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Financial Analysis and Investment Decision - Empirical Study on the Jordanian Stock Market 2011-2015

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ABSTRACT

Nevertheless of many factors such as –economic, political, social and market condition, still financial analysis is considered as one of the main instruments that is employed by different investors categories to assist in rationalizing investment decision making. This study focused on the impact of different ratio categories on investment decision making, the study was conducted on industrial listed companies in Amman Stock Exchange. The most significant finding s of the study that, profitability indicators showed a positive significant impact on investment decision at 5% level, while credit and assets utilization indicators exposed a negative significant impact on investment decision at 10% level, while other indicators have no impact on investment decision.

Keywords: Ratios, Indicators, Multiplier, decision, Profitability.

1. INTRODUCTION

Investment decision is a crucial issue that affect the organization's financial position even the possibility of its existence. There are many techniques that can be adopted by decision makers in order to assist them in adopting certain investment opportunity and these techniques may be payback period or net present value or even internal rate of return.

There are many factors that affect investment decision which should be taken into consideration before taking any investment decision such as economical factors, financial factors as well as physiological factors especially for individual investor. Moreover for individual investors even gender possesses an impact on investment decision. Typically speaking there is no decisive criteria as which technique is considered to be as the ultimate trigger for accurate investment decision, this may be attributed to many risks involved that are out of control and unpredictable, precisely speaking; political and macro economic factors may contribute for such uncertainty.

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The success of any financial analysis is directly related to the accuracy and scrutiny of the financial statements which are considered as the raw material of financial analysis process, and the source for deriving the financial indicators related to company's performance. Briefly speaking in order to obtain a good quality of finished goods you should use good quality of raw material and the same thing is applied to financial analysis. Anaja B. & Emmanuel E. (2015), pointed out that investors rely very significantly on the degree of reliability and credibility of the financial statements that is approved by an auditor or financial expert. (Abu Baker and Naser, 2000), debated that, investorsConsider the annual financial report as the main source of information regarding the corporate financial position and financial results, that should be publicized for external related parties.

In this study emphasis will be exercised on the role of financial analysis, using ratio analysis as a proxy. The research will investigate as which ratio category (credit ratios, liquidity ratios, assets utilization ratios, profitability ratios, market ratios or operation activities ratios) will be of interest and useful to investors (institutional or individual) in taking successful investment decision. The research will be conducted on sample of listed companies within the Industrial sector in Amman Stock Exchange – ASE. Credit ratios, liquidity ratios, assets utilization ratios, profitability ratios, market ratios or operation activities ratios or operation activities ratios or operation activities ratios, be the proxy of independent variables while end of the year stock market price will represent the dependent variable. The study will be conducted over a period of 5 years 2011 – 2015.

2. LITERATURE REVIEW AND PREVIOUS STUDIES

2.1. Literature Review

Previous literature has been focusing on the necessity to take both non-financial and financial perspective into consideration when considering investment decisions. It is assumed that nature of financial information structure and the type of information available are considered as supporting tools for investment decisions.

It is widely believed that investment decisions are an outcome of several variables such as market's characteristics, risk profiles and accounting information.

Financial analysis is considered the core tool for evaluating the health of any organization financial position, it's very vital in making reliable investment decision, thus user of financial statement should understand the content and meaning of these financial statement, investors should be able to analyze, read and interpret these financial statements to make generate the utmost gain possible. The type of financial analysis conducted refers to who? And why? We are performing financial analysis, as for long term lender they are mainly concerned with the company ability to survive and sustain the loan term so they mainly focus on the company's solvency (credit worthiness), while short term creditors they are interested in the company's liquidity, while investors in stock exchange they focus on the earning power of the company and owners wealth, thus no single type of analysis will satisfy the needs of all the above mentioned parties.

Financial analysis is a systematic process which leads to obtaining information which assists all stakeholders in decision making and evaluating past, present and future performance of companies under investigation. Financial analysis process help in extracting different indicators related to companies 'financial performance and position, in addition it helps in discovering weakness and strength points of the company, moreover we can also discover company source of finance and its uses (investment).

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The core of financial analysis and investment decision making is company's financial information. Financial information is necessary to compare, predict, and evaluate a company's earning capability. It is also necessary to help in investment and financing decision making. The financial information of a company is contained in the annual financial statements. Gavtan (2005) defined financial statements as financial information that is related to the financial position of any company in a capsule form. Michael C. E. (2013) in his investigation on the degree of confidence of published financial statements by corporate investors. The results revealed that one of the utmost priorities of the company's management toward investors is to provide a standardized and authenticated financial statement. The results of the study showed also that investors depend mainly on the credibility the financial statement in making his / her investment decisions.

