Understating the Impact of Economic Factors on Stock Yield: Jordanian Stock Market Case

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ABSTRACT

The study aimed to identify the most salient and critical factors influencing the Stock yield and causing this sharp fluctuation, and clarifying which factors are more influential than others on the Stock yield in the Amman Stock Market – Jordan. The study population consisted of all listed companies in the Amman Stock Market. The sample of the study is random stratified and includes 30% of the original population. The study sample numbered 60 companies of the companies listed on the Amman Stock Market. The main findings are the positive relationship between inflation rates, interest rate, number of employees and capital shares with income shares. The results also showed no relationship between the deficit and surplus of balance of payments and stock yield, as well as no relationship between the level of gross domestic product (GDP) and the stock yield in Amman Stock Market in Jordan.

Keyword: Stock Yield, Inflation Rate, Interest Rate, Number of Employees, Balance of Payment, Gross Domestic Product
JEL Classifications: E44, G10

1. INTRODUCTION

The stock market is the place where securities are exchanged between seller and buyer under the laws and provisions of dealing with securities stocks and bonds. The stock market has a significant impact on economic growth in the Hashemite Kingdom, and it has a secondary market that deals with shares (Matar and Tim, 2005; Al-Shibli and Al-Shibli, 2000). The objective of an investor is always to get the estimated yield as an estimated venture capital. There are several sectors in the market (banking, industry, services and insurance sectors).

Due to the potential profit and loss of these companies' shares, there are external and internal factors that affect the Earnings per share. External economic factors that have different effects on stock yield will be mentioned, including the interest rate, which is considered the main incentive of capital descriptions

and its transfer between shares, bonds and banks; the rate of inflation that affects the interest rate and also affects securities and is accompanied by an increase or decrease in investment and balance Payments and the imbalances that result in disturbances in the state economy and financial position among the outside world (Yong and Xingkai, 2016; Farhan, 2002). In addition to the effect of budget on economic development (Jamal, 2004). One of the most important factors affecting the productivity of companies, income of employees, and employment opportunities is GDP, which indirectly affects the Stock Market (Levine et al., 2000; Al-Zubaidi, 2004). There are two common internal factors to companies listed on the Amman Stock Market on stock yield, these factors are: 1. The number of employees in the company, which varies from one company to another depending on the business' size, and affects the results of the projects outcome profit or loss. The capital of the company (the circulation amount), it aims to increase wealth. In this research,

we will explain the effect of each factor on stock yield, which gives stockholders indications to the right time to invest in the appropriate companies.

2. THE HYPOTHESES

Hypothesis 1: There was no statistically significant relation between inflation rate and stock yield at (0.05 ≤α) level.

Hypothesis 2: There was no statistically significant relation between Balance of payment surplus and deficit and the stock yield at (0.05 ≤α) level.

Hypothesis 3: There was no statistically significant relation between interest rates and stock yield at (0.05 ≤α) level.

Hypothesis 4: There was no statistically significant relation between the government budget deficit and stock yield at (0.05 ≤α) level.

Hypothesis 5: There was no statistically significant relation between the size of GDP and the stock yield at (0.05 ≤α) level.

Hypothesis 6: There was no statistically significant relation between the size of the capital of companies and stock yield at (0.05 ≤α) level.

Hypothesis 7: There was no statistically significant relation between the number of employees and the stock yield at (0.05 ≤α) level.

3. THE MODEL

The model of the study is presented in Figure 1.

4. LITERATURE REVIEW

A study by (Abu Al-Haijaa, 2004) entitled "allocation of profits policies and their impact on market value per share." This study aimed at identifying the most important financing policies on which companies depend on providing needed liquidity for expansion and growth. The importance of this study emerges from it studying the retained earnings which is one of the most important financing policies in companies and they should be used optimally. The researcher studied all companies listed on the Amman Stock market and then chose a company from each sector. The study found a significant statistical relation between the market value per share and the book value of the share. The study also found that companies in Jordan follow similar profit distribution policies, it turns out that companies in Jordan have tried to maintain a stable yield for the share and within certain limits. A study by (King and Levine, 1993) aimed to examine the nature of the relations between the ratio of book value and the market stock yield (BE/ME) and Earnings per share to the market stock yield (E/P) and market share return (MRR). The study sample included 35 Jordanian public shareholding companies listed on the Amman Stock market within the industrial and services sectors during the period between 1990 and 1991.

