSS statistical) and calculated coefficient of Pearson correlation between the dependent variable and all of the independent variables, at the level of significance 0.05, when the level of significance between the variables are less than 0.05 will reject the null hypothesis and when be opposite will accept the null hypothesis. And To find an equation describes the relationship between the dependent and the independent variables the study was used (STEPWISE) method that in the Multiple Linear Regression Equation that include the independent variables that have high significant affect stock price.

### 3.1.6.1 Collection steps for analysis

- Financial statements was collected of the firms for the period between (2009 - 2013). Published on the site of the Palestine stock Exchange, The financial statements were standardized to make the financial analysis.
- Market price were calculated as in the end of each month and then calculate the average of each year.
- Financial ratios was calculated of the financial statements of the firms.
- Then enter all financial ratios and the market prices to the (SPSS) program to make statistical tests on them.

*Table (4): Describe the financial ratios that used and its equation.*

Financial Rations	Equations
<b>Current Ratio</b>	$\frac{\text{Current Assets}}{\text{Current Liabilities}}$
<b>Quick Ratio</b>	$\frac{\text{Current assets} - \text{Inventories}}{\text{Current liabilities}}$
<b>Inventory Turnover</b>	$\frac{\text{Sales}}{\text{Inventories}}$
<b>Days sales outstanding (average collection period)</b>	$\frac{\text{Receivables}}{\text{Annual sales}/365}$
<b>Fixed Asset Turnover</b>	$\frac{\text{Sales}}{\text{Net fixed assets}}$
<b>Total Asset Turnover</b>	$\frac{\text{Sales}}{\text{Total assets}}$
<b>Debt Ratio</b>	$\frac{\text{Total liabilities}}{\text{Total assets}}$
<b>Times-interest-earned</b>	$\frac{\text{Earnings Before Interest and Tax}}{\text{Interest expense}}$
<b>Profit Margin</b>	$\frac{\text{Net income available to common stockholders}}{\text{Sales}}$
<b>Basic Earning power ratio</b>	$\frac{\text{Earnings Before Interest and Tax}}{\text{Total assets}}$
<b>Return on Total Assets</b>	$\frac{\text{Net income available to common stockholders}}{\text{Total assets}}$
<b>Return on Equity</b>	$\frac{\text{Net income available to common stockholders}}{\text{Common equity}}$
<b>Earnings per stock</b>	$\frac{\text{Net income}}{\text{Common stocks outstanding}}$

<b>Book value per stock</b>	<u>Common equity</u> stocks outstanding
<b>Price/Earnings ratio</b>	<u>Price per stock</u> Earnings per stock
<b>Price/cash flow</b>	<u>Price per stock</u> Cash flow per stock
<b>Market / Book ratio</b>	<u>Market price</u> Book value per stock

Source: (Brigham & Ehrhardt, 2013)

## 3.2 Data analysis & Test the hypothesis

### 3.2.1 Introduction

In this chapter 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 (the stock price) with independent variables (financial ratios) and the extent of their impact in the prediction of the stock price, accepted or rejected the hypothesis according to the value of (Sig), and to find an equation describes the relationship between the dependent and the independent variables the study used the Multiple Linear Regression Equation.

### 3.2.2 Statistical analysis & Test hypothesis

#### 3.2.2.1 Industry sector

##### 1. Determine the correlation coefficients and test hypotheses

The study was selected (17) independent variables for industrial companies to measure their contribution to predict the price per stock, as calculated value ratios of those variables, and using the statistical program at the level of significance 0.05, and calculated coefficient of Pearson correlation between the dependent variable and all of the independent variables and the results were as shown in table (3):

*Table (5): Describe the correlation between the dependent variable and independent variables in industry sector*

Independent variables	Person correlation (R)	Coefficient of determination (R <sup>2</sup> )	Sig. value
Current Ratio	0.112	1.25%	0.465
Quick Ratio	0.078	0.61%	0.611
Inventory turnover	-0.050	0.25%	0.744
Days Sales	0.240	5.76%	0.113
Fixed Assets Turnover	0.009	0.01%	0.951
Assets Turnover	-0.018	0.03%	0.908
Debt Ratio	0.051	0.26%	0.741
Times Interest Earning	0.275	7.56%	0.068
Profit Margin	0.714	50.98%	0.000**
Basic Earning Power Ratio	0.598	35.76%	0.000**
Return on Assets	0.607	36.84%	0.000**
Return on Equity	0.501	25.10%	0.000**
Cash Flow Per stock	0.123	1.51%	0.419
Earnings Per stock	0.782	61.15%	0.000**
Price on Earning Ratio	0.008	0.01%	0.960
Price on Cash Flow	-0.039	0.15%	0.800
Market on Book Value Ratio	0.443	19.62%	0.002**

\*\* Correlation is significant at the 0.05 level.

### **The First hypothesis:**

*There is a significant relationship between the Liquidity ratios and stock price of the listed companies in Palestine Stock Exchange.*

The table (3) showed that the value (Sig = 0.465) which is greater than the significance level 0.05, which means there is no statistically significant relationship between the current ratio and stock price in the market securities, but according to Al

Gergawi (2008) and Kohansal & et al (2012) find that there is significant relationship between the current ratio and stock price. The Coefficient of determination to the current ratio is able to explain what accounted for (1.25%) of the changes in the stock price. Also, according to value (Sig = 0.611) of quick ratio there is no statistically significant relationship between the quick ratio and stock price in the market securities. The Coefficient of determination to the quick ratio is able to explain what accounted for (0.61%) of the changes in the stock price.

#### **The Second hypothesis:**

*There is a significant relationship between the Activity ratios and stock price of the listed companies in Palestine Stock Exchange.*

In the Industry there is no statistically significant relationship between the all activity ratios (inventory turnover, days Sales, fixed assets turnover and assets turnover) and stock price in the market securities, Because the value of  $\text{Sig} > 0.05$ . And the Coefficient of determination to the activity ratios is able to explain what accounted for (0.25% - 5.76% - 0.01% - 0.03%) respectively, of the changes in the stock price (Table (3)).

But according to the study of Al Gergawi (2008) find that there is a significant relationship between (the fixed assets turnover ratio and assets turnover ratio) with the stock price in the market securities, This difference may be Because of the difference the sample size and the time period taken (there is many events occurred after the study of Al Gergawi).

#### **The Third hypothesis:**

*There is a significant relationship between the Debt ratios and stock price of the listed companies in Palestine Stock Exchange.*

The relationship between the debt ratio and stock price is positive relation. But the value of  $\text{Sig} = 0.741$  is larger than the significant level (0.05) so, there is no significant relationship between the debt ratio and stock price. In addition the debt ration able to explain what accounted for (0.26%) of the change in the stock price. But according to the study of Kohansal & et al (2012) find that there is significant relationship between the debt ratio and stock price.

Also, the time interest earning ratio don't have a significant relationship with the stock price because the value of  $\text{Sig} = 0.068$ . And the time interest earning ratio is able to explain what accounted for (7.56%) of the changes in the stock price.

#### **The Fourth hypothesis:**

*There is a significant relationship between the Profitability ratios and stock price of the listed companies in Palestine Stock Exchange.*

The correlation coefficient between the profit margin ratio and stock price equal (0.714) so, There is a positive relationship, and according to value of  $\text{Sig} = 0.000$ , this relationship is a significant. Also the profit margin ratio is able to explain what accounted

for (50.98%) of the changes in the stock price. The study of Al Gergawi (2008) support this relationship. Also the basic earning power have a positive and significant relationship with the stock price in the market securities. And can able to explain what accounted for (35.75%) of the changes in the stock price.

The results showed that the correlation coefficient between the return on assets ratio and stock price was (0.607) its positive relationship and value ( $Sig = 0.000$ ) which is less than the significance level 0.05. And The Coefficient of determination to the return on assets ratio is able to explain what accounted for (36.84%) of the changes in the stock price. So, there is statistically significant relationship between the return on assets ratio and stock price in the market securities, this finding supported by Al Gergawi (2008).

According to table (3), the coefficient of determination to the return on equity ratio is able to explain what accounted for (25.10%) of the changes in the stock price. And the correlation coefficient between the return on equity ratio and stock price was (0.501) its positive relationship and value ( $Sig = 0.000$ ) which is less than the significance level 0.05, there is statistically significant relationship between the return on equity ratio and stock price in the market securities, and the study of Al Gergawi (2008) approved this finding. But according to study of Kohansal & et al (2012) and Kan (2012) there is no significant relationship between the return on equity ratio and stock price.