2.2. Previous Studies

In the past decades many prominent in finance field contributed much in assisting investors in adopting good investment decisions. (Abdul Jamal et al., 2014) argued that decision making process is substantially by financial analysis in which participate toward a successful investment decision.

(Norman A. S., 2011) in his study on Tanzanian Stock Exchange extracted that due to lack of knowledge regarding the importance of financial statements analysis, major portion individual investors in the Tanzanian market do not depend on the analysis of financial statement when investing in stocks while institutional investors do consider analysis of financial statements as an important tool for decision making. (Van, 2002) remarked that investor's in common stock mainly worried about the present and future earning capacity, trend and stability, so there analysis will be focused on the company profitability (financial result) and its ability to avoid bankruptcy.

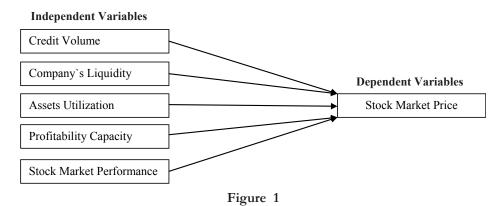
Jagongo, A. and Mutswenji, V.(2014) conducted their study on individual investor by adopting a questionnaire directed to them, where they draw a conclusion that the main factors that impact individual's investment decision is the firm's position within the industry and its reputation in the market in addition to the expected return. Hussein A. H, (2007) pointed outthat organizations expected returns expected organization earnings, stock turnover, organization historical performance and organized financial market are considered as the major determinant related to investors decision. Samih, O., and Zubi, Z.(2014) on their study on ASE which was related to the role of financial indicators as a tool to rationalize investment decision taken by investors in Vestineet. al (2016) concluded that company's financial statement is the most important tool for investment decision making as they pointed out that 82% of investment decision are based on the analysis of financial statement and the remaining 18% are related to some other factors

2.3. Hypothesis of the study

For the purpose of analyzing the role and impact of ratios` financial analysis on investment decision, the study sample will be consist of companies listed in Amman Stock Exchange – ASE for the period 2011 – 2015. Thus to reach to study goals, the following Hypotheses are developed:

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2.4. Study Model



2.5. Variables definition

Based on the above model, the following proxies will be used to represent different variables:

Independent Variables:

- 1. Debt Ratio (D.R.) = Total Debts / Total Assets as a proxy for credit volume.
- 2. Liquidity Ratio (L.R.) = Cash & cash equivalent / Current Liabilities as a proxy company's liquidity.
- 3. Assets Utilization Ratio (A.U.R.) = Net Sales / Fixed Assets as a proxy assets utilization
- 4. Profitability Ratio (P.R.) = Net Income / Equity Rights as a proxy for profitability capacity
- 5. Stock Multiplier Ratio = Stock Price / Earning per Share as a proxy for stock market performance.

3. RESEARCH METHODOLOGY

The sample of the study contains 10 listed companies that represent the industrial sectors as illustrated in table(1):

| Table 1 Study Sample | | | | | |
|------------------------|------------------------------------|--------------------------------|--|--|--|
| Number | Company Symbol | Industrial Sector | | | |
| 1 | ICAG | Chemical Industries | | | |
| 2 DADI | | Pharmaceutical Industries | | | |
| 3 JODA | | Food and Beverages | | | |
| 4 JOPH | | Mining and Extraction | | | |
| 5 JOCM | | Mining and Extraction | | | |
| 6 | JOPI | I Engineering and Construction | | | |
| 7 | 7 WOOD Engineering and Constru | | | | |
| 8 WIRE | | Electrical Industries | | | |
| 9 AEIN | | Electrical Industries | | | |
| 10 | 10 JOWM Textiles and Clothing Indu | | | | |

The research independent variables are the yearly ratios of the sample as proxies of (Credit Volume, Company Liquidity, Asset Utilization, Profitability capacity and Stock Multiplier) while the dependent variable is end of year stock closing price for the 10 sample companies.

