The Factors that affect shares’ Return in Amman Stock Market

Laith Akram Muflih AL – Qudah
Al-Balqa Applied University (Amman University College for Financial & Administrative Sciences)

Abstract

This study aims to define the most important factors that affect the stock return and the excessive volatility. The study also interested to show those factors that that the investors rely on to take their investment decisions, the study relies on data that covers the period from 2005 to 2010. Archival research methodology was used in this study using publicly available archival data. Basically the regression model was applied on Amman Stock Exchange in Jordan on the data of company. The population size is 15 listed Industrial companies in Amman Stock Exchange (ASE). The results of the study show that the following factors (Balance of payments, Number of Employees and the size of the company) are significant at 0.05 levels, which mean that each of these three variables affect the stock return. The rest of variables (interest rate, budget deficits, gross domestic, and inflation rate) are not significant at 0.05 levels, which mean that each of them does not affect the stock return.

Keywords: Stock return, Amman Stock Market, Interest rate, Inflation.

Introduction

The key function of the stock market is to provide an exchange in which buyers and sellers interact for the purpose of trading in shares and other securities issued by publicly traded companies (Monther & Kaothar, 2010). In the course of exchange, stock market prices change according to the market activity as influenced by the forces of demand and supply. If there is a high demand for a given stock, its price will move upwards. Conversely if there are more people who want to sell than buy, the market experiences excess supply (sellers) than demand (buyers), and the effect of this will push the prices downwards presupposing that the market forces are allowed to operate freely.
The stock exchange provides investors with an efficient mechanism to liquidate or make investments in securities (Monther & Kaothar, 2010). The fact that investors are certain of the possibility of selling what they hold, as and when they want, is a major incentive for investment as it guarantees mobility of capital between the surplus spending units (SPUs) and deficit spending units (DSUs). The stock market gives an important platform for information sharing among investors, company valuation, and prospect for company fundamentals.

Stock returns change in stock markets on a daily basis. Moreover, during certain times of the year, it is easy to notice that stock returns appreciate every morning, and this may take place many times in one day for some stocks. This means that stock returns are determined by supply and demand forces. There is no foolproof system that indicates the exact movement of stock returns. However, the factors behind increases or decreases in the demand and/or supply of a particular stock could include company fundamentals, external factors, and market behavior.

**Objective of the Study:**
Given the fluctuation of stock returns in the time period of 2005-2010 has sought to study achieve the following objectives:

1. Knowledge of the most important factors affecting the Stock return and that cause the excessive volatility.

2. How to make buying and selling decisions based on the factors affecting, as the investor's knowledge of factors that influence and control assisted in making the decision to sell or purchase decision.

3. Identify the problems and obstacles to the market to achieve its goals and objectives and what can be done In order to avoid these problems and obstacles.
Importance of the study:

The importance of the study, it will illustrate the factors that affect stock returns in the market Amman Financial as well as determine the relationship between these factors and of each of the external factors Economic (inflation, interest rate, balance of payments, budget, GDP) And their impact on stock returns, and internal factors (the number of workers the company, the capital of the Company) and its impact on Stock returns. Also, this study will shed light on the concept and importance of internal and external factors. Affecting the stock returns because of their significant role in influencing the economy of the state. From here, The purpose of the study is to examine the factors that influence stock prices for firms listed in the market Amman Financial. This will be of benefit to both policy makers and investors to identify the specific factors affecting prices and can therefore be used as basis for making decision on strategies to be adopted in making investment decisions in the capital market.

The importance of The study stems from the study of factors affecting the return on stock through:

1. The phenomenon of the decline in trading volumes and stock market return.
2. Benefit some groups that deal with the market, such as investors, brokers, and others.