#### **The Fifth hypothesis:**

*There is a significant relationship between the Market ratios and stock price of the listed companies in Palestine Stock Exchange.*

The cash flow per stock ratio have a positive relationship with the stock price but this relation is not significant according to value of  $Sig$ . because it is lower than the level significant (0.05). The Coefficient of determination to the cash flow per stock ratio is able to explain what accounted for (1.51%) of the changes in the stock price. So, there is no statistically significant relationship between the cash flow per stock ratio and stock price in the market securities.

The earning per stock ratio is able to explain what accounted for (61.15%) of the changes in the stock price. There is statistically significant relationship between the earning per stock ratio and stock price in the market securities, because the value of  $Sig$  equal 0.00 and it is lower than the significant level. And this relationship is positive. this finding is supported by the study of Al-Qudah (2013) and Kan (2012). But according to Al Gergawi (2008) there is no significant relationship.

There is no statistically significant relationship between the price on earnings ratio and stock price in the market securities, because the value ( $Sig = 0.960$ ) which is greater than the significance level 0.05. The price on earnings ratio is able to explain what accounted for (0.01%) of the changes in the stock price. This finding supported by study of Al Gergawi (2008). But the study of Al-Qudah (2013) find that there is significant relationship between the price on earnings ratio and stock price.

In the other hand, there is no statistically significant relationship between the price on cash flow ratio and stock price in the market securities, because value ( $Sig = 0.800$ ) which is greater than the significance level 0.05. The Coefficient of determination to the price on cash flow ratio is able to explain what accounted for (0.15%) of the changes in the stock price.

As showed in table (3) that the correlation coefficient between the market price on book value ratio and stock price was (0.443) its positive relationship and value ( $Sig = 0.002$ ) which is less than the significance level 0.05, which means there is statistically significant relationship between the market price on book value ratio and stock price in the market securities the market price on book value ratio is able to explain what accounted for (19.62%) of the changes in the stock price. Also, the study of Al-Qudah (2013) and Al Gergawi (2008) approved this result.

## 2. The Mathematical Model.

The variables of study were put in a mathematical model to ease the analysis the relationship between dependent & independent variable using the regression.

*Table (6): STEPWISE Regression Results of Industry sector*

Variables	Coefficient	Std. Error	T-Statistic	Sig.
Constant	-1.754	0.373	-4.701	.000
Earnings per stock	4.022	0.715	5.621	.000
Market price on book value	1.085	0.13	8.376	.000
Days sales	0.10	0.001	7.180	.000
Fixed assets turnover	0.483	0.101	4.799	.000
Profit margin	2.658	0.610	4.360	.000
Return on equity	-4.438	1.120	-3.961	.000
R-squared= 0.906, Adjusted R-squared= 0.891, F= 60.854, Sig=.000				

Dependent Variable: Market price

As shown in table (4), the test results showed that here (6) a significant relationship with variables are statistically significant at a price per stock and the value of the coefficient of determination shows that the average Together, these independent variables able to explain what (89.1%) of the resulting changes in the dependent variable which is considered a high percentage. Through the results of the analysis of variance of the regression line shows that the value of the test (60.854= F) and value ( $Sig = 0.000$ ), which indicates the presence of a significant relationship between the stock price and the independent variables together.

According to table (4), the following linear regression model to calculate the Stock Price in the Palestine Stock Exchange in the industry sector as follows:

$$Y = 4.022X_1 + 1.085X_2 + 0.010X_3 + 0.483X_4 + 2.658X_5 - 4.438X_6 - 1.754.... \quad (1)$$

When,

Y: Market Price	X4: Fixed assets turnover
X1: Earning per stock	X5: Profit margin
X2: Market price on book value	X6: Return on equity
X3: Days sales	

The linear regression model (*No.1*) shows the variables that have the high significant relationship with the market price in industry sector. Earning per stock: is an important variable affecting the market price, which earning per stock increase will attract the investors and increase the demand on the stock. So, will lead to increase in market price. Market price/book value: a lower ratio could mean that the stock is undervalued, also mean that something fundamentally wrong with the company. So, its important ratio for the investors. Days sales outstanding: when the credit facilities increased, this will lead to more risk of not recollecting those credits and bad debts will be increased. Therefore this situation will lead to decrease the income then decrease the market price. Fixed assets turnover: When this ratio increase its mean that the company is utilizing its fixed assets in generating revenues by successfully. Profit Margin: when the profit margin increase its mean the net income available to common stock will increase, and the demand on the stock will increase. Return on equity: when the profit as a percent of equity increased, this will lead to more ability of using the profit as guarantee to pay any amounts needed.

### **3.2.2.2 Investment sector**

#### **1. Determine the correlation coefficients and test hypotheses**

The study was selected (17) independent variables for industrial companies to measure their contribution to predict the price per stock, as calculated value ratios of those variables, and using the statistical program at the level of significance 0.05, and calculated coefficient of Pearson correlation between the dependent variable and all of the independent variables and the results were as shown in table (5):

*Table (7): Describe the correlation between the dependent variable and independent variables in investment sector*

<b>Independent variables</b>	<b>Person correlation (R)</b>	<b>Coefficient of determination (R2 )</b>	<b>Sig. value</b>
Current Ratio	0.114	1.30%	0.514
Quick Ratio	0.120	1.44%	0.492
Inventory turnover	0.053	0.28%	0.764
Days Sales	0.030	0.09%	0.864
Fixed Assets Turnover	0.400	16.00%	0.017**
Assets Turnover	0.446	19.89%	0.007**
Debt Ratio	0.081	0.66%	0.643
Times Interest Earning	0.084	0.71%	0.630
Profit Margin	0.096	0.92%	0.585
Basic Earning Power Ratio	0.274	7.51%	0.111
Return on Assets	0.243	5.90%	0.159
Return on Equity	0.277	7.67%	0.108
Cash Flow Per stock	0.127	1.61%	0.468
Earnings Per stock	0.336	11.29%	0.049**
Price on Earning Ratio	-0.047	0.22%	0.790
Price on Cash Flow	0.248	6.15%	0.151
Market on Book Value Ratio	0.528	27.88%	0.001**

\*\* Correlation is significant at the 0.05 level

### **The First hypothesis:**

*There is a significant relationship between the Liquidity ratios and stock price of the listed companies in Palestine Stock Exchange.*

The results showed that the relationship between the current ratio and stock price is a positive relationship but value ( $Sig = 0.514$ ) which is greater than the significance level 0.05, which means there is no statistically significant relationship between the current ratio and stock price in the market securities. Also to the current ratio is able to explain what accounted for (1.30%) of the changes in the stock price. and the study of Martani, Mulyono & Khairurizka (2009) find that there no significant relationship between the current ratio and stock price. But study of Al Gergawi (2008) and Pourkand & Babayazar (2013) find that there is a significant relationship between the current ratio and stock price.

According to table (5) the quick ratio is able to explain what accounted for (1.44%) of the changes in the stock price. And the relationship between the quick ratio and stock price was (0.120) its positive relationship but value ( $Sig = 0.492$ ) which is greater than the significance level 0.05, which means there is no statistically significant relationship between the quick ratio and stock price in the market securities, but the study of Pourkand & Babayazar (2013) find that there is a significant relationship.

### **The Second hypothesis:**

*There is a significant relationship between the Activity ratios and stock price of the listed companies in Palestine Stock Exchange.*

The results showed that the relationship between the inventory turnover ratio and stock price is positive relationship but value ( $Sig = 0.764$ ) which is greater than the significance level 0.05, which means there is no statistically significant relationship between the inventory turnover ratio and stock price in the market securities. And the inventory turnover ratio is able to explain what accounted for (0.28%) of the changes in the stock price.

Also, there is no statistically significant relationship between the days sales ratio and stock price in the market securities. Because the value of ( $Sig = 0.864$ ) which is greater than the significance level 0.05. And the days sales ratio is able to explain what accounted for (0.09%) of the changes in the stock price.