3.1. Financial and Statistical Approaches

First of all, the average yearly ratios that represent the proxies of financial analysis ratios are calculated from the annual reports of Jordanian listed companies for the period (2011-2015), and then the end of year close price of the same companies are collected from the annual reports of Amman Stock Exchange (ASE) for the same period as indicated in table (2).

| S. No. | Company Symbol | Average Debt Ratio | Average Liquidity Ratio | Average Asset Utilization Ratio | Average Profitability Ratio | Average Stock Multiplier Ratio | Average Stock Close price (JOD) |
|-----------|-------------------|--------------------------|-------------------------------|---------------------------------------|-----------------------------------|--------------------------------------|---------------------------------------|
| 1 | ICAG | 0.370 | 2.218 | 1.128 | 0.075 | 28.700 | 2.20 |
| 2 | DADI | 0.429 | 1.700 | 0.560 | 0.020 | 3.814 | 2.20 |
| 3 | JODA | 0.218 | 2.244 | 1.420 | 0.103 | 13.608 | 2.71 |
| 4 | JOPH | 0.289 | 1.936 | 0.684 | 0.126 | 16.074 | 8.97 |
| 5 | JOCM | 0.483 | 0.820 | 0.558 | -0.122 | 18.578 | 1.49 |
| 6 | JOPI | 0.274 | 2.842 | 0.550 | 0.000 | 9.682 | 1.10 |
| 7 | WOOD | 0.267 | 1.702 | 0.682 | -0.084 | 5.918 | 2.08 |
| 8 | WIRE | 0.366 | 1.892 | 0.634 | -0.032 | -28.658 | 0.50 |
| 9 | AEIN | 0.343 | 1.844 | 0.554 | -0.046 | -1.460 | 0.67 |
| 10 | JOWM | 0.041 | 7.842 | 0.124 | 0.066 | 14.952 | 4.46 |

Table 2The average annual ratios and stocks` closing pricefor the period (2011-2015)

Source: Amman Stock Exchange Data-Base

After that, using the panel data analysis, the Multi - Linear regression will be implemented between the independent variables and the close prices as dependent variable, in order to analyze the regression coefficients (β s) and (R^2), to investigate into the nature of impact related to financial analysis on investment decision.

Since credit, liquidity, asset utilization, profitability ratios and stock multiplier are function of the five types of financial analysis; we can express this impact by the following formula:

$$\mathbf{Y} = \boldsymbol{\alpha} + \boldsymbol{\beta} \mathbf{1}(\mathbf{X}\mathbf{1}) + \boldsymbol{\beta} \mathbf{2}(\mathbf{X}\mathbf{2}) + \dots + \boldsymbol{\beta} t\left(\mathbf{X}t\right) + \boldsymbol{e}$$

Where:

Y: is the dependent variable which represents the investment decision

 α : is the constant of the regression equation

 β_1 : is the regression coefficient of the first independent variable

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 X_1 : is the first independent variable

 β_t : is the regression coefficient of the last independent variable

 \mathbf{X}_t : is the last independent variable

e: is the standard error of the regression model

3.2. Empirical results

| | Table 3 | |
|--------------------------|---------------------------|---------------------------|
| Represents the empirical | results of the regression | n analysis of pooled data |

| Coefficient | В | Sig |
|--------------------------|--------|-------|
| Credit Ratios | -7.244 | 0.092 |
| Liquidity Ratios | -0.388 | 0.200 |
| Asset Utilization Ratios | -1.892 | 0.071 |
| Profitability Ratios | 14.044 | 0.000 |
| Stock Multipliers | 0.003 | 0.820 |

As shown in table – 3 above, the impacts of Credit Volume, Company Liquidity, Asset Utilization, Profitability capacity and Stock Multiplier were tested. Results showed that not all the financial analysis elements have significant impact on investment decision. At 5% significance level, as only profitability capacity has high positive significant impact on investment decision for the period (2011-2015), as it affects stocks` market value, this indicate that investors could rely on this variable to take a decision whether to invest in stocks or no. While at 10% significance level, the credit volume, asset utilization and profitability capacity reflect significant impact on investment decision for the period (2011-2015). The statistical analysis showed that, financial analysis ratios explain only 39.7% of the investment decision taken by all investors in Jordan as indicated by R². Many other factors as supply and demand and economic variables also may have an effect on investment decision.

4. CONCLUSION

As illustrated in the statistical analysis results, investors in Jordan-when taking the investment decision – should care much about the profit and the earning they will receive since the profitability capacity showed high positive regression coefficient at 0.000 significance level, so the 4th hypothesis is accepted.

The 1st and the 3rd hypotheses are also accepted since their significance levels are less than 10% but with negative regression coefficients, this means that investors do not like to invest in companies that have low debt and low asset turnover because this will affect the stock prices negatively. No significant impact of liquidity and stock multiplier on investment decision have been exposed, so the 2nd and 5th hypotheses are rejected.

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