

Importance of Financial Analysis for Published Financial Information to Predict the Stocks Behavior (Case study-ASE –Industrial Sector-Jordan)

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Abstract

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 share of the industrial sector in the Amman Stock Exchange in order to help investors make rational decisions when they the investment process. To achieve this purpose has been tested three financial ratios for a sample of 30 companies listed their shares in the financial market, where data has been relying on published financial statements for its annual information.

These ratios have been analyzed using the method of statistical known as a multiple regression to find the best model for the industrial sector of the financial market, which includes group of ratios (Many Variables) of Finance in which they can predict the price of stock in companies listed on the Amman Stock Exchange by this classification. Has been reached model for the industry where it appeared that the industry was affected by several variables affect the share price of this sector is the ratio of market value to book value and the percentage of the book value per ordinary share and the study concluded that it can rely on a set of financial ratios for each of the sectors (classified by the Palestine Securities Exchange) to predict the price of the arrow, study also 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.

Keywords: Capital Asset Pricing Model (CAP.M), General Accounting Accepted Principle (GAAP), Earnings per Share (EPS), Book Value of share, Market Value of share, Stock Price.

1- Introduction:

The financial markets play a role in terms of economic activity and function, whether in developing & emerging countries, being a working tool to collect savings and employ them in the form of liquid investments in the financial and monetary market. Usually investors try to avoid risk in their investments, through diversification of investment portfolios components they own, even easier for them to also convert a portion of these investments to the capital funds, as stipulated in the Capital Asset Pricing Model (CAP.M) and at the same time ensuring the greatest possible return, as investing in securities the right of ownership as is the case for owning stock or debt such as bonds rights (Zubi, 2004, p18).

And financial analysis defines as a "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"(Karajeh and others, 2002, p1)

Thus, the financial analysis includes the Interpretation of Financial Statements published and understood, and that is being prepared according to the rules and principles defined in accordance with the general accounting accepted principles (GAAP), with the help of other data further in the light of certain considerations and specific purposes, in order to evaluate a particular decision or the study of investment opportunity where they can through it evaluation of financial and investment performance of the facility and then stand on the truth and predictability priced its shares, whether a comprehensive assessment of all or part of a facility such as the analysis of liquidity or profitability assessment.

2- The Study Problem:

It's clear from the above that to maintain rights of the stakeholders, particularly investors, existing and prospective, that requires the provision of confidence in the financial information contained in the reports and

financial statements, so it came this study was to look at the role of the financial analysis of financial information published in the financial statements for predicting stock prices, and here, the main question of the study is:

- What is the role of financial analysis of published financial information in the financial statements in predicting prices Stock?

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 we find that there are economic and political factors affect the behavior of investors, and the performance of the financial market, so it comes study to confirm the importance of financial analysis and its role in predicting stock prices, which achieves advantage in the development of the practice of accounting and audit work, and thus achieve the quality of information in the financial market to me which is reflected on the decisions of investors and stock market movement.

4- The study hypothesis's

4.1. There is a significant relationship between the ratio of earnings per and stock price in the Amman Stock Exchange (ASE).

4.2. There is significant relationship between the ratio of market value to book value and stock price in the Amman Stock Exchange (ASE).

4.3. There is significant relationship between the ratio of market stock price to EPS and stock price in the Amman Stock Exchange (ASE).

5- Literature review:

5.1. Study (Zu'bi, 2000, entitled: "The impact of macroeconomic factors on the general index of the stock prices in Amman financial Market during the period 1978-1998.

This study aimed to know the effect of macroeconomic variables on the Amman Financial Market Index, has been using the standard model has been appreciated by using the method of least squares (OLS). Which contains a form on each of the growth in GNP, and the interest rate, exchange rate, and growth in the money supply, slow down the market index for the previous period variables independent, and the index as the dependent variable and the study examined the stability of the function pointer Amman Financial Market.

The study concluded that the Amman financial market responds to economic variables college is moral significance (T) combined, but when examining each variable separately, it was shown that the variables above, except for the market index for the previous period, meaning that the dependent variable affected by its behavior in the prior period.

5.2. Nassar 2001 study entitled: "Is precede stock prices accounting profits in reversing the appropriate information to determine the value of the Firms?"