As showed in results, The value of ( $Sig = 0.017$ ) is less than the significance level 0.05 There is significant correlation between the fixed assets turnover ratio and stock price in the market securities, and the relationship is positive. The fixed assets turnover ratio is able to explain what accounted for (16%) of the changes in the stock price. In addition, there is statistically significant relationship between the assets turnover and stock price in the market securities, its positive relationship and value ( $Sig = 0.007$ ) is less than the significance level 0.05. And the assets turnover ratio is able to explain what accounted for (19.89%) of the changes in the stock price.

### **The Third hypothesis:**

*There is a significant relationship between the Debt ratios and stock price for the listed companies in Palestine Stock Exchange.*

In the investment sector, there is no statistically significant relationship between the debt ratios (debt ratio and time interest earning) and stock price in the market securities. Because the value of Sig. is lower than the level of significance (0.05). And the debt ratio and time interest earning are able to explain what accounted for (0.66% - 0.71%) respectively, of the changes in the stock price.

### **The Fourth hypothesis:**

*There is a significant relationship between the Profitability ratios and stock price of the listed companies in Palestine Stock Exchange.*

The results showed that the correlation coefficient between the profit margin ratio and stock price is positive relationship but value (Sig = 0.585) which is greater than the significance level 0.05, which means there is no statistically significant relationship between the profit margin ratio and stock price in the market securities, and the profit margin ratio is able to explain what accounted for (0.92%) of the changes in the stock price. But there is a significant relationship according to study of Pourkand & Babayazar (2013) and Martani, Mulyono & Khairurizka (2009).

As showed in the table (5) that the relationship between the basic earning power ratio and stock price is positive relationship but value (Sig = 0.111) which is greater than the significance level 0.05, which means there is no statistically significant relationship between the basic earning power ratio and stock price in the market securities. Also the basic earning power ratio is able to explain what accounted for (7.51%) of the changes in the stock price.

There is no statistically significant relationship between the return on assets ratio and stock price in the market securities, because the value of (Sig = 0.159) which is greater than the significance level 0.05. And the return on assets ratio is able to explain what accounted for (5.90%) of the changes in the stock price. But according to Placido & Menaje (2012) and Al Gergawi (2008) there is a significant relationship. Also there is no statistically significant relationship between the return on equity ratio and stock price in the market securities, value (Sig = 0.108) which is greater than the significance level 0.05. The return on equity ratio is able to explain what accounted for (7.67%) of the changes in the stock price. and this finding supported by the study of Martani, Mulyono & Khairurizka (2009). But according to Al Gergawi (2008) there is a significant relationship.

### **The Fifth hypothesis:**

*There is a significant relationship between the Market ratios and stock price of the listed companies in Palestine Stock Exchange.*

The relationship between the cash flow per stock ratio and stock price was (0.127) its positive relationship but value (Sig = 0.468) which is greater than the significance level

0.05, which means there is no statistically significant relationship between the cash flow per stock ratio and stock price in the market securities. The cash flow per stock ratio is able to explain what accounted for (1.61%) of the changes in the stock price.

But, the earning per stock ratio have a positive relationship between with stock price and value ( $Sig = 0.049$ ) is less than the significance level 0.05, which means there is statistically significant relationship between the earning per stock ratio and stock price in the market securities. The earning per stock ratio is able to explain what accounted for (11.29%) of the changes in the stock price. Also the study of Al Gergawi (2008) and Placido & Menaje (2012) approved this finding. But the study of Pourkand & Babayazar (2013) find there is no significant relationship.

The results showed that the correlation coefficient between the price on earnings ratio and stock price is negative relationship but value ( $Sig = 0.790$ ) which is greater than the significance level 0.05, which means there is no statistically significant relationship between the price on earnings ratio and stock price in the market securities. This ratio is able to explain what accounted for (0.22%) of the changes in the stock price. Also, the study of Al Gergawi (2008) supported this finding. But the study of Roux (2010) find that there is a significant relationship.

The table (5) showed that the relationship between the price on cash flow ratio and stock price is positive, and the price on cash flow ratio is able to explain what accounted for (6.15%) of the changes in the stock price. But value ( $Sig = 0.151$ ) which is greater than the significance level 0.05, which means there is no statistically significant relationship between the price on cash flow ratio and stock price in the market securities.

The results showed that the correlation coefficient between the market price on book value ratio and stock price is positive relationship and value ( $Sig = 0.001$ ) which is less than the significance level 0.05, which means there is statistically significant relationship between the market price on book value ratio and stock price in the market securities, the market price on book value ratio is able to explain what accounted for (27.88%) of the changes in the stock price. And this finding supported by the study of Karami & Talaeei (2013), Al Gergawi (2008), Ibrahim & Kheradyar & Nor (2011) and Martani, Mulyono & Khairurizka (2009).

## 2. The Mathematical Model.

The variables of study were put in a mathematical model to ease the analysis the relationship between dependent & independent variable using the regression.

*Table (8): STEPWISE Regression Results of Investment sector*

Variables	Coefficient	Std. Error	T-Statistic	Sig.
Constant	0.388	0.071	5.457	.000
Market price on Book Value	0.439	0.046	9.484	.000
Assets turnover	8.796	1.611	5.460	.000

Fixed assets turnover	-5.198	1.168	-4.452	.000
Price on cash flow	0.001	0.000	2.757	.000
R-squared= 0.842, Adjusted R-squared= 0.821, F= 40.017, Sig=.000				

### Dependent Variable: Market price

As shown in table (6), the test results showed that here (4) a significant relationship with variables are statistically significant at a price per stock and the value of the coefficient of determination shows that the average Together, these independent variables able to explain what (82.1%) of the resulting changes in the dependent variable which is considered a high percentage. Through the results of the analysis of variance of the regression line shows that the value of the test ( $40.017 = F$ ) and value ( $Sig = 0.000$ ), which indicates the presence of a significant relationship between the stock price and the independent variables together.

According to table (6), the following linear regression model to calculate the Stock Price in the Palestine Stock Exchange in the Investment sector as follows:

When,

Y: Market Price

### X3: Fixed assets turnover

### X1: Market price on Book Value

#### X4: Price on cash flow

#### X2: Assets turnover

The linear regression model (No.2) shows the variables that have the high significant relationship with the market price in investment sector. Market price/book value: a lower ratio could mean that the stock is undervalued, also mean that something fundamentally wrong with the company. So, its important ratio for the investors. Total assets turnover: when this ratio increase its mean that the company is utilizing its total assets in generating revenues by successfully. Fixed assets turnover: when this ratio increase its mean that the company is utilizing its fixed assets in generating revenues by successfully. Market price/Cash flow: when a cash flow increase, earning should increase, that will lead to increase in stock price.

### **3.2.2.3 Service sector**

#### 1. Determine the correlation coefficients and test hypotheses

The study was selected (15) independent variables for industrial companies to measure their contribution to predict the price per stock, as calculated value ratios of those variables, and using the statistical program at the level of significance 0.05, and calculated coefficient of Pearson correlation between the dependent variable and all of the independent variables and the results were as shown in table (7):

*Table (9): Describe the correlation between the dependent variable and independent variables in service sector*

Independent variables	Person correlation (R)	Coefficient of determination (R <sup>2</sup> )	Sig. value
Current Ratio	-0.035	0.12%	0.830
Quick Ratio	-0.029	0.08%	0.860
Fixed Assets Turnover	-0.094	0.88%	0.563
Assets Turnover	0.124	1.54%	0.446
Debt Ratio	-0.189	3.57%	0.243
Times Interest Earning	0.287	8.24%	0.072
Profit Margin	0.147	2.16%	0.366
Basic Earning Power Ratio	0.611	37.33%	0.000**
Return on Assets	0.583	33.99%	0.000**
Return on Equity	0.524	27.46%	0.001**
Cash Flow Per stock	0.581	33.76%	0.000**
Earnings Per stock	0.873	76.21%	0.000**
Price on Earning Ratio	-0.041	0.17%	0.804
Price on Cash Flow	0.087	0.76%	0.596
Market on Book Value Ratio	0.864	74.65%	0.000**

\*\* Correlation is significant at the 0.05 level

### The First hypothesis:

*There is a significant relationship between the Liquidity ratios and stock price of the listed companies in Palestine Stock Exchange.*

The table (7) showed that the correlation coefficient between the current ratio and stock price is negative relationship but value (Sig = 0.830) which is greater than the significance level 0.05, which means there is no statistically significant relationship between the current ratio and stock price in the market securities, the current ratio is able to explain what accounted for (0.12%) of the changes in the stock price. also Martani,

Mulyono & Khairurizka (2009) and Al Gergawi (2008) supported this finding, but the study of Pourkand & Babayazar (2013) find that there is a significant relationship.