Problem of the study:

View of what constitutes the stock market of an important economic activity through trading in Securities (shares, bonds) and size of investment in this market. Have been deeper in the securities market. And follow-up financial stocks and their returns, which show a sharp fluctuation in by a sharp rise and fall during the time period from 2005 -2010, And the presence of many variables enter into the determination of return, the study has identified these variables and the statement of the importance of each variable with the proportion of its impact on stock returns.
And it is determined by the problem of the study the following questions:

1. Is there a relationship between payment balance sheet on the stock returns?

2. Is there a relationship between the interest rate on the stock returns?

3. Is there a relationship between the budget deficits on the stock returns?

4. Is there a relationship between the gross domestic products on the stock returns?

5. Is there a relationship between the inflation rate on the stock returns?

6. Is there a relationship between the number of Employees on the stock returns?

7. Is there a relationship between the size of the company on the stock returns?

**Research Hypotheses:**

In the light of the literature review, the following hypotheses are formulated:

H1: There is no Significant Statistical relationship between payment balance sheet and stock return at a level \( \alpha \leq 0.05 \).

H2: There is no Significant Statistical relationship between Interest rate and stock return at a level \( \alpha \leq 0.05 \).

H3: There is no Significant Statistical relationship between budget deficit and stock return at a level \( \alpha \leq 0.05 \).

H4: There is no Significant Statistical relationship between the gross domestic product and stock return at a level \( \alpha \leq 0.05 \).

H5: There is no Significant Statistical relationship between the Inflation rate and stock return at a level \( \alpha \leq 0.05 \).

H6: There is no Significant Statistical relationship between the Number of Employees and stock returns at a level \( \alpha \leq 0.05 \).

H7: There is no Significant Statistical relationship between the size of the company and Stock return at a level \( \alpha \leq 0.05 \).
Sample of the Study:

\[ Y = \beta + (\beta_1 X_1) + (\beta_2 X_2) + (\beta_3 X_3) + (\beta_4 X_4) + (\beta_5 X_5) + (\beta_6 X_6) + \epsilon \]

Y: Stock return
X1: Payment balance sheet.
X2: Interest rate.
X3: budget deficit
X4: gross domestic product
X5: Inflation rate.
X6: number of employees.
X7: Size of company.

Review of Literature

Introduction:
The literature review examines the studies that have been undertaken and theoretical orientation on factors influencing stock return. An empirical review is done discussing various studies already undertaken, identifying the research gaps and conceptualizing the current study. A summary of the variables indicating the predicted results is presented.

Ralph and Eriki (2001) on the Nigerian Stock Market examining the relation between stock prices and inflation provides a strong support for the proposition that inflation exerts a significant negative influence on the behavior of the stock prices. Moreover, the study shows that stock prices are also strongly driven by the level of economic activity measured by GDP, interest rate, money stock, and financial deregulation. On the other hand, the findings of the study show that oil price volatility has no significant effect on stock prices.

Zhao (1999) studied the relationships among inflation, output (industrial production) and stock prices in the Chinese economy. The study employs monthly values covering the period from January 1993 to March 1998. The results indicate a significant and
negative relation between stock prices and inflation. The findings also indicate that output growth negatively and significantly affect stock prices.

Dimitrios Tsoukalas (2003) examines the relationships between stock prices and macroeconomic factors in the emerging Cypriot equity market. In this study, the author has used the vector autoregressive model (VAR). The macroeconomic factors examined in this study, which covers the period from 1975 to 1998, are exchange rate, industrial production, money supply, and consumer prices. The results of the study indicate a strong relationship between stock prices and those macroeconomic factors. According to the author, the strong relationship between stock prices and exchange rate should not be surprising, since the Cypriot economy depends for most part on services such as tourism and off-shore banking. He also notes that the relationships between stock prices and industrial production, money supply, and consumer prices reflect macroeconomic policies implemented by Cypriot monetary and fiscal authorities.

Ibrahim (2003) applies co integration and VAR modeling to evaluate the long term relationship and dynamic interactions between Malaysian Equity Market, various economic variables, and major equity markets in the United States and Japan. The macroeconomic variables used are real output, aggregate price level, money supply, and exchange rate. The study yielded two main findings: first, the Malaysian stock price index is positively related to money supply, consumer price index, and industrial production. Second, it is negatively linked to the movement of exchange rates.

