The Study of the Effects of Exchange Rate Fluctuations on Petrochemical Industry Return in Tehran Stock Exchange

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Abstract
Relationship between financial markets is a subject that has attracted the attention of many studies to it. In this context, the effect of macroeconomic indicators on capital market and specially stock exchange have an important role in macroeconomic policies in determining the changes trend of capital market. It should be noted also that different industries receive different effects considering the nature of their operations from Macroeconomics. Petrochemical industry is an industry that due to its direct function with oil products is highly affected by macroeconomics including exchange rate. The aim of the present study also is to study the effects of exchange rate fluctuations on petrochemical industry return in Tehran Stock Exchange. For this purpose, a number of 41 companies active in this industry during the time period of 2008 - 2013 were studied and research findings indicated that exchange rate directly cannot affect the return of companies active in this industry, but its fluctuations exert this effect directly on the returns of these companies.

Keywords: Exchange rate, industry return, petrochemical industry, stock exchange

Introduction
Investors make investment in the hope of achieving more wealth. One of the important factors that investors consider in their decision-making is return on equity (Abbasian et al., 2008). Return in investment is a driving force that creates motivation and is considered as a reward for investors (Sakki & Tofighi, 2012). In fact, every investor first should gain assurance and confidence that in the first place his main invested capital will be returned and then his expected return is achieved, so that he can be able to make decision regarding investment (Poorbagher, 2008). Stock return itself is a function of multiple factors, that one of them is exchange rate fluctuations (Halafi, 2004). In theory, uncertainty regarding exchange rate fluctuations in addition to foreign trade affect domestic economy, specially stock market a well. In an open economy, services and capital are exchanged between countries with regards to exchange rate. Therefore, exchange rate can affect major variables in export, import and Entrance and exit of capital (Barzandeh, 1997).

In fact, it can be said that exchange rate fluctuations creates a kind of risk in foreign relations that hence, can disrupt export, import and capital flows (Ejara, 2010). Therefore, if exchange rate changes are regulated correctly, it can provide a proper and more desirable environment for production, trade and investment. Exchange rate fluctuation cause a change in the prices of commodities and services, as well as production and production factors and through this, affects current and expected future cash flows and following that it affects stock returns of economic agencies (Zare' and Rezaee, 2006). In a way that reduced money value causes an increase in demand for domestic manufactured goods which is due to the increased price of foreign products comparing to domestic, the result of which is a general increase in prices and on the other hand, reduces the import of intermediate and capital goods due to their increased price which in turn leads to increased
production cost and reduced investment. At the result of all these, demand for stock reduces and therefore, Stock market returns reduces as well (Zamani Farahani, 2002).

Considering the great importance of this topic, stock market acts as one of the indicators for evaluation of economic status of our country that increased investment in this market and attracting capital to capital market requires increased stock market return, reduced risk and creation of desirable contexts for invest and since, macroeconomic variables such as exchange rate, inflation, oil price and ... affect stock market returns, hence, clarity in the relationship between economic variables and stock market can be a solution for future managers and investors for decision making (Aydemi & Demirhan, 2009).

Monetary and financial variables are among factors that can affect return in companies. Currency refers to the money used in other countries. In other words, currency in general refers to those monetary units that are being traded in other countries, except in the main country and currency exchange rate refers to the amount of National currency which should be paid in order obtain a unit of the money of another country. Exchange rate of currency can be considered as the equal value of a foreign currency unit of money to national currency. In other words, exchange rate refers to buying or selling price of a unit of a foreign money in the currency commonly used in a country (Rahmani and Sadighzadeh, 2014).