The correlation coefficient between the quick ratio and stock price is negative relationship but value ( $Sig = 0.860$ ) which is greater than the significance level 0.05, which means there is no statistically significant relationship between the quick ratio and stock price in the market securities, the quick ratio is able to explain what accounted for (0.08%) of the changes in the stock price. but Pourkand & Babayazar (2013) find there is a significant relationship in his study.

#### **The Second hypothesis:**

*There is a significant relationship between the Activity ratios and stock price for the listed companies in Palestine Stock Exchange.*

The fixed assets turnover is able to explain what accounted for (0.88%) of the changes in the stock price. And the value ( $Sig = 0.563$ ) which is greater than the significance level 0.05, which means there is no statistically significant relationship between the fixed assets turnover ratio and stock price in the market securities. But according to Al Gergawi (2008) there is a significant relationship. Also, there is no statistically significant relationship between the assets turnover and stock price in the market securities, because the value ( $Sig = 0.446$ ) which is greater than the significance level 0.05. The assets turnover is able to explain what accounted for (1.54%) of the changes in the stock price. also there is no significant according to Al Gergawi (2008). But there is a significant relationship in the study of Martani, Mulyono & Khairurizka (2009).

#### **The Third hypothesis:**

*There is a significant relationship between the Debt ratios and stock price of the listed companies in Palestine Stock Exchange.*

According to table (7) that the correlation coefficient between the debt ratio and stock price is a negative relationship and value ( $Sig = 0.243$ ) which is greater than the significance level 0.05, which means there is no statistically significant relationship between the debt ratio and stock price in the market securities. the debt ratio is able to explain what accounted for (3.57%) of the changes in the stock price. Also the correlation coefficient between the time interest earning ratio and stock price is a positive relationship but value ( $Sig = 0.072$ ) which is greater than the significance level 0.05, which means there is no statistically significant relationship between the time interest earning ratio and stock price in the market securities. The time interest earning ratio is able to explain what accounted for (8.24%) of the changes in the stock price.

#### **The Fourth hypothesis:**

*There is a significant relationship between the Profitability ratios and stock price of the listed companies in Palestine Stock Exchange.*

The correlation coefficient between the profit margin ratio and stock price is a positive relationship but value ( $\text{Sig} = 0.366$ ) which is greater than the significance level 0.05, which means there is no statistically significant relationship between the profit margin ratio and stock price in the market securities, and the profit margin ratio is able to explain what accounted for (2.16%) of the changes in the stock price. but there is a significant relationship according to study of Al Gergawi (2008), Martani, Mulyono & Khairurizka (2009) and Pourkand & Babayazar (2013).

There is statistically significant relationship between the basic earning power ratio and stock price in the market securities. The value ( $\text{Sig} = 0.000$ ) which is less than the significance level 0.05, the relation is positive. The basic earning power ratio is able to explain what accounted for (37.33%) of the changes in the stock price. But there is statistically significant relationship between the return on assets ratio and stock price in the market securities, because value ( $\text{Sig} = 0.000$ ) which is less than the significance level 0.05. The return on assets ratio is able to explain what accounted for (33.99%) of the changes in the stock price. Also the study of Al Gergawi (2008) and Placido & Menaje (2012) approved this finding.

The results showed that the correlation coefficient between the return on equity ratio and stock price is positive relationship and value ( $\text{Sig} = 0.001$ ) which is less than the significance level 0.05, which means there is statistically significant relationship between the return on equity ratio and stock price in the market securities, the return on equity ratio is able to explain what accounted for (27.46%) of the changes in the stock price. and this finding supported by the study of Al Gergawi (2008) Martani, Mulyono & Khairurizka (2009).

### **The Fifth hypothesis:**

*There is a significant relationship between the Market ratios and stock price of the listed companies in Palestine Stock Exchange.*

The correlation coefficient between the cash flow per stock ratio and stock price is a positive relationship and value ( $\text{Sig} = 0.000$ ) which is less than the significance level 0.05, which means there is statistically significant relationship between the cash flow per stock ratio and stock price in the market securities. The cash flow per stock ratio is able to explain what accounted for (33.76%) of the changes in the stock price.

In addition, there is statistically significant relationship between the earning per stock ratio and stock price in the market securities. Because the value ( $\text{Sig} = 0.000$ ) which is less than the significance level 0.05. The earning per stock ratio is able to explain what accounted for (76.21%) of the changes in the stock price. Also the study of Placido & Menaje (2012) and Al Gergawi (2008) supported this finding. But the study of Pourkand & Babayazar (2013) find there is no significant relationship.

But, the correlation coefficient between the price on earnings ratio and stock price is a negative relationship but value ( $\text{Sig} = 0.804$ ) which is greater than the significance level 0.05, which means there is no statistically significant relationship between the price on earnings ratio and stock price in the market securities, but the study of Roux (2010) find

that there is a significant relationship. The price on earnings ratio is able to explain what accounted for (0.17%) of the changes in the stock price. But there is a significant relationship in the study of Al Gergawi (2008).

Also, the correlation coefficient between the price on cash flow ratio and stock price was a positive relationship but value ( $Sig = 0.596$ ) which is greater than the significance level 0.05, which means there is no statistically significant relationship between the price on cash flow ratio and stock price in the market securities. The price on cash flow ratio is able to explain what accounted for (0.76%) of the changes in the stock price.

The results showed that the correlation coefficient between the market price on book value ratio and stock price is a positive relationship and value ( $Sig = 0.000$ ) which is less than the significance level 0.05, which means there is statistically significant relationship between the market price on book value ratio and stock price in the market securities, the market price on book value ratio is able to explain what accounted for (74.65%) of the changes in the stock price. and this finding supported by the study of Ibrahim & Kheradyar & Nor (2011), Karami & Talaeei (2013), Al Gergawi (2008) and Martani, Mulyono & Khairurizka (2009).

## 2. The Mathematical Model.

The variables of study put in a mathematical model to ease the analysis the relationship between dependent & independent variable using the regression.

*Table (10): STEPWISE Regression Results of Service sector*

Variables	Coefficient	Std. Error	T-Statistic	Sig.
Constant	-0.435	0.147	-2.967	.005
Earnings per stock	9.444	0.527	17.921	.000
Return on equity	-6.725	0.632	-10.634	.000
Market price on book value	1.302	0.139	9.345	.000
R-squared= 0.980, Adjusted R-squared= 0.979, F= 603.033, Sig= .000				

Dependent Variable: Market price

As shown in table (8), the test results showed that here (3) a significant relationship with variables are statistically significant at a price per stock and the value of the coefficient of determination shows that the average Together, these independent variables able to explain what (97.9%) of the resulting changes in the dependent variable which is considered a high percentage. Through the results of the analysis of variance of the regression line shows that the value of the test ( $F= 603.033$ ) and value ( $Sig = 0.000$ ), which indicates the presence of a significant relationship between the stock price and the independent variables together.

According to table (8), the following linear regression model to calculate the Stock Price in the Palestine Stock Exchange in the Service sector as follows:

When,

Y: Market Price

### X3: Market price on book value

X1: Earning per stock

### X2: Return on equity

The linear regression model (No.3) shows the variables that have the high significant relationship with the market price in service sector. Earning per stock: is an important variable affecting the market price, which earning per stock increase will attract the investors and increase the demand on the stock. So, will lead to increase in market price. Market price/book value: a lower ratio could mean that the stock is undervalued, also mean that something fundamentally wrong with the company. So, its important ratio for the investors. Return on equity: when the profit as a percent of equity increased, this will lead to more ability of using the profit as guarantee to pay any amounts needed.