The study aimed to test whether stock prices precede accounting profits in reversing the appropriate information to determine the value of the firm in the ASE, also aimed to determine the number of fiscal periods preceding the prices accounting profits, in the reverse of that information, and to measure the improvement could be entered on the relationship returns profits when measured asynchronously.

As a result of close transactions in response estimated earnings, the value expected, amounting to 10.75, at the breadth of a window measuring the return, we have reached the highest value for the coefficient response profits estimated 7.15, so when you enter returns three previous financial periods in the model, and therefore the study concluded that stock prices precede in(average earnings) to reverse the appropriate information to determine the value of the facility with three financial years, and stock prices for the previous fiscal periods is the importance of the prices of the current period, and can be used to predict future profit entity.

5.3. Haddad 2003 study entitled: "The relationship between stock prices and future accounting profits: study applied to industrial companies Jordanian public shareholding"

The study aimed to test the relationship between current accounting earnings and stock returns with the current accounting earnings and the future accounting profits of industrial company's listed public shareholding in the

Amman Stock Exchange, and this relationship was examined using multiple regression method. Where the study sample consisted of 25 industrial companies 1999, has reached - listed on the Amman Stock Exchange during the period between 1985 study to the existence of a relationship between profits current accounting and the accounting profits future, and thus the existence of information content of earnings current accounting and the future profits.

5.4. Study Ershaid, 2004 entitled: "The determinants of stock prices in the Amman Stock Exchange"

The study aimed to identify the determinants of stock prices in the Amman Stock Exchange within the overall framework, and has been a focus on the nature of the relationship between the index of stock prices as the dependent variable in this market and the variables reprise congenital College for the period (1997-1978) through the adoption of a mathematical model and use the gradient method. Findings have shown by computer and existence of spirits relationship with statistical significance between the number of stock prices as the dependent variable and the following independent variables: the index of industrial production, inflation, money supply. And there are no statistical significance between the index and all of the discount rate and exchange rate.

6- Methodology :

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.

6.1. Data Collection Methods:

I. Primary Sources:

- Publications of the Amman Stock Exchange (ASE).
- Reports issued by companies that have been selected as a sample for the study.
- Financial Statement by companies that have been selected as a sample of a study.

II. Secondary Sources:

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

6.2. The study Population: The study population consists of all industrial companies listed on the Amman Stock Exchange (ASE) and consisting of 78 companies registered in the market and practiced their activities until the year 2008.

6.3. The study Sample:

A Random sample among the companies composing the industrial sector has been chosen for conducting this study after omitting all companies who don't meet the following criteria:

1. To be among the registered companies and traded in industrial sector
2. Trading in the company stocks wasn't suspended according to a decision made by the board of directors of the market during the period from 2/1/2002 till 31/12/2008
3. Trading in the company stocks wasn't interrupted, and its type of ownership wasn't transformed or merged during the period from 2/1/2002 till 31/12/2008
4. Availability of sufficient data such as income statement, balance sheet in order to calculate financial indicators and ratios that were used in the study
5. Availability of all monthly closing prices for the companies stocks during the whole period in which the study was conducted.

According to the abovementioned criteria, a random **sample** has been chosen for this study comprising (30) industrial companies listed in the Amman Stock Exchange. They are all following the Gregorian calendar and their financial year ends up in the 31st of December of each year.

6.4. The study Variables:

6.4.1. Dependent Variable: from the explain above we can notes that the dependent variable is the **stock price** for each firm that have been selected in the study sample.

6.4.2. Independent Variable: the researchers have been selected (3) Independent variables for this sector (Industrial Sector) to measure their contribution to predict the price per share, which was calculated value ratios of those variables and data entry on the computer and using the SPSS statistical at the level of significance 0.05 was calculated coefficient of Pearson correlation between the dependent variable and all of the independent variables.

6.5. Calculate the study variables:

A- Dependent Variable: the closing price for each facility was obtained through annual time series of 6 (from 2002-2008) years for each company through annual trading bulletins published on the website of the Amman Stock Exchange.

B- Independent Variable: these variables was calculated depend on the financial statements for the companies as follow:

1- Earnings Per Share:

$$EPS = \frac{EAIT}{NOS} \dots\dots\dots (1)$$

When,

- EPS: Earnings per Share.
- EAIT: Earnings after Interest & Tax.
- NOS: Numbers of Ordinary Stocks.