The relationship was examined using simple and multiple linear regression analysis the results were similar to other studies (Abdah, 2001; Stephen, 2013) which indicated that there was a significant positive correlation between Earnings per share and the market stock yield; while the relation between ratio of the book value of the market value of the share, and market stock yield was not statistically significant. The study also indicated that the ability to explain the variance in market stock yield is not very different when using a ratio of realized earnings per share and the book value of the market value of the shares together, than using ratio of earnings per share by itself. Sheilla and Odhiambo (2015) study aimed to investigate how this sector's shares were affected by a number of factors. The study included estimating the relation between the returns of oil sector shares as a dependent variable and between some independent variables such as the interest rate, the exchange rate of the US and the Canadian dollar, and the market returns and oil prices. Using the Generalize method the study found that the returns of this sector are positively correlated with the market returns of Least Square and oil prices. However, these returns are in line with interest rates as well as Canadian currency exchange rates against the US dollar (Hammad, 2000).

Figure 1: Study Model
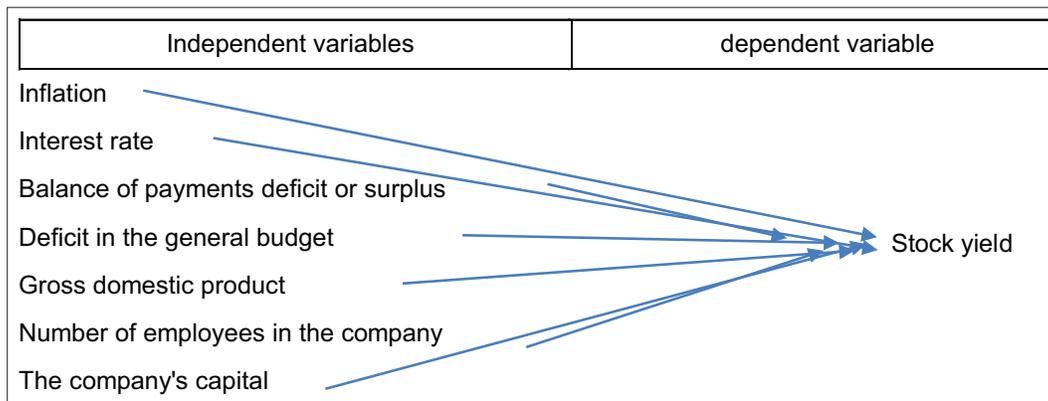
5. THE DATA, METHODOLOGY AND ESTIMATED RESULTS

The study population consists of all the companies listed on the Amman Stock market, numbering 202 companies, which were divided into four categories and Table 1 shows that:

In order to verify the objectivity of the study results, Kolmogorov-Smirnov test was used to verify the absence of statistical problems in the study data that may adversely affect the results of testing the study hypothesis. This test requires normal distribution of the data. In contrast, if there were any statistical problems in the study data there will be a false correlation between the independent and dependent variables of the study, and therefore the correlation loses its ability to explain or predict the phenomenon under study, as shown in Table 2.

Table 1: The random sample was adopted in selecting the number of companies per sector

Sector	Number of companies	The study sample
1. Banks	17	5
2. Industry	83	25
3. Services	77	23
4. Insurance	25	7
Total	220	60

Table 2: Normal distribution of the study variables

Result	Sig *	Kolmogorov-Smirnov	Variable	n
Follow normal distribution	0.723	0.693	Inflation	1
Follow normal distribution	0.994	0.421	Interest rate	2
Follow normal distribution	0.848	0.468	Balance of payments deficit or surplus	3
Follow normal distribution	0.206	1.066	Deficit in the general budget	4
Follow normal distribution	0.974	0.482	Gross domestic product	5
Follow normal distribution	0.139	3.593	Number of company employees	6
Follow normal distribution	0.139	3.593	The company's capital	7
Follow normal distribution	0.087	2.503	stock yield	8

*The distribution is normal as between if the significance level is >0.05

Looking at the table above and at the level of significance (0.05) and above, it is found that the distribution of all variables was normal. Where the normal distribution rate for all responses was greater than (0.05), which is the level adopted in the statistical treatment of this study. Table 3 shows the relation between the independent variables of the study and stock yield, in addition to the regression B below the level of $0.05 \leq \alpha$.

Table 3 shows that inflation had a strong correlation with stock yield. The coefficient of correlation is (0.841) and the value of the R^2 (0.708) and the value of (F) were greater than the tabular value. Therefore, the null hypothesis was rejected and the alternative hypothesis was accepted, which states that there is a relationship between inflation and stock yield. In the variable deficit or surplus of payment features, the relationship was (0.313). The coefficient of R^2 (0.098) is weak and the test value of (F) is less than the tabular value. This results in the acceptance of the null hypothesis, ie, the absence of a relationship between deficit and surplus and the features of payments and stock yield. As for interest rates the results showed the strength of the relationship between the interest rates and the stock yield where the strength of the relation was (0.737) and coefficient of determination was (0.543) while the coefficient of regression was (20.631) and this is evidence of a strong relationship between interest rates and stock yield, and this is logical theoretically.