#### **3.2.2.4 Insurance sector**

### **1. Determine the correlation coefficients and test hypotheses**

The study was selected (15) independent variables for industrial companies to measure their contribution to predict the price per stock, as calculated value ratios of those variables, and using the statistical program at the level of significance 0.05, and calculated coefficient of Pearson correlation between the dependent variable and all of the independent variables and the results were as shown in table (9):

*Table (11): Describe the correlation between the dependent variable and independent variables in insurance sector*

<b>Independent variables</b>	<b>Person correlation (R)</b>	<b>Coefficient of determination (R2 )</b>	<b>Sig. value</b>
Current Ratio	0.531	28.20%	0.016**
Quick Ratio	0.532	28.30%	0.016**
Fixed Assets Turnover	0.314	9.86%	0.178
Assets Turnover	-0.370	13.69%	0.876
Debt Ratio	-0.646	41.73%	0.002**

Times Interest Earning	0.041	0.17%	0.864
Profit Margin	-0.046	0.21%	0.848
Basic Earning Power Ratio	0.651	42.38%	0.002**
Return on Assets	0.561	31.47%	0.010**
Return on Equity	-0.004	0.0016%	0.988
Cash Flow Per stock	0.527	27.77%	0.017**
Earnings Per stock	0.836	69.89%	0.000**
Price on Earning Ratio	-0.161	2.59%	0.497
Price on Cash Flow	-0.173	2.99%	0.467
Market on Book Value Ratio	0.095	0.90%	0.692

\*\* Correlation is significant at the 0.05 level

### The First hypothesis:

*There is a significant relationship between the Liquidity ratios and stock price of the listed companies in Palestine Stock Exchange.*

The results showed that the correlation coefficient between the current ratio and stock price was a positive relationship and value ( $Sig = 0.016$ ) which is less than the significance level 0.05, which means there is statistically significant relationship between the current ratio and stock price in the market securities, The current ratio is able to explain what accounted for (28.20%) of the changes in the stock price. also the study of Al Gergawi (2008) supported this finding. Also there is statistically significant relationship between the quick ratio and stock price in the market securities, because the value of  $Sig$  is less than the significance level 0.05, and this relation is a positive relation. The quick ratio is able to explain what accounted for (28.30%) of the changes in the stock price.

### The Second hypothesis:

*There is a significant relationship between the Activity ratios and stock price of the listed companies in Palestine Stock Exchange.*

Table (9) showed that the correlation coefficient between the fixed assets turnover ratio and stock price is a positive relationship but value ( $Sig = 0.178$ ) which is greater than the significance level 0.05, which means there is no statistically significant relationship between the fixed assets turnover ratio and stock price in the market securities. the fixed assets turnover ratio is able to explain what accounted for (9.86%) of the changes in the stock price.

Also, the relationship between the assets turnover ratio and stock price is a negative relationship but value ( $\text{Sig} = 0.876$ ) which is greater than the significance level 0.05, which means there is no statistically significant relationship between the assets turnover and stock price in the market securities. The assets turnover is able to explain what accounted for (13.69%) of the changes in the stock price.

#### **The Third hypothesis:**

*There is a significant relationship between the Debt ratios and stock price of the listed companies in Palestine Stock Exchange.*

There is a negative relationship between the debt ratio and stock price but the value ( $\text{Sig} = 0.002$ ) which is less than the significance level 0.05, which means there is statistically significant relationship between the debt ratio and stock price in the market securities. The debt ratio is able to explain what accounted for (41.73%) of the changes in the stock price.

the correlation coefficient between the time interest earning ratio and stock price is a positive relationship but value ( $\text{Sig} = 0.864$ ) which is greater than the significance level 0.05, which means there is no statistically significant relationship between the time interest earning ratio and stock price in the market securities. The time interest earning ratio is able to explain what accounted for (0.17%) of the changes in the stock price.

#### **The Fourth hypothesis:**

*There is a significant relationship between the Profitability ratios and stock price of the listed companies in Palestine Stock Exchange.*

The profit margin ratio is able to explain what accounted for (0.21%) of the changes in the stock price. and the correlation coefficient between the profit margin ratio and stock price is a negative relationship but value ( $\text{Sig} = 0.848$ ) which is greater than the significance level 0.05, which means there is no statistically significant relationship between the profit margin ratio and stock price in the market securities.

As showed in the results that the correlation coefficient between the basic earning power ratio and stock price is a positive relationship and value ( $\text{Sig} = 0.002$ ) which is less than the significance level 0.05, which means there is statistically significant relationship between the basic earning power ratio and stock price in the market securities. The basic earning power ratio is able to explain what accounted for (42.38%) of the changes in the stock price.

The return on assets ratio have a positive relationship with stock price and value ( $\text{Sig}= 0.010$ ) which is less than the significance level 0.05, which means there is statistically significant relationship between the return on assets ratio and stock price in the market securities, The return on assets ratio is able to explain what accounted for (31.47%) of the changes in the stock price. and this finding supported by the study of Kabajeh, ALNu'aimat & Dahmash (2012) and Al Gergawi (2008).

The return on equity ratio is able to explain what accounted for (0.00160%) of the changes in the stock price. and the correlation coefficient between the return on equity ratio and stock price is a negative relationship but value (Sig = 0.988) which is greater than the significance level 0.05, which means there is no statistically significant relationship between the return on equity ratio and stock price in the market securities. Also, Kabajeh, ALNu'aimat & Dahmash (2012) find that there is no significant relationship between the return on equity ratio and stock price. But according to Al Gergawi (2008) there is a significant relationship.

### **The Fifth hypothesis:**

*There is a significant relationship between the Market ratios and stock price of the listed companies in Palestine Stock Exchange.*

The results showed that the correlation coefficient between the cash flow per stock ratio and stock price is a positive relationship and value (Sig = 0.017) which is less than the significance level 0.05, which means there is statistically significant relationship between the cash flow per stock ratio and stock price in the market securities. The cash flow per stock ratio is able to explain what accounted for (27.77%) of the changes in the stock price.

Also, the correlation coefficient between the earning per stock ratio and stock price was (0.836) its positive relationship and value (Sig = 0.000) which is less than the significance level 0.05, which means there is statistically significant relationship between the earning per stock ratio and stock price in the market securities, and the study of Al Gergawi (2008) supported this finding. The earning per stock ratio is able to explain what accounted for (69.89%) of the changes in the stock price. But,

There is no statistically significant relationship between the price on earnings ratio and stock price in the market securities, because The value (Sig = 0.497) which is greater than the significance level 0.05, also the price on earnings ratio is able to explain what accounted for (2.59%) of the changes in the stock price. the study of Al Gergawi (2008) supported this study.

According to table (9) that the correlation coefficient between the price on cash flow ratio and stock price is a negative relationship but value (Sig = 0.467) which is greater than the significance level 0.05, which means there is no statistically significant relationship between the price on cash flow ratio and stock price in the market securities. The price on cash flow ratio is able to explain what accounted for (2.99%) of the changes in the stock price.

As showed in the results that the correlation coefficient between the market price on book value ratio and stock price is a positive relationship but value (Sig = 0.692) which is greater than the significance level 0.05, which means there is no statistically significant relationship between the market price on book value ratio and stock price in the market securities. The market price on book value ratio is able to explain what accounted for (0.90%) of the changes in the stock price. But according to Al Gergawi (2008) there is a significant relationship.

## 2. The Mathematical Model.

The variables of study were put in a mathematical model to ease the analysis the relationship between dependent & independent variable using the regression.

Through (15) financial ratios, the test results showed that here (4) a significant relationship with variables are statistically significant at a price per stock and thus can determine the form below to predict a price per stock of the insurance sector in the Palestine Securities as follows:

*Table (12): STEPWISE Regression Results of Insurance sector*

Variables	Coefficient	Std. Error	T-Statistic	Sig.
Constant	5.597	1.200	4.664	.005
Earnings per stock	7.488	1.225	6.110	.000
Return on assets	-22.759	5.458	-4.170	.001
debt ratio	-6.429	1.622	-3.964	.001
Assets turnover	1.717	0.725	2.366	.032
R-squared= 0.912, Adjusted R-squared= 0.889, F= 38.866, Sig= .000				

Dependent Variable: Market price

As shown in table (10), the test results showed that here (4) a significant relationship with variables are statistically significant at a price per stock and the value of the coefficient of determination shows that the average Together, these independent variables able to explain what (88.90%) of the resulting changes in the dependent variable which is considered a high percentage. Through the results of the analysis of variance of the regression line shows that the value of the test (38.866 = F) and value (Sig = 0.000), which indicates the presence of a significant relationship between the stock price and the independent variables together.