Mukherjee and Naka (1995) investigate the relation between Tokyo stock prices and six macroeconomic variables using a vector error correction model (VECM). Their study covered 240 monthly observations for each variable in the period from January 1971 to December 1990. The results of the study show that the relationship between Tokyo stock prices, the exchange rate, money supply, and industrial production is positive, whereas the relationship between Tokyo stock prices and inflation and interest rates is mix.

Chaudhuri and Smiles (2004) test the long run relationship between stock prices and changes in real macroeconomic activity in the Australian stock market in the period from 1960 to 1998. The
real macroeconomic activities include real GDP, real private consumption, real money, and real oil price. The results of their study indicate that long run relationships between stock prices and real macroeconomic activity. The study also found that foreign stock markets such as the American and New Zealand market significantly affect the Australian stock return movement. In order to test the informational efficiency of the Malaysian stock market.

Ibrahim (1999) investigates the dynamic interaction between stock prices and seven macroeconomic variables covering the period from 1977 to 1996. The author used co integration and the Granger causality test. The macroeconomic variables include the industrial production, consumer prices, M1, M2, credit aggregates, foreign reserves and exchange rates. The results strongly suggest informational inefficiency of the Malaysian market. In other words, there is co integration between the stock prices and these macroeconomic variables. The study demonstrates that stock price movements anticipate variation in the industrial production, money supply, and the exchange rate while they react to the deviations from long run path of consumer prices, credit aggregates, and foreign reserves.

Maysami and Koh (2000) examine the dynamic relations between macroeconomic variables and Singapore stock markets using the vector error correction model. The macroeconomic variables are exchange rate, long and short term interest rates, inflation, money supply, domestic exports, and industrial production. The data were seasonally adjusted and cover the period from 1988 to 1995. The study shows that inflation, money supply growth, change in short and long term interest rates, and variation in exchange rates do form a co-integrating relation with the changes in Singapore’s stock market levels. This study also examined the association between the American and Japanese stock markets and the Singapore stock market. Results show that the three markets are highly co-integrated.

**Background at the Capital Markets in Jordan**

The temporary law No. 31 of the year 1976 gave the permeation to establish a market known as Amman Financial Market (AFM), and operation were officially started on the 1st of January, 1978. AFM was established to regulate the issuance of securities, a place that could ensure safe,
speedy and easy trading for suppliers and demanders and to protect small savors through a mechanism that would define a fair price based on supply and demand. Moreover, two major tasks were given to AFM; first to take the role of Security and Exchange Commission (SEC), and the role of a traditional Stock Exchange. In March 1999 AFM was legally split up to create Jordan Security Commission (JSC) and Amman Stock Exchange, or the security market.

ASE is considered to be one of the most important markets in the Meddle East, which currently lifted all restrictions on foreign investments. It consists of two markets; the primary and the secondary markets, and four major sectors: Banking, Services, Insurance and Industries. The secondary market in ASE is subdivided into six major markets; first market, second market, third market, bonds market, mutual funds market and transactions off the trading floor. The ASE market has witnessed an increase in the number of listed companies through out the years, which gives an indication of an economic growth in Jordan. Market capitalization also increased since the establishment of the ASE market. At the end of 2004, 192 companies were listed on the market with a total market capitalization of 13033.8 million JDs (Key Statistics of the ASE).

The sectors in Amman stock exchange are the following:
1. Bank sector.
2. Industrial sector.
4. Insurance sector.

**Sampling and Data Collection:**

Data for the study covers the period from 2005 to 2010. Archival research methodology was used in this study using publicly available archival data. Basically the regression model was applied on Amman Stock Exchange in Jordan on the data of company. The population size is 15 listed Industrial company in Amman Stock Exchange (ASE).
Multi collinearity Testing:

Multicollinearity between the five independent variables was checked using the Collinearity statistics: Tolerance and Variance Inflation Factor (VIF). Tolerance is the amount of variance in an independent variable that is not explained by other independent variables. VIF measures how much the variance of the regression coefficient is inflated by multicollinearity. The minimum acceptable cutoff value for tolerance is typically (0.10). The maximum acceptable cutoff value for the VIF is (10). In other words, to indicate no problem with multicollinearity tolerance value should not be less than (0.10) while VIF value should not be more than (10).

As shown in Table(1), VIF values are less than 10, which means that there is not multicollinearity

<table>
<thead>
<tr>
<th>Variables</th>
<th>Tolerance</th>
<th>VIF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Balance</td>
<td>.402</td>
<td>2.485</td>
</tr>
<tr>
<td>Interest</td>
<td>.438</td>
<td>2.281</td>
</tr>
<tr>
<td>Deficit</td>
<td>.321</td>
<td>2.589</td>
</tr>
<tr>
<td>Gdp</td>
<td>.227</td>
<td>7.566</td>
</tr>
<tr>
<td>Inflation</td>
<td>.207</td>
<td>4.837</td>
</tr>
<tr>
<td>Employees</td>
<td>.154</td>
<td>6.477</td>
</tr>
<tr>
<td>Size</td>
<td>.141</td>
<td>7.094</td>
</tr>
</tbody>
</table>

Hypothesis Testing

Logarithmic Regression was used to test the hypothesis and it was found that (calculated F = 4.93) is significant at 0.05 level. So that, we reject Ho and accept Ha, that means, there is a relationship between the independent variables and stock return, and this effect is high with \( r = 0.632 \), also the independent variables explains 0.399 of the change in the dependent variable.
In order to test the effect of each variable on stock return following table summarizes the results of coefficients:

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>(Constant)</td>
<td>27.179</td>
<td>15.910</td>
<td>1.708</td>
</tr>
<tr>
<td></td>
<td>Inbalance</td>
<td>.271</td>
<td>.099</td>
<td>2.748</td>
</tr>
<tr>
<td></td>
<td>Ininterest</td>
<td>.341</td>
<td>1.066</td>
<td>.052</td>
</tr>
<tr>
<td></td>
<td>Indeficit</td>
<td>2.872</td>
<td>2.968</td>
<td>.594</td>
</tr>
<tr>
<td></td>
<td>Ingdp</td>
<td>-4.731</td>
<td>3.724</td>
<td>-.837</td>
</tr>
<tr>
<td></td>
<td>Linflation</td>
<td>.696</td>
<td>.766</td>
<td>.215</td>
</tr>
<tr>
<td></td>
<td>InsizE</td>
<td>-.854</td>
<td>.294</td>
<td>-.832</td>
</tr>
</tbody>
</table>

a. Dependent Variable: lnstock
As we see in the above table:
- The calculated t values for (Balance of payments, Number of Employees and the size of the company) are significant at 0.05 level, that is, each of these three variables affects the stock return.
- The calculated t values for the rest of variables are not significant at 0.05 level, that is, each of them does not affect the stock return.

The equation model is:

\[
\text{Stock return} = 27.179 + 0.271(\text{Balance of payments}) + 0.341(\text{interest rate}) + 2.872(\text{deficit}) - 4.731(\text{GDP}) + 0.696(\text{inflation}) + 1.087(\text{Number of Employees}) - 0.854(\text{size of the company})
\]

**Results of the study:**

1. There is Significant Statistical relationship between payment balance sheet and stock return.
2. There is no Significant Statistical relationship between Interest rate and stock return.
3. There is no Significant Statistical relationship between budget deficit and stock return.
4. There is no Significant Statistical relationship between the gross domestic product and stock return.
5. There is no Significant Statistical relationship between the Inflation rate and stock return.
6. There is Significant Statistical relationship between the Number of Employees and stock returns.
7. There is Significant Statistical relationship between the size of the company and Stock return.

**In the light of the aforementioned, we recommend the following:**

1. Securities Commission, the institution monitoring Amman Stock Exchange, furnishes the investor with all the information influencing the stock price to allow him able to make the safe and correct decision.
2. We notice in Amman Stock Exchange that risk premium is the spread between stock return of any company subtracted by the risk-free return, referring to systematic risks. This indicates the inefficiency of the companies in Jordan market regarding the best utilization of the available resources.
3. Before making his decision about investment, the Jordanian investor should study the available information, especially the risk premium and the systematic risks which are the most important factors to be taken into consideration when choosing the ideal portfolio.
References