One of the differences between financial transactions inside the country and international transaction is that domestic trades involves transactions in national currency of the country, however, international trades usually involves transactions in foreign currencies. Therefore, exchange rate of foreign currency affects trade relations of businesses with the outside world. Considering the fact that more than 95% of the facilities and devices being used in houses and workplaces, including household and industrial electric and non-electric devices, various types of containers and packaging materials, clothing, stationery, shoes, paint, glue and etc are produced by petrochemical industry through a series of simple or complex process of gas and oil conversion, hence, this industry has found a special importance in the economy of Iran. In addition, due to the significant share of oil and gas of this industry in the economy of Iran, it has a unique characterizes, and hence, considering the economic dependency of Iran to oil, exchange rate fluctuations can be considered as a risk factor in interpretation of fluctuations in other sectors of economy (Rahnamaye Roodposhti et al., 2012).

Exchange rate of currency affects both macroeconomic variables such as GDP as well as capital market variables such as stock index. On the other hand, price of petrochemical materials has a direct correlation with the price of oil and exchange rate and those companies that are using petrochemical products as their consuming materials or their products are one of the Products extracted from oil, have great dependency on oil prices.

Considering the major role of the government in economy and its decision-making and strong effect of government policies on stock market, it can be concluded that conducting a study about the effect of macroeconomic factors including currency exchange rate can provide a new prediction in this field, in a way that investors and shareholders will be able to predict the effects rustling from Macroeconomic decisions on stock price and index changes (Sajadi et al., 2011). Therefore, the present study seeks to study the relationship between exchange rate fluctuations and returns of companies active in petrochemical industry listed on Tehran Stock Exchange. To this end, in the following sections, research methodology, findings and conclusion are presented.

**Literature review**
Introduction of the topic of flexible exchange rate system in 1973 created a kind of fluctuation and uncertainty in exchange rate. This created a debate among policy makers and
researcher about the effect of exchange rate on trade flows. However, both theoretical and empirical studies, have found contradictory results about the relationship between changes in exchange rate and international trade flows. Although, in most of the trade models it has been concluded that fluctuation of exchange rate leads to increased risk and uncertainty and in turn interrupts trade flows, however, some other studies, such as Mckenzie’s study, suggests otherwise. But most of these studies are conducted in developed countries and there are limited studies in developing countries - which is due to limitations of time series data (Mckenzie, 1999).

Based on the way exchange rate fluctuations affect economic performance, there are two streams of economic theory. One of these streams explores the way domestic economy reacts to Internal and external financial shocks under different regimes of exchange rate and how exchange rate affects international trade. In general, the impact of exchange rate regime on fluctuation depends on the shock imposed on domestic economy. Considering the general rule that a flexible exchange rate is a proper impediment against actual external shock and fixed exchange rate system is a proper impediment for internal shocks of LM curve (Esmaili and Hassanpur Kashani, 2012).

Stock return fluctuation, is a controversial financial topic that has attracted the attention of capital market researchers in emerging markets in recent years (Zafar et al., 2008). The reason of this attraction is due to the relationship between price fluctuation and return and its effect on performance of financial sectors as well as the whole economy. On the other hand, usefulness of stock return fluctuation studies for investors is that they consider stock return fluctuation as a criterion for risk and also, capital market policy makers can use this criterion as a tool for measuring the vulnerability extent of stock market (Fink et al., 2010).

So many financial experts and analysts have expressed that the need to spend so many years studying financial markets and investments, in order to understand the way of determining stock return. However, still this process cannot be fully understood. For this reason, the topic of investment has attracted the attention of so many investors and students. The goal of investors is to attract profit and therefore, most studies are focused on stock return, so that they can aid investors to predict the results of a business unit activities. It is because, through this, investors' risk also reduces (Cao et la., 2002). It should be mentioned that capital return is one of the most important ratios that should be used by financial analysts, because it indicates the level of success or effectiveness of management in application of assets of a business unit on the other hand, one of the characteristics of accounting information is that these information have predictability power, that is, these information can aid users to predict the future and current results of a business unit activities (Khalife Soltani & Bahrami, 2011). Considering that the topic of the present study is an applied topic, we hope that investors and economic decision makers can make use of its results for making proper decisions.