According to table (10), The following linear regression model to calculate the Stock Price in the Palestine Stock Exchange in the Insurance sector as follows:

$$Y = 7.488*X_1 - 22.759*X_2 - 6.429*X_3 + 1.717*X_4 + 5.597 \dots \dots \dots \quad (4)$$

When,

Y: Market Price

X3: debt ratio

X1: Earning per stock

X4: Assets turnover

X2: Return on assets

The linear regression model (*No.4*) shows the variables that have the high significant relationship with the market price in insurance sector. Earning per stock: is an important

variable affecting the market price, which earning per stock increase will attract the investors and increase the demand on the stock. So, will lead to increase in market price. Return on assets: when the profit as a percent of assets increased, this will lead to more ability of using the profit as guarantee to pay any amounts needed. Debt ratio: when the debt ratio increase the total liabilities will be increase, this will lead to more risk of the company because it will not be able to pay its liabilities. So, this will affect the market price. When this ratio increase its mean that the company is utilizing its total assets in generating revenues by successfully.

### 3.2.2.5 Banking sector

#### 1. Determine the correlation coefficients and test hypotheses

The study was selected (14) independent variables for industrial companies to measure their contribution to predict the price per stock, as calculated value ratios of those variables, and using the statistical program at the level of significance 0.05, and calculated coefficient of Pearson correlation between the dependent variable and all of the independent variables and the results were as shown in table (11):

*Table (13): Describe the correlation between the dependent variable and independent variables in banking sector*

Independent variables	Person correlation (R)	Coefficient of determination (R <sup>2</sup> )	Sig. value
Current Ratio	-0.246	6.05%	0.154
Quick Ratio	-0.246	6.05%	0.154
Fixed Assets Turnover	0.832	69.22%	0.000**
Assets Turnover	0.423	17.89%	0.011**
Debt Ratio	0.298	8.88%	0.082
Profit Margin	0.627	39.31%	0.000**
Basic Earning Power Ratio	0.736	54.17%	0.000**
Return on Assets	0.720	51.84%	0.000**
Return on Equity	0.829	68.72%	0.000**
Cash Flow Per stock	0.180	3.24%	0.300

Earnings Per stock	0.911	82.99%	0.000**
Price on Earning Ratio	-0.213	4.54%	0.218
Price on Cash Flow	-0.062	0.38%	0.724
Market on Book Value Ratio	0.980	96.04%	0.000**

\*\* Correlation is significant at the 0.05 level

### **The First hypothesis:**

*There is a significant relationship between the Liquidity ratios and stock price of the listed companies in Palestine Stock Exchange.*

As shown in table (11) that the correlation coefficient between the current ratio and stock price is a negative relationship but value (Sig = 0.154) which is greater than the significance level 0.05, which means there is no statistically significant relationship between the current ratio and stock price in the market securities, the current ratio is able to explain what accounted for (6.05%) of the changes in the stock price. and the study of Martani, Mulyono & Khairurizka (2009) and Al Gergawi (2008) find that there no significant relationship between the current ratio and stock price. But study of Pourkand & Babayazar (2013) find that there is a significant relationship between the current ratio and stock price.

The correlation coefficient between the quick ratio and stock price was is a negative relationship but value (Sig = 0.154) which is greater than the significance level 0.05, which means there is no statistically significant relationship between the quick ratio and stock price in the market securities, the quick ratio is able to explain what accounted for (6.05%) of the changes in the stock price. but the study of Pourkand & Babayazar (2013) find that there is a significant relationship.

### **The Second hypothesis:**

*There is a significant relationship between the Activity ratios and stock price of the listed companies in Palestine Stock Exchange.*

In the banking sector the correlation coefficient between the fixed assets turnover ratio and stock price is a positive relationship and value (Sig = 0.000) which is less than the significance level 0.05, which means there is statistically significant relationship between the fixed assets turnover ratio and stock price in the market securities. The fixed assets turnover ratio is able to explain what accounted for (69.22%) of the changes in the stock price.

The correlation coefficient between the assets turnover ratio and stock price was is a positive relationship and value (Sig = 0.011) which is less than the significance level 0.05, which means there is statistically significant relationship between the assets turnover and stock price in the market securities, The assets turnover is able to explain

what accounted for (17.89%) of the changes in the stock price. and Martani, Mulyono & Khairurizka (2009) supported this finding.

### **The Third hypothesis:**

*There is a significant relationship between the Debt ratios and stock price of the listed companies in Palestine Stock Exchange.*

According to results, that the correlation coefficient between the debt ratio and stock price is a positive relationship but value ( $Sig = 0.082$ ) which is greater than the significance level 0.05, which means there is no statistically significant relationship between the debt ratio and stock price in the market securities. The debt ratio is able to explain what accounted for (8.88%) of the changes in the stock price.

### **The Fourth hypothesis:**

*There is a significant relationship between the Profitability ratios and stock price of the listed companies in Palestine Stock Exchange.*

The profit margin ratio is able to explain what accounted for (39.31%) of the changes in the stock price. And the correlation coefficient between the profit margin ratio and stock price is a positive relationship and value ( $Sig = 0.000$ ) which is less than the significance level 0.05, which means there is statistically significant relationship between the profit margin ratio and stock price in the market securities, and this finding supported by the study of Pourkand & Babayazar (2013) and Martani, Mulyono & Khairurizka (2009).

Also, the correlation coefficient between the basic earning power ratio and stock price is a positive relationship and value ( $Sig = 0.000$ ) which is less than the significance level 0.05, which means there is statistically significant relationship between the basic earning power ratio and stock price in the market securities. The basic earning power ratio is able to explain what accounted for (54.17%) of the changes in the stock price

That the relationship between the return on assets ratio and stock price is a positive relationship and value ( $Sig = 0.000$ ) which is less than the significance level 0.05, which means there is statistically significant relationship between the return on assets ratio and stock price in the market securities, the return on assets ratio is able to explain what accounted for (51.84%) of the changes in the stock price. also according to Placido & Menaje (2012) there is a significant relationship. But the study of Al Gergawi (2008) find there is no significant relationship.

The return on equity ratio is able to explain what accounted for (68.72%) of the changes in the stock price. And the correlation coefficient between the return on equity ratio and stock price was is a positive relationship and value ( $Sig = 0.000$ ) which is less than the significance level 0.05, which means there is statistically significant relationship between the return on equity ratio and stock price in the market securities. But the study of Martani, Mulyono & Khairurizka (2009) and Al Gergawi (2008) find that there is no significant relationship.

### **The Fifth hypothesis:**

*There is a significant relationship between the Market ratios and stock price of the listed companies in Palestine Stock Exchange.*

According to table (11) that the correlation coefficient between the cash flow per stock ratio and stock price is a positive relationship but value ( $Sig = 0.300$ ) which is greater than the significance level 0.05, which means there is no statistically significant relationship between the cash flow per stock ratio and stock price in the market securities. The cash flow per stock ratio is able to explain what accounted for (3.24%) of the changes in the stock price.

The earning per stock ratio is able to explain what accounted for (82.99%) of the changes in the stock price. And the correlation coefficient between the earning per stock ratio and stock price is a positive relationship and value ( $Sig = 0.000$ ) which is less than the significance level 0.05, which means there is statistically significant relationship between the earning per stock ratio and stock price in the market securities, also the study of Placido & Menaje (2012) supported this finding. But the study of Al Gergawi (2008) and Pourkand & Babayazar (2013) find there is no significant relationship.

The relationship between the price on earnings ratio and stock price is a negative relationship and value ( $Sig = 0.218$ ) which is greater than the significance level 0.05, which means there is no statistically significant relationship between the price on earnings ratio and stock price in the market securities, The price on earnings ratio is able to explain what accounted for (4.54%) of the changes in the stock price. but the study of Roux (2010) find that there is a significant relationship. But according to Al Gergawi (2008) there is a significant relationship.

As the result showed, that the correlation coefficient between the price on cash flow ratio and stock price is a negative relationship but value ( $Sig = 0.724$ ) which is greater than the significance level 0.05, which means there is no statistically significant relationship between the price on cash flow ratio and stock price in the market securities. The stock price is able to explain what accounted for (0.38%) of the changes in the price on stock price.