The strength of the relationship between general budget deficit and stock yield were weak and unsettled. The correlation coefficient was (0.217) and the determination coefficient was (0.047). The coefficient of regression was negative, and this indicates that the relation between the two variables is weak. As for the size of the GDP, the results showed that there is a strong positive relationship with the value of correlation coefficient (0.702) and the coefficient of determination (0.436) and the value of the calculated F test was greater than the tabular value. Therefore, the alternative hypothesis was accepted, which means there is a relationship between the two independent variables, the size of gross product and the stock yield. While the size of company's capital was strongly correlated with the stock yield through the strength of the coefficient of correlation (0.696) and the coefficient of determination R^2 (0.485) and its calculated result (F) which was greater than the tabular value, causing rejection of the null hypothesis and acceptance of the alternative hypothesis that states the presence of a relation between the size of the company capital

Table 3: The relation between the study variables and the stock yield

Individual Level of significance		F	Regression coefficient B	Illustration coefficient R2	Correlation coefficient R	Variables
H_{O1} accepted	0.002	6.66	0.194	0.708	0.841	Inflation
H_{O2} rejected	0.494	0.543	0.195	0.098	0.313	Balance of payments deficit or surplus
H_{O3} accepted	0.015	9.519	0.206	0.543	0.737	Interest rates
H_{O4} rejected	0.096	2.857	0.13	0.047	0.217	General Budget Deficit
H_{O5} accepted	0.044	6.546	0.71	0.493	0.702	size of Gross domestic product
H_{O6} accepted	0.001	22.33	0.803	0.736	0.858	Number of employees
H_{O7} accepted	0.025	7.522	0.263	0.485	0.696	The size of companies capital

and the stock yield. Through the results presented in Table 3, it is possible to determine the factors that are related to the stock yield and factors unrelated to the impact through the weakness of the relationship of stock yield.

6. CONCLUSION

The study reached the following main results. The results indicated a statistically significant relation between inflation and stock yield at significant level of ($\alpha \leq 0.05$) level. A statistical relationship is found to be logical because the high economic inflation is usually reflected in the purchasing power of the local currency. When purchasing power of the local currency decreases, it leads to higher values of real assets such as real estate and securities, including stocks. The results of the statistical analysis showed that there is no statistically significant relation between the balance of payments deficit or surplus and the stock yield at significant level of ($\alpha \leq 0.05$). Although there is no statistical relation, but there is a theoretical relation between the balance of payments and the stock yield. The deficit of the balance of payments on the value of the currency increases the interest paid on loans and must be reflected in stock prices and returns, this contradict the statistical result.

The results of the study showed a statistically significant relation between interest rates and stock yield at significant level of ($\alpha \leq 0.05$). This is logical because there is a close relation between the interest rate and inflation, as the raise of interest rate guides investors to deposit more and decrease usage of loans, unless there is a return on investment above the interest rate, thus leading to the interest rate, while if investors turn to deposits this will lead to lowering prices. And the results of the analysis indicate that there is no statistically significant relation between the state budget deficit and the stock yield at significant level of ($\alpha \leq 0.05$). Although there is no statistical relation, theoretically, there is a relation from the researcher's point of view. Because deficit in the general budget means increasing the size of the GDP, and accordingly means the increase in goods in a given region, is evidence of the decline in the value of primary commodities, resulting in a lower stock yield. Also, the results showed a significant statistical relationship between the number of employees and stock yield at significant level of ($\alpha \leq 0.05$) and there was a positive statistical relation between the numbers of employees leading to an increase in shares. This means that the greater number of workers leads to increased productivity, including increased investment, and therefore the stock increases. But this is not necessarily true for all companies,

for there are some companies with a large number of employees and a lower stock yield than some other companies with small staff.

The results of the analysis showed a statistically significant relation between the size of the companies' capital and stock yield at significant level ($\alpha \leq 0.05$). This indicates that there is a positive statistical relation between the stock yield and the size of the companies' capital. The increase in the size of the capital leads to an increase in stock yield. This gives the company an economic strength compared to other companies, which raises the stock yield, but this result does not necessarily apply to all companies, for many companies with large capital have less stock yield than companies whose capital size is smaller.

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