



Identification and Role of Environmental Factors Affecting the Movement of the Three levels of Stock Prices Using Fuzzy Technique

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ABSTRACT

The intervention of the government and the presence of political figures and parallel to that monetary policy is a set of decisions and measures used by the monetary and government authorities to influence economic activities and increase stock price levels by trying to maintain balance and not create price bubbles. The purpose of this research is to identify the environmental factors caused by political communication and monetary policy using the fuzzy technique and its role in the movement process of the three levels of stock prices. The research sample includes 143 companies from the companies accepted in the Tehran Stock Exchange, which covers a seven