The market price on book value ratio is able to explain what accounted for (96.04%) of the changes in the stock price. And the correlation coefficient between the market price on book value ratio and stock price was (0.980) its positive relationship and value ( $Sig = 0.000$ ) which is less than the significance level 0.05, which means there is statistically significant relationship between the market price on book value ratio and stock price in the market securities, and this finding supported by the study of Al Gergawi (2008) and Karami & Talaeei (2013), Ibrahim & Kheradyar & Nor (2011) and Martani, Mulyono & Khairurizka (2009).

## **2. The Mathematical Model.**

The variables of study put in a mathematical model to ease the analysis the relationship between dependent & independent variable using the regression.

*Table (14): STEPWISE Regression Results of banking sector*

Variables	Coefficient	Std. Error	T-Statistic	Sig.
Constant	-0.026	0.042	-0.615	.543
Market price on book value	1.203	0.044	27.279	.000
Earnings per stock	12.224	0.661	18.497	.000
Return on equity	-15.613	0.911	-17.143	.000
Basic earning power	10.544	2.969	3.552	.001
Price on earning	0.000035	0.000	-2.528	.017
Fixed assets turnover	-0.116	0.051	-2.277	.031
R-squared= 0.998, Adjusted R-squared= 0.997, F= 1973.791, Sig= .000				

Dependent Variable: Market price

As shown in table (12), the test results showed that here (6) a significant relationship with variables are statistically significant at a price per stock and the value of the coefficient of determination shows that the average Together, these independent variables able to explain what (99.70%) of the resulting changes in the dependent variable which is considered a high percentage. Through the results of the analysis of variance of the regression line shows that the value of the test (1973.791 = F) and value (Sig = 0.000), which indicates the presence of a significant relationship between the stock price and the independent variables together.

According to table (12), the following linear regression model to calculate the Stock Price in the Palestine Stock Exchange in the Banking sector as follows:

$$Y = 1.203*X1 + 12.224*X2 - 15.613*X3 - 10.544*X4 + 0.0003518*X5 - 0.116*X6 - 0.026.....(5)$$

When,

Y: Market Price

X4: Basic earning power

X1: Market price on book value

X5: Price on earning

X2: Earning per stock

X6: Fixed assets turnover

X3: Return on equity

The linear regression model (No.5) shows the variables that have the high significant relationship with the market price in banking sector. Earning per stock: is an important variable affecting the market price, which earning per stock increase will attract the investors and increase the demand on the stock. So, will lead to increase in market price. Market price/book value: a lower ratio could mean that the stock is undervalued, also mean that something fundamentally wrong with the company. So, its important ratio for the investors. Return on equity: when the profit as a percent of equity increased, this will lead to more ability of using the profit as guarantee to pay any amounts needed. Basic

earning power: when the earning before interest and tax increase as a percent of total assets, this will lead to increase the net income of the company and it's very important for the investors. Market Price/Earning per stock: shows how much investors are willing to pay per dollar of earnings, and a high price/earning ratio means that investors are anticipating higher growth in the future. Fixed assets turnover: When this ratio increase its mean that the company is utilizing its fixed assets in generating revenues by successfully.

## **Chapter 4**

### **The Results & Recommendations**

## 4.1 The results

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

### 1. The industry sector:

- a. There is a significant relationship between the market price and earning per stock, profit margin, fixed assets turnover, days sales and market price on book value.
- b. The formula is:

$$Y = 4.022*X1 + 1.085*X2 + 0.010*X3 + 0.483*X4 + 2.658*X5 - 4.438*X6 - 1.754$$

When,

Y: Market Price

X4: Fixed assets turnover

X1: Earning per stock

X5: Profit margin

X2: Market price on book value

X6: Return on equity

X3: Days sales

### 2. The investment sector:

- a. There is a significant relationship between the market price and market price on book value, assets turnover, fixed assets turnover and price on cash flow.
- b. The formula is:

$$Y = 0.439*X1 + 8.796*X2 - 5.198*X3 + 0.001X4 - 0.388$$

When,

Y: Market Price

X3: Fixed assets turnover

X1: Market price on Book Value

X4: Price on cash flow

X2: Assets turnover

### 3. The service sector

- a. There is a significant relationship between the market price and Return on equity, Earning per stock and Market price on book value.
- b. The formula is:

$$Y = 9.444*X1 - 6.725*X2 + 1.302*X3 - 0.435$$

When,

Y: Market Price

X2: Return on equity

X1: Earning per stock

X3: Market price on book value

#### **4. The insurance sector:**

- a. There is a significant relationship between the market price and Earning per stock, Return on assets, debt ratio and Assets turnover.
- b. The formula is:

$$Y = 7.488*X1 - 22.759*X2 - 6.429X3 + 1.717X4 + 5.597$$

When,

Y: Market Price

X3: debt ratio

X1: Earning per stock

X4: Assets turnover

X2: Return on assets

#### **5. The banking sector:**

- a. There is a significant relationship between the market price and Earning per stock, Return on assets, debt ratio and Assets turnover.
- b. The formula is:

$$Y = 1.203*X1 + 12.224*X2 - 15.613*X3 - 10.544*X4 + 0.0003518X5 - 0.116X6 - 0.026$$

When,

Y: Market Price

X4: Basic earning power

X3: Return on equity

X1: Market price on book value

X5: Price on earning

X2: Earning per stock

X6: Fixed assets turnover

## **4.2 The recommendations**

- In the industry sector, it might be useful for the investors to benefit from the earning per stock, market price on book value, day's sales, fixed assets turnover and Profit margin when they taking an investment decision.
- The variables that affect the market price (market price on book value, assets turnover, fixed assets turnover and price on cash flow) might be useful for investors while they taking their investment decision in investment sector.
- In the investment sector, the following (earning per stock, return on equity and market price on book value) are significant ratios might be useful to be taken into consideration while the investors taking their financial decision.
- The variables that affect the market price (earning per stock, return on assets, debt ratio and assets turnover) might be useful for investors while they taking their investment decision in insurance sector.
- In the industry sector, it might be useful for the investors to benefit from the market price on book value, earning per stock, return on equity, basic earning power, price on earning and fixed assets turnover.
- Necessity for Palestine Stock Exchange claim registered firms to preparation its financial statements in accordance with Palestine Stock Exchange standards in order to standardize the procedures and to help investors to make comparisons between the performances of firms in one sector among themselves when making the investment decision.

## **4.3 Future study**

- There is many factors effect on stock price and this study focused on quantitative factors (financial ratios), so the recommended to the next researchers that take another factors (qualitative factors) to identify the effects that are directly related to stock prices.

## References

- Al-Qudah, A. (2013). Importance of Financial Analysis for Published Financial Information to Predict the Stocks Behavior (Case study-ASE –Industrial Sector-Jordan). *European Journal of Business and Management*, 5(26), 96-102.
- Abu Mouamer, F. (2011),"The Determinants of Capital Structure of Palestine Listed Companies", *The Journal of Risk Finance*, Vol. 12 Iss 3 pp. 226 – 241.
- Al Gergawi, H (2008). *The role of financial analysis of financial information published in the financial statements to predict the prices of shares: applied study on the companies listed on the Palestine Securities Exchange*. Islamic university, Palestine.(Arabic research)
- Alnamrouti, K., & Alaoise, S. (2012) Analysis of Individual Investor Trends at Palestine Securities Exchange in Gaza Strip. *Journal of Islamic University*, 1(20), 36.
- Aono, K. and Iwaisako,T. (2011), *Forecasting Japanese Stock Returns with Financial Ratios and Other Variables*. Research Center for Price Dynamics Working Paper Series , No. 63., Institute of Economic Research, Hitotsubashi University.
- Babalola, Y., & Abilola, F. (2013). Financial Ratio Analysis of Firms: A Tool for Decision Making. *International Journal of Management Sciences*, 1(4), 132-137.
- Bodie, Z., Kane, A., & Marcus, A. (2011). *Investments* (9 ed.). New York: McGraw-Hill/Irwin.
- Bragg, S. (2012). *Financial Analysis: A Controller's Guide* (2 ed.). Wiley, Canada.
- Breuer, A., Frumusanu, M. L., Breuer, B. L., & Manciu, A. (2012). Cash And Liquidity/Liquidity And Liquidity Ratio. *Annals-Economy Series*, 4, 78-82
- Brigham, E., & Ehrhardt, M. (2011). *Financial Management: Theory and Practice* (13 ed.). Mason: South-Western Cengage Learning.
- Brigham, E., & Ehrhardt, M. (2013). *Financial management: theory & practice*: Cengage Learning.
- Broberg, M., & Lindh, K. (2012). *Dividend-yield, an indicator for successful trading?:-A study of dividend-yield's impact on total stock return on the Swedish stock market*. Umea University.
- Campbell, J., & MacKinlay, A. (1997 ). *The econometrics of financial markets*: Princeton, N.J. : Princeton University Press.