Research methodology

Research method used in this study in terms of nature and content is a correlation method and the reason of using this method is to discover the correlation between research variables. Also, this study is a bibliographical, analytical - causative study and is based on panel data analysis as well. In terms of goal and aim, the present study is an applied study. The present study was conducted in a deductive - inductive reasoning framework. It means that in theoretical principles and research background bibliographical studies, sites and articles in inductive framework and data collection for confirmation or rejection of hypotheses in deductive framework were used. Methodology of the present study is an Ex-Post Facto study (by using past information and data) and the statistical method used in it is Cross-sectional correlation and for studying the existence of a relationship between variables, regression test was used.

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**Research model and variables**

Regression models of the present study are adopted from base study of this research that is Cakan & Ejara (2013), in which Gold Price and Oil Price are considered as control research variables.

\[ R_{it} = \beta_0 + \beta_1 \text{Currency} + \beta_2 \text{RM} + \beta_3 \text{Fluctuation} + \beta_4 \text{Gold Price} + \beta_5 \text{Oil Price} + \beta_6 \text{BETA} + \beta_7 \text{SIZE} + \epsilon_{it} \]

\[ R_{it} = \beta_0 + \beta_1 \text{VAR_Currency} + \beta_2 \text{RM} + \beta_3 \text{Fluctuation} + \beta_4 \text{Gold Price} + \beta_5 \text{Oil Price} + \beta_6 \text{BETA} + \beta_7 \text{SIZE} + \epsilon_{it} \]

**Dependent variable:**
- \( R_{it} \): Total stock return of company, which is calculated from the below formula:
  \[ R_{it} = \frac{(p_t - p_{t-1}) + DPS_t + SO_t + SR_t}{p_{t-1}} \]

Where,
- \( R_{it} \): Refers to the return of company i, in period t.
- \( P_t \): Refers to price per share at the end of period t.
- \( P_{t-1} \): Price per share at the end of period t-1.
- \( DPS_t \): Refers to dividend belonging to each share in period t.
- \( SO_t \): Refers to the value of authorization certificate to buy granted share in period t.
- \( SR_t \): Refers to the value of purchase priority for the granted share in period t.

**Independent variable:**
- Currency: Refers to currency rate (USD) extracted from Central Bank website with consideration of published information and statistics published by this bank.
- VAR_Currency: Fluctuation of currency exchange rate which is calculated through standard deviation quarterly during the year.

**Control variables:**
- RM: Refers to Tehran Stock exchange return rate during the year which is calculated from sum of the price changes and cash dividend as below:
  \[ R_m = \frac{\sum c_{i,t}D_{i,t} - \sum x_i p_i}{c_{i,t}p_{i,t}} + \frac{TEP_t - TEP_{t-1}}{TEP_{t-1}} \]
  \( TEP_t \): Stock index at the end of the day.
  \( TEP_{t-1} \): Stock index on the first day.
  \( X_iP \): Cash brought by investors in Capital Increase.
  \( C_i \): The number of shares during the period.
  \( D_i \): Cash dividend per share.
  \( P_i \): Stock price in the period under study.
  \( T \): Period under study.

Fluctuationit: Inflation rate with high level of fluctuations in recent years is calculated and extracted from Central Bank website and considering the information and statistics published by this bank.
Gold Price: Rate of per ounce of gold in USD is calculated and extracted from Central Bank website and considering the information and statistics published by this bank.

Oil Price: Rate of each barrel of oil is calculated and extracted from Central Bank website and considering the information and statistics published by this bank.

BETA: Refers to the systematic risk index of company which is calculated through pricing model of capital assets.

SIZE it: Company size which is equal to natural logarithm of total company assets.

Eit: Prediction error of model.

