

The Relationship between Macroeconomic Indicators and Stock Prices of Listed Companies in Tehran Stock Exchange

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Abstract: The aim of this study was to investigate the relationship between macroeconomic indicators and stock prices of listed companies in Tehran Stock Exchange. The research method was correlation-descriptive method. The statistical population of this study was all the listed companies in Tehran Stock Exchange which were as many as 449 companies over 2009 to 2013. The population were included all the companies, during this period of 5 years in industry and groups several. 91 companies were chosen as the sample. Regression was used to analyze the data. The results showed that there was a significant relationship between the macroeconomic indicators and performance of listed companies in Tehran Stock Exchange.

Keywords: Oil Prices, Stock Prices, Inflation, Exchange Rates, Interest rates of Bank.

Introduction

The importance of macroeconomic indicators such as exchange rates and inflation for the economy, especially in the current situation on the one hand is more dependent on the state budget to these indicators and on the other hand the volume of imports has increased dramatically, there is no need to elaborate. Any serious changes in macroeconomic indicators could be affected by public sector spending and disruptions to the country's foreign trade will create many problems. For example, assuming a stable volume of production and export of crude oil in the coming years the country's future oil revenues will be a function of oil prices (Javadi, 2010). Capital market in each country is influenced by internal and external factors. One important external factor is the volatility of oil prices that much research has been done on the correlation between stock with changes in oil prices, most studies abroad has been observed that most of this dependence but, the relationship in some studies is different than other studies, some have shown negative correlation between changes in oil prices and stock, or some other positive correlation high or low. In all the studies, the relationship between the variables cited due to changes in oil prices as a major factor. So, if due to changes in oil prices, the conflict and political tensions, wars and differences between exporter and importer countries, particularly in the Middle East, changes in oil prices will have a negative impact on stock exchange. And if that change in oil prices (for oil prices) were related due to the global economic growth and development or associated countries, will have a positive impact on stock (Karim Zadeh, 2012). The aim of this study was to investigate the relationship between macroeconomic indicators and the stock prices of listed companies in Tehran Stock Exchange.

Materials and Methods

The research method was correlation-descriptive method. The statistical population of this study was all the listed companies in Tehran Stock Exchange which were as many as 449 companies over 2009 to 2013. The population were included all the companies, during this period of 5 years in industry and groups several. 91 companies were chosen as the sample using the following criteria.

1. By the end of March 2009 and is listed in Tehran Stock Exchange for the fiscal year ended March.
2. Companies have their fiscal year during the periods are changed.
3. The financial information required for this study in the period of 2009 to 2013 when it is fully implemented.
4. do not as a part of banks, financial institutions (investment companies, financial intermediaries, Holding companies, leasing) means do not be as the manufacturer, because the disclosure of financial information and corporate governance structure is different in them.
5. Companies must be out of stock before 2013.
6. Companies should not be among the companies from 2013 onwards, were accepted at Tehran Stock Exchange. In this study, the independent variable was economic indicators in oil prices and inflation and exchange rates and interest rates that the oil price per barrel of crude oil was based on the dollar on world markets which was calculated on a monthly basis in the period from year 2007up to the end 2012. Inflation rates, exchange rates and interest rates from 2007 to 2012 are extracted from the central bank. And the dependent variable was the return on equity. This price at some point of time was the maximum amount that competing buyers willing to pay in order to receive future cash flows related to the stock (payments received for dividends and changes in the price of the stock) and antibiotic residues. Variable was measured as the share price and was considered as a quantitative variable. There are different criteria for measuring several variables "size of the company" which include the total amount of assets, sales and number of employees. In this study, the Nehpri logarithm of total assets was used to measure "company size" variable. Financial lever: The use of financial resources of the business relationship in terms of debt or equity, and the determination and evaluation of the composition of the review. In this study, to measure the financial leverage, the book value of long-term debt divided by the total assets was used (Sinai & Nisi, 2003). To achieve the objectives of the study, regression equation was used as below:

$$R_t = \beta_0 + \beta_1 OP + \beta_2 ER + \beta_3 IN + \beta_4 IR + \beta_5 SIZE + \beta_6 FL + \varepsilon$$

In this equation: P_t = return on equity, OP = oil price, ER: exchange rate, IN= the inflation rate, IR = Interest rates, FL= financial lever, SIZE = size of the company. Regression was used to analyze the data. In all analyzes, the significance level of $P < 0.05$ was considered.

Results

Kolmogorov - Smirnov test showed normal distribution of the data ($P > 0.05$). Before fitting the model, the F-Limer and Hausman diagnostic test to select the appropriate method to estimate the pattern in which the results are presented in Table Table 2. As can be seen in the F Limer test has achieved a significant level and considering the significance level of 5% was acceptable in the light of panel data with fixed effects and lots of choice. The results of the Hausman test shows that the method is estimating panel data with fixed effects.

Table1. The results of diagnostic tests.