- Chunhui (Maggie) Liu, G., Kwok-Kee, W., & Yao, L. (2013). Ratio analysis comparability between Chinese and Japanese firms. *Journal of Asia Business Studies*, 7(2), 185-199.
- Correia, C., Flynn, D., Uliana, E., & Wormald, M. (2011). *Financial Management* (7 ed.). Cape Town: Juta.
- Damodaran, A. (2002). *Investment valuation: tools and techniques for determining the value of any asset* (2 ed.). New York: John Wiley & Sons, Inc.
- David, E. (2003). *Financial analysis and decision making : tools and techniques to solve financial problems and make effective business decisions*: New York : McGraw-Hill / Irwin.
- De, A., Bandyopadhyay, G., & Chakra borty, B. (2011). Application of the factor analysis on the financial ratios and validation of the results by the cluster analysis: An empirical study on the Indian cement industry. *Journal of Business Studies Quarterly*, 2(3), 13-31.
- Dhanabhaktyam, M., & Kavitha, M. (2012). Financial Performance of selected Public sector banks in India. *International Journal of Multidisciplinary Research*, 2(1), 255- 269.
- Elton, E., Gruber, M., Brown, S., & Goetzmann, W. (2011). *Modern Portfolio Theory and Investment Analysis* (8 ed.): John Wiley & Sons, Inc.
- Gardner, M., & Mills, D. (1994). *Managing financial institutions: An asset liability approach*. Orlando: The Dryden Press.
- Gitman, L., & Zutter, C. (2012). *Principles of Managerial Finance* (13 ed.). Boston: Prentice Hall.
- Gottwald, R. (2012). The Use of the P/E Ratio to Stock Valuation. *Grant journal*, 1(2), 21-24.
- Huang, G. and Song, F. (2006), “The determinants capital structure: evidence from China”, *China Economic Review*, Vol. 17, pp. 14-36.
- Hofmann, E., & Lampe, K. (2013). Financial statement analysis of logistics service providers: Ways of enhancing performance. *International Journal of Physical Distribution & Logistics Management*, 43(4), 321-342.
- Hunjra, A., Shahzad, M., Cani, M., Hassan, S., & Mustafa, U. (2014). Impact of Dividend Policy, Earning per Share, Return on Equity, Profit after Tax on Stock Prices. *International Journal of Economics and Empirical Research*, 2(3), 109-115.

- Ibrahim, I., Kheradyar, S., & Nor, F. (2011). Stock Return Predictability with Financial Ratios. *International Journal of Trade, Economics and Finance*, 2(5), 391-396.
- Irungu, P. (2013). Effect of Financial Performance Indicators on Market Price of Shares in Commercial Banks of Kenya. *International Journal of Management and Business Studies*, 3(3), 72-77.
- Josefsson, N., & Karlsson, A. (2011). *Stock Price Valuation: A Case study in Dividend Discount models & Free Cash Flow to Equity models*. Master's thesis within Finance, Jonkoping University.
- Kabajeh, M., ALNu'aimat, S., & Dahmash, F. (2012). The Relationship between the ROA, ROE and ROI Ratios with Jordanian Insurance Public Companies Market Share Prices. *International Journal of Humanities and Social Science*, 2(11), 115-120.
- Karami, G., & Talaeei, L. (2013). Predictability of stock returns using financial ratios in the companies listed in Tehran Stock Exchange *International Research Journal of Applied and Basic Sciences*, 4(12), 4261-4273.
- Khan, K. (2012). Effect of Dividends on Stock Prices - A Case of Chemical and Pharmaceutical Industry of Pakistan. *Journal of Management*, 2(5), 141-148.
- Kohansal, M., Dadrasmoghaddam, A., Karmozdi, K., & Mohseni, A. (2012). Relationship between Financial Ratios and Stock Prices for the Food Industry Firms in Stock Exchange of Iran *World Applied Programming* 13(10), 512-521.
- Kothari, C. (2004). *Research Methodology Methods & Techniques* (2 ed.). New Delhi: New Age International publisher.
- Lasher, W. (2005). *Practical Financial Management* (4 ed.). South-Western College :USA.
- Lermack, H. (2003). *Steps to a Basic Company Financial Analysis*. Philadelphia University, Philadelphia: USA.
- Lesáková, L. (2007). *Uses and Limitations of Profitability Ratio Analysis in Managerial Practice*. Paper presented at the International Conference on Management, Enterprise and Benchmarking.
- Lin, F., Liang, D., & Chen, E. (2011). Financial ratio selection for business crisis prediction. *Expert Systems with Applications*, 38(12), 15094-15102.
- Martani, D., Mulyono, & Khairurizka, R. (2009). The effect of financial ratios, firm size, and cash flow from operating activities in the interim report to the stock return.

- Chinese Business Review*, 8(4), 531-560.
- Morrison, J. (2000). Bank management: Text and cases. *Journal of Education for Business*, 75(3), 188.
- Muresan, E. R., and Wolitzer, P. (2004). "Organize Your Financial Ratios Analysis with P A L M S", Working Paper No. 02-01, September 20, 2004.
- Nadarajah, S., & Kotz, S. (2007). Generalized financial ratios. *Mathematical methods in the applied sciences*, 30(8), 995-1001.
- Namazi, M., & Rostami, N. (2006). Examination financial ratios and stock out put price of accepted companies in stock market of Tehran, the examination accounting and accountancy.
- Paramasivan, C., & Subramanian, T. (2009). *Financial Management*. New Delhi: New Age International.
- Patricia, M., Dechow, B., Korcan, A., Estelle, Y., & Annika, Y. (2013). The use of financial ratio models to help investors predict and interpret significant corporate events. *Australian journal of management*, 38(3), 553-598.
- PEX (2014). Monthly Statistical Newsletter. *Journal of Tadawul*, 4, Pp. 6.
- Placido, M., & Menaje, J. (2012). Impact of Selected Financial Variables on Share Price of Publicly Listed Firms in the Philippines. *American International Journal of Contemporary Research*, 2(9), 98-104.
- Pourkand, C., & Babayazar, A. (2013). Relation between Stocks Returns and Financial Ratios Changes. *Journal of Basic and Applied Scientific Research*, 3(7), 170-182.
- Rose, P., & Hudgins, S. (2005). *Bank management and financial services*. Boston: McGraw Hill.
- Roux, T. (2010). *Investigating the Relationship between the Price-Earnings Ratio and Future Stock Returns in the South African Market*. Master Thesis, University of Cape Town, South Africa.
- Saied, P., & Khandoozi, B. (2011). The investigation of relation between market ratios and market price per share of accepted companies in Tehran stock exchange. *Global Business and Management Research*, 3(2), 136-140.
- Shahen, Y. (2007). *The role of investment awareness in the efficiency and stability of financial markets*. Paper presented at the first annual meeting of the Palestinian Capital Market.

Subramanyam, K., & Wild, J. (2009). *Financial Statement Analysis* (10 ed.). New York: McGraw-Hill/Irwin.

Taani, K., & Banykhaled, M. (2013). The Effect of Financial Ratios, Firm Size and Cash Flows from Operating Activities on Earnings per Share: (an Applied Study: on Jordanian Industrial Sector). *International Journal of Social Sciences and Humanity Studies* 3(1), 197-205.

Tailor, R. (2013). The Important Of Financial Analysis. *The important of financial analysis*, 4(3).

Ungreanu, M. (2010), *Financial analysis from accounting point of view*, University of Iasi, Romania; CES working paper, Pp. 138-148.

Web. Palestine stock exchange page Retrieved 15/9/2014, 22:10 PM, from <http://www.p-s-e.com/PSEWEBSITE/english/AboutPSE.aspx?TabIndex=0>.