Research population and sample

Statistical population of this study includes all companies active in petrochemical industry listed on Tehran Stock Exchange that are a total number of 41 company as below:

Persian Gulf Petrochemical Industry Company, Persian Oil & Gas Development, Pardis Petrochemical Company, Kermanshah Petrochemical Industries Company, Fanavaran Petrochemical Company, Shiraz Petrochemical Company, Herbicides Production Company, Parsylon, nirouchlor, Shahid Ghazi Pharmaceutical company, Goltash, Pars Alvan, Fars Petrochemical Industries Company, Pars Carbon Black, Shazand petrochemical Company, Isfahan Petrochemical Company, Kharg Petrochemical company, Melli Agrochemical Company(PLC), Pakvash Henkel company, Sina Petrochemical Industries, Tolidaru, Tolypers Company, Polymers Iran, Fiber Intermediate Products Company, Iran's Investment in Chemical Industry, Iran Mineral Salts Company, Production of Polypropylene Fibers Company, Abadan Petrochemical Company, Farabi Petrochemical Company, Alif Company, Loab Iran Company, Petrochemical Investment, Iran Carbon Company, Pakan, Shirin Darou Company, Hakim Pharmaceutical Company, Pars Company, Kaf company, Pars Pamchal Chemical Company, Rangin Industrial and Chemical Company, Manufacturing Factories of Sepehr Paint. Since the number of companies in research population is limited, for the postponement of sample selection all-count sampling method was used and the timeframe of 2007 - 2013 was used and data was collected seasonally. Due to exchange rate fluctuations in recent years has been high, it has been tried to collect data seasonally, because in this way larger amount of data are collected and more acceptable results are obtained.

Data collection method and instruments

In this study for collecting data the following methods were used:

A. For collecting information regarding theoretical framework and research literature, bibliographical sources, articles, books and other specialized websites were used.

B. Organizational data and reports published by companies listed on Tehran Stock Exchange were collected from financial statements of companies and Pars Portfolio software. Also, for testing research hypotheses and finally data analysis, Excel, SPSS 19 and EVIEWS7 were used.

Research findings

In this section, measures of central tendency such as average and measures of dispersion such as standard deviation, skewness and kurtosis are presented for each of the search variables. Average is the main measure of central tendency and provides us with the average value of data, in a way that, if data are arranged on an axis in order, average value is exactly located at the balance point or at the center of gravity of distribution. Standard deviation is one of the measures of dispersion and presented the dispersion level of data. Skewness also is one of the parameters of determining deviation from symmetry and is the symmetry indicator of data. If the population has a symmetrical distribution, its coefficient of skewness will be equal to zero and if the population is skewed to left, its coefficient of skewness will be negative and if it is skewed to right, this coefficient will be positive. Kurtosis also is the measure of dispersion of population against normal
distribution (Momeni and Ghayomi, 2011). A summary of descriptive statistics related to model variables are presented in table 1.

### Table 1. Descriptive statistics of research variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>Symbol</th>
<th>Average</th>
<th>Standard deviation</th>
<th>Skewness</th>
<th>Kurtosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Company's return</td>
<td>R</td>
<td>0.659</td>
<td>0.252</td>
<td>0.088</td>
<td>2.881</td>
</tr>
<tr>
<td>Market's return</td>
<td>RM</td>
<td>0.673</td>
<td>0.361</td>
<td>0.035</td>
<td>2.817</td>
</tr>
<tr>
<td>Exchange rate</td>
<td>Currency</td>
<td>18178.71</td>
<td>9581.455</td>
<td>0.554</td>
<td>1.595</td>
</tr>
<tr>
<td>Variations of exchange rate</td>
<td>Var_Currency</td>
<td>1.362</td>
<td>0.689</td>
<td>0.266</td>
<td>2.710</td>
</tr>
<tr>
<td>Inflation rate</td>
<td>Fluctuation</td>
<td>21.179</td>
<td>7.605</td>
<td>0.228</td>
<td>1.781</td>
</tr>
<tr>
<td>Gold price</td>
<td>Gold</td>
<td>1391.917</td>
<td>225.576</td>
<td>-0.161</td>
<td>1.925</td>
</tr>
<tr>
<td>Crude oil price</td>
<td>Oil</td>
<td>81.048</td>
<td>13.008</td>
<td>-1.535</td>
<td>4.075</td>
</tr>
<tr>
<td>Beta risk</td>
<td>Beta</td>
<td>0.357</td>
<td>0.147</td>
<td>-0.109</td>
<td>3.106</td>
</tr>
<tr>
<td>Company size</td>
<td>Size</td>
<td>13.806</td>
<td>4.073</td>
<td>-0.009</td>
<td>2.829</td>
</tr>
</tbody>
</table>