Model with the dependent variable	Test	Static	Significant level	Accepted methods
Stock returns	F Limer	11.359	0.0000	Panel data with fixed effects
	Hausman	2.578	0.0023	Panel data with fixed effects

Source: Calculations research

The estimation results are presented in Table 2. According F static obtained (11.018) which can be stated that the 99% confidence level, a total of independent variables associated with the dependent variable. Also, according to the coefficient of determination, these findings indicate that about 74 percent of the variation in the dependent variable explained by the independent variables. Moreover, according to the Durbin-Watson statistic obtained is equal to 1.84 that can be stated there was no correlation between the first order patterns of remains. Due to the

significant coefficients of the variables in oil prices, exchange rates, inflation and interest rates can be stated that the macroeconomic indicators are related to the stock returns of companies listed in Tehran Stock Exchange. The coefficient of the price of oil was (120.68) due to the significant level of less 0.05. Therefore, there was a significant positive correlation between oil prices and stock returns. Variable rate of inflation and significant negative correlation with the dependent variable and the relationship was statistically significant at the five percent level. Exchange rate negative and statistically significant coefficient was evaluated. Hence, there was a negative relationship between exchange rate and stock returns. Variable rate interest rates were 271.52 due to the significant level of 0.000 which was less than 0.05. There was a negative and significant relationship with the dependent variable yield, and this relationship was not statistically significant at the five percent level.

Table2. Analysis of the results.

Dependent variables: return on equity			
The independent variable	Coefficient	Statistic t	Significant level
Oil prices	120.68	109.56	0.000
The inflation rate	-356.98	-61.941	0.000
Exchange rate	-5.999	-220.74	0.000
Interest rates of bank	-271.52	-34.632	0.000
Size of the company	-2623.4	-0.5038	0.6147
Financial Lever	-507.29	-1.4840	0.1387
Intercept	20020.0	3.436	0.0007
The coefficient of determination	0.7471	Adjusted coefficient of determination	0.679
F statistic	11.018	F statistic error	0.000
Durbin Watson statistic			
2.04			

Discussion and Conclusion

The aim of this study was to investigate the relationship between macroeconomic indicators and stock prices of listed companies in Tehran Stock Exchange. The research method was correlation-descriptive method. The statistical population of this study was all the listed companies in Tehran Stock Exchange which were as many as 449 companies over 2009 to 2013. It is worth saying that changes in oil prices are the main source of economic turmoil producing countries dependent on oil, including Iran. The relationship between oil prices and stock market price index is one of the most important issues in macroeconomics. Studies on the impact of oil shocks on stock market price index are relatively vague, so that there was no public opinion about the relationship between stock market prices and the volatility of oil prices. Some studies suggested a negative relationship between oil prices and stock market price index report, while some studies suggest there was no significant relationship between these two factors. Other findings showed that there was a relationship between the rate of inflation and stock prices of listed companies in Tehran stock exchange. Inflation leads to the redistribution of assets and income. Asset price inflation has increased more than those who have benefited from the process of inflation and those which increase the price of assets is less than the rate of inflation, lose. In this way, businesses are able to increase revenues by more than the inflation rate is the nominal gain and vice versa for those who cannot legally limit their nominal revenue increase are affected in the inflation rate. The effects of inflation, the result obtained those listed companies which have assets. The impact of inflation on the rise in the price was more, the effects of inflation on stock prices of these companies will be more a result of the stock, with the person who would be more acceptable, because the share holder of shares of the company received the tab that the increase in the value of assets in company stock, will be expected to increase their stock price. Thus, shareholders whose shares are nominal return over the inflation rate rises, profit and shareholders whose shares are nominal output growth is lower than the rate of inflation, the inflation will be affected. The results of research were consistent with the results of Madsen and Jacob (2002). There was a relationship between the exchange rate and stock prices of listed companies in Tehran stock exchange. A large importer of high costs due to the high exchange rate will see losses and lower income gain, which is leading to lower stock prices. The exchange rate increased foreign debt by the corporation. On the other hand, increases of debt led to lack of liquidity and lack of liquidity of firms with negative effect on the distribution of profits, return on equity and price index and the increased cost of production, reduced margins. The results of this study were consistent with the

results of studies such as: Madsen and Jacob (2002). There was a relationship between interest rates and stock prices of listed companies in Tehran stock exchange. To explain these findings, we can say that investors are looking for efficient portfolio investment. Based on the experiences gained from the analysis of return on investment in the stock market and its associated risks, investors receive returns from investment in the stock market, it's not enough to know the risks. On the other hand, the existence of long-term bank deposit interest rates without risk in Iran is causing the macroeconomic variables as a competitor to become invest in the stock market. It's expected that the increase in bank deposit interest rates, with the stock price index had a negative correlation these two variables' results were consistent with the results of studies such as: Maysami and Koh (2000). Due to the fact that oil prices, the managers' perspective is an exogenous variable, companies need to assess their financial managers more aware of the actual performance and profitability of firms and their decisions are long-term analysis and Fashion sought to mislead them and not making mistakes. Investors also can be due to changes in oil prices, changes in the general index to predict stock price index, and for investment in the stock market, these changes in mind.

Conflict of interest

The authors declare no conflict of interest

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