2- Market Value to Book Value:

$$M.V \setminus B.V = \frac{M.V}{B.V} \dots\dots\dots (2)$$

When,

- M.V: Market Value for Share
- B.V: Book Value for Share

3- The Market Stock Price to EPS:

$$M.S.P \setminus EPS = \frac{S.P}{EPS} \dots\dots\dots (3)$$

When,

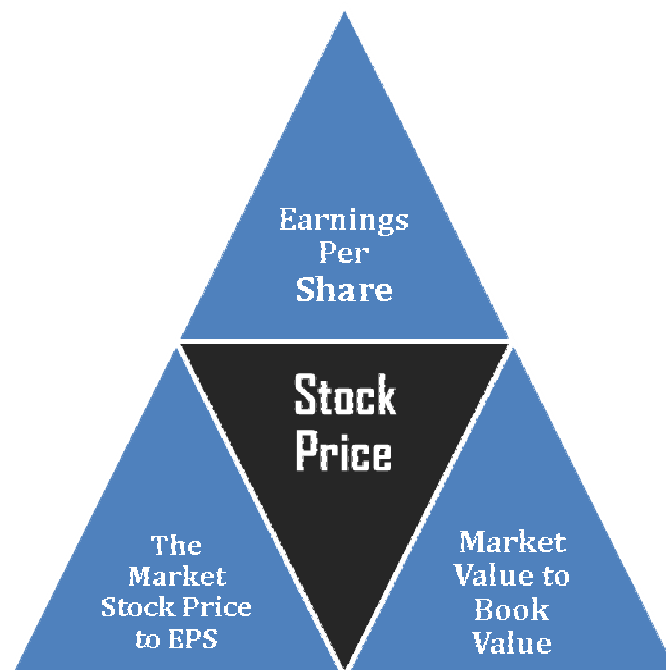
- S.P: The Market Stock Price
- EPS: Earnings per Share.

After we calculate these variables, we use the SPSS as statistical method to each percentage contribution variables in predicting the price per share as well as:

- Pearson correlation coefficient to study the relationship between two variables.
- A (T) test to study the significance of each variable of the independent variables individually in multiple linear regression models.
- Multiple linear regression analysis in order to find a model generating Aceh linear relationship dependent variable (stock price) between the independent variables affecting financial ratios and using STEPWISE method.
- A (F) test to study the relationship between the dependent variable and the independent variables together in a multiple linear regression model.

7- The study Model:

7.1. Virtual Model: the Researchers put the Dependent Variable & Independent Variable in the chart below to assume the relationship between them.



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

$$M.S.P = \alpha_0 + B_1 * EPS + B_2 * (M.V \setminus B.V) + B_3 * (M.S.P \setminus EPS) + \bar{\epsilon}_i \dots \dots \dots (4)$$

When,

- M.S.P: The Market Stock Price.
- EPS: Earnings per Share.
- M.V: The Market Value for Share.
- B.V: The Book Value for Share.

8- Data Analysis' & Test Hypothesis:

The researchers have been selected (3) independent variables for industrial companies to measure their contribution to predict the price per share, as calculated value ratios of those variables, and using the program (SPSS statistical) 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 (1)

Table (1) Correlation coefficients between dependent and independent variables for Industrial sector in the (ASE).

Independent Variables	Pearson correlation coefficient (R*)	Coefficient of determination (R ²)	Significance (Sig*)
Earnings Per Share	0.187	3.49	0.215
Market Value to Book Value	0.909	82.59	**0.000
The Market Stock Price to EPS	-0.348	12.10	**0.000

**** Correlation is Significance at level Sig: 0.05**

A comparison between the variables that have been identified for this sector and between the actual results of the correlation coefficients that show the true relationship between the dependent variable and the independent

variables to verify the validity of hypotheses for the sector mentioned in the light of the results shown by the above table shows the following:

8.1. The 1st Hypothesis

There is a significant relationship between the ratio of earnings per and stock price in the Amman Stock Exchange (ASE).

The results showed that the correlation coefficient between the two variables was (0.187) and value (Sig = 0.215) which is **greater** than the significance level 0.05, which means **accepting** the nihilism hypothesis nihilism and therefore there is **no** statistically significant relationship between the ratio of earnings per share and stock price in the market securities, and has appeared weak relationship of the value of Coefficient of determination R^2 that the independent variable is able to explain what rate (3.49%) of the changes in the dependent variable, and the changes that have not been explained by this variable has reached (96.51%), which means that there are others independent variables affect the dependent variable.

8.2. The 2nd Hypothesis

There is significant relationship between the ratio of market value to book value and stock price in the Amman Stock Exchange (ASE).

The results showed that the correlation coefficient between the two variables was (0.909) and value (Sig = * 0.00) which is **less** than the significance level 0.05, which means rejection of the nihilism hypothesis and therefore it is There direct correlation significant between the ratio of market value to book value and stock price the stock market.

The Coefficient of determination (R^2) to the independent variable is able to explain what accounted for (82.59%) of the changes in the dependent variable is considered a high percentage, and the changes that have not been explained by this variable has reached (17.41%), which means that there are variables other independent affect the dependent variable.

8.3. The 3rd Hypothesis

There is significant relationship between the ratio of market stock price to EPS and stock price in the Amman Stock Exchange (ASE).

The results showed that the correlation coefficient between the two variables was (-0.348) and value (Sig = * 0.00) which is less than the significance level 0.05, which means rejection of the nihilism hypothesis and therefore it is There direct correlation significant between the ratio of market stock price to EPS and stock price in the Amman Stock Exchange (ASE).

The Coefficient of determination (R^2) to the independent variable is able to explain what accounted for (12.10%) of the changes in the dependent variable is considered a high percentage, and the changes that have not been explained by this variable has reached (%87.90), which means that there are variables other independent affect the dependent variable.

8.4. Multiple Linear Regression Equation:

To find an equation describes the relationship between the dependent and the independent variables we have been introduced independent variables previous and the dependent to the computer in the statistical program (SPSS) which appear only independent variables that affecting significant in the dependent variable, and have been used way (STEPWISE) and that in the Multiple Linear Regression Equation, the results show that more Variables impact on stock prices in the stock market for the industrial sector are:

- **The Ratio of market Stock Price to EPS**
- **The Ratio of market value to Book Value**

The total multi-correlation coefficient between the dependent variable and the combination of these variables (0.996) and the value of the coefficient of determination shows that the average Together, these independent variables able to explain what (99.1%) of the resulting changes in the dependent variable which is considered a high percentage.

The changes that have not been explained reached to (0.9%) explained researchers to other independent variables as previously stated (that there are multiple factors affected the share price). Through the results of the analysis of variance of the regression line shows that the value of the test ($1050.055 = F$) and value (Sig = 0.000), which indicates the presence of a significant relationship between the stock price and the independent variables together.

Based on that, the researchers determined the following linear regression model to calculate the Stock Price in the Amman Stock Exchange in the industrial sector as follows: (table 2)

Table (2): Multiple Linear Regression Equation

The Expected Stock Price = $\alpha_0 + B_1 * (M.V \setminus B.V) + B_2 * (M.S.P \setminus EPS) + \bar{e}_i$			
The Expected Stock Price = $-1.870 + (1.7) * B_1 + (1.2) * B_2$			
Value of T-Test	-17.50	25.12	17.76
Value of Sig*	0.000*	0.000*	0.000*

9- The Results of Study:

After the analysis and testing of hypotheses the researchers reached the following conclusions:

- a. The process of financial analysis is No longer limited to the quantitative content of the amount shown by the figures published financial statements, but exceeds the attention of the financial analyst in the research behind these numbers of semantics.
- b. To perform financial analysis process aspired role required the presence of multiple standards to measure performance and to compare the results that are reached.
- c. When analyzing the financial statements of any firms that can use a large number of financial ratios which can be divided into groups and each group measure and examine a particular phenomenon, depending on the purpose of the financial analysis process.
- d. There are several parties can benefit from the process of analysis when making financial decisions from both inside or outside the firm varying in terms of their respective interest the results of the analysis.
- e. Although the Amman Stock Exchange listed firms are required to have financial statements are prepared in accordance with International Standards on calculators, but it is clear companies does not do.
- f. The above analysis is clear to the researchers that there is direct ratios affect in predicting the price stock share, so the recommended to the next researchers that take new ratios identify the effects that are directly related to stock prices.

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