In the following research hypotheses testing results are presented.

**Testing of first hypothesis**

In this section, first the necessary pattern for model estimation is determined and then research model is estimated and the obtained results are interpreted. Therefore, before regression model fit, for determining whether is model is of panel or pooled type, Chow or F-test (bound test) was used. H0 hypothesis in Chow test indicates the appropriateness of pooled model and the opposite hypothesis indicates to appropriateness of panel data. Results of this test is presented in table 2.

### Table 2. Results of Chow test for first regression model

<table>
<thead>
<tr>
<th>Test</th>
<th>Test value</th>
<th>Freedom degree</th>
<th>P-Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chow test (F)</td>
<td>0.596</td>
<td>(952,24)</td>
<td>0.937</td>
</tr>
</tbody>
</table>

Considering the significance level of Chow test (p-value = 0.937), H0 is accepted at confidence level of 95% and indicates that pooled data method is more appropriate for research model fit. Therefore, research regression model is fitted by using pooled data method. Results of model estimation are presented in table 3.

### Table 3. Results of first research hypothesis testing by using pooled data method

<table>
<thead>
<tr>
<th>Variables</th>
<th>Coefficients</th>
<th>T-value</th>
<th>P-Value</th>
<th>Relationship</th>
</tr>
</thead>
<tbody>
<tr>
<td>CURRENCY</td>
<td>7.95*10-8</td>
<td>0.052</td>
<td>0.9584</td>
<td>Not significant</td>
</tr>
<tr>
<td>RM</td>
<td>0.224</td>
<td>9.172</td>
<td>0.0001</td>
<td>Significant</td>
</tr>
<tr>
<td>FLUCTUATION</td>
<td>0.0002</td>
<td>15.304</td>
<td>0.0184</td>
<td>Significant</td>
</tr>
<tr>
<td>GOLD</td>
<td>-0.00004</td>
<td>-0.662</td>
<td>0.5078</td>
<td>Not significant</td>
</tr>
<tr>
<td>OIL</td>
<td>0.008</td>
<td>5.440</td>
<td>0.0003</td>
<td>Significant</td>
</tr>
<tr>
<td>BETA</td>
<td>-0.352</td>
<td>-5.676</td>
<td>0.0001</td>
<td>Significant</td>
</tr>
<tr>
<td>SIZE</td>
<td>0.011</td>
<td>5.537</td>
<td>0.0001</td>
<td>Significant</td>
</tr>
<tr>
<td>C</td>
<td>0.469</td>
<td>6.568</td>
<td>0.0001</td>
<td>-</td>
</tr>
</tbody>
</table>

F-value of variance analysis: 30.888**
Model's significance level: 0.0001
Model's coefficient of determination: 0.4813
For studying the significance of the whole model, considering that the probability of F-value is smaller than 0.05 (p-value<0.0001) with a confidence level of 95% it is confirmed that the whole model is significant. Coefficient of determination of the model also indicates that 47.54% of the existing changes in seasonal return of companies is explained by the variables entered in to the model. Considering the significance level of t-student test for determining the meaningfulness of the effect of exchange rate variable which is estimated to be larger than first type error of 0.05 (p-value = 0.9584), it is accepted that this variables does not a significant effect on return of companies. Therefore, first research hypothesis is rejected at first type error level of 0.05.

**Testing second research hypothesis**

Results of Chow test for determining whether the second research model is a panel data model or a pooled data model, are presented in table 4.

<table>
<thead>
<tr>
<th>Test</th>
<th>Test value</th>
<th>Freedom degree</th>
<th>P-Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chow (F)</td>
<td>0.570</td>
<td>(952,24)</td>
<td>0.952</td>
</tr>
</tbody>
</table>

Considering the significance level of Chow test (p-value = 0.952), H0 is accepted at confidence level of 95% and it indicates that pooled data method is more appropriate for second research model fit. Therefore, second research regression model is fitted by using pooled data method. Results of model estimation are presented in table 5.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Coefficient</th>
<th>T-value</th>
<th>P-Value</th>
<th>Relationship</th>
</tr>
</thead>
<tbody>
<tr>
<td>Var_Currency</td>
<td>0.058</td>
<td>4.771</td>
<td>0.0001</td>
<td>Significant</td>
</tr>
<tr>
<td>RM</td>
<td>0.201</td>
<td>9.109</td>
<td>0.0001</td>
<td>Significant</td>
</tr>
<tr>
<td>FLUCTUATION</td>
<td>0.001</td>
<td>0.939</td>
<td>0.3477</td>
<td>Not significant</td>
</tr>
<tr>
<td>GOLD</td>
<td>-0.00003</td>
<td>-0.665</td>
<td>0.5060</td>
<td>Not significant</td>
</tr>
<tr>
<td>OIL</td>
<td>0.005</td>
<td>5.590</td>
<td>0.0163</td>
<td>Significant</td>
</tr>
<tr>
<td>BETA</td>
<td>0.340</td>
<td>-6.122</td>
<td>0.0001</td>
<td>Significant</td>
</tr>
<tr>
<td>SIZE</td>
<td>0.009</td>
<td>5.069</td>
<td>0.0001</td>
<td>Significant</td>
</tr>
<tr>
<td>C</td>
<td>0.416</td>
<td>6.361</td>
<td>0.0001</td>
<td>-</td>
</tr>
</tbody>
</table>

F-value of variance analysis:  31.636**
Model's significance level:  0.0001
Model's coefficient of determination:  0.4849
Adjusted coefficient of determination:  0.4790

For studying the significance of the whole model, considering that The probability of F-value is smaller than 0.05 (p-value<0.0001) with a confidence level of 95% it is confirmed that the whole model is significant. Coefficient of determination of the model also indicates that 47.90% of the existing changes in seasonal return of companies is explained by the variables entered in to the model. Considering the significance level of t-student test for determining the meaningfulness of the effect of exchange rate fluctuations variable which is estimated to be larger than first type error of 0.05 (p-value = 0.0001), it is accepted that this variable has a significant effect on return of companies. Therefore, second research hypothesis is confirmed at first type error level of 0.05.

**Conclusion**

From the time of Adam Smith, the dominant view regarding organizations has been their they gain their force from investors, employees and suppliers to produce and provide their customers

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with services and products. In this view, organization performance refers to financial return received by shareholders (Ejara, 2013). Each of us during our life make a number investment decisions in different fields such as property, gold, stock and ... In a scientific decision making, selection of each of these directly depends on the extent of risk and return of that opportunity comparing to other investments. In other words, the main aim is to identify the investment opportunity with highest return and lowest risk in equal return conditions comparing to other opportunities. Therefore, the importance of stock return prediction has made researchers to seek variables and indicators that are significantly related to stock return and also those variables effective on this relationship (Daniels et al., 2013). Researchers always have sought to identity those variables that effective on return and to base their decision-making on them.

Obtained resulted from conducted studies in this field indicate that financial and non-financial information both are effective on stock return (Mehrani et al., 2004). Hence one of the criterion used measuring organization performance, which was addressed in the present study, is stock return, because usually the most important criteria for evaluation of institutions' performance at present is stock return rate. This criterion alone have information content for investors and is used for performance evaluation. Reduction in the level and rate of this criterion is warning for companies because it indicates to weak performance of a company. This criterion has high information content, because reflects performance evaluation on the basis of market value and investors information very well.

On the other hand, any kind of change in exchange rate affects international operations of companies and their total return, which in turn affect stock price as well. Nature of change in stock price depends on multi-national characteristics of companies. In 2005, Dimitrova claimed that creating the relationship between stock price and exchange are due to a number of reasons is important, first, because so many researchers agree that it can be effective on decisions regarding financial and monetary policies. As Dimitrova and Gavine (1989) have mentioned in their studies, it has been documented that The rapid growth of the stock market has a positive effect on total demands. Gavine argues that if total demand would be sufficiently high, financial and monetary policies targeting interest rate and actual currency rate would be neutralized. Sometimes, policy makers support a cheaper currency in order to strengthen export sector. They should be aware whether such a policy will reduce the value in stock market or not. Secondly, the relationship between the two markets can be used for prediction of rate course. This helps multi-national agencies in management of their affairs at the face of foreign contracts as well as exchange rate risk which leads to stabilization of their revenues. Third, currency often is considered as an asset in Portfolios of investment funds. Awareness of the relationship between exchange rate and other assets in portfolio is critical for the performance of these funds (Aydemir & Demirhan, 2009).

However, identification of the type and the extent to which exchange rate and its fluctuations affect stock market return not only can be useful in making strategic Policies for preventing abnormal economic shocks occurring in capital market, but can affect the type of investment decisions with reliance on more extensive and comprehensive information. Hence, not only investors and companies, but also managers of Exchange Organization managers can prevent losses caused by market reaction to investors' decisions. In the meantime, achieving an appropriate model that can properly explain the relationship between exchange rate fluctuations and stock market return, can provide the necessary contexts for researchers and scientific community of our country to introduce and establish more accurate models for this purpose.

To this end, the aim of the present study was to explore the effect of exchange rate fluctuations on Petrochemical Industry return in Tehran Stock Exchange and research findings

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indicated that exchange rate directly cannot affect return of active companies in this industry, however, its fluctuations exerts a direct effect on return of these companies.

Based on the results obtained from the present study, the following practical recommendations are presented:

- Considering that there is no linear significant relationship between exchange rate and stock return of companies in petrochemical industry, it appears that stock return of companies is affected by other several factors which indicates to Instability of relationships between capital markets and macroeconomics. Hence, it is recommended that policy makers pay attention to Regulatory mechanisms for controlling the transformation of capital market with consideration of changes in macroeconomics and create more financial transparency in economic reports as well as in capital market, so that changes in each market is reflected Explicitly to other markets.

- Considering the existence of a significant linear relationship between exchange rate fluctuations and stock return of companies in petrochemical industry, investors are recommended not to consider the exact values of macro indicators in their investment decisions, but consider the existing changes and trend of changes in macro indicators as the basis of their decision-making for making the appropriate decision.

- Companies, for reducing the loss of their customers, should try to use strategies such as insuring their stock, guaranteeing minimum debt and ....

- Based on increasing usage of Euro in international trade system, it is recommended that active companies in Petrochemical and export fields to move toward performing their trades with the use of this currency.

- Foreign exchange, liquidity, inflation, oil price fluctuations policies and following the changes in oil revenues are among important sources of actual exchange rate fluctuation in our country. Considering that fixed exchange rate doesn't have any efficiency, it is recommended that foreign exchange, commercial, monetary and financial polices are developed under a floating exchange rate system.

- Regulatory financial and monetary policies, liquidity control, Storage of surplus oil revenues (for periods in which e are facing with reduced Foreign exchange revenues) and controlling inflation should be developed and planned properly and for executing them commited and skilled people should be used.

- It is recommended to try not to use price index only as a criterion for evaluating stock profitability or selection of new stock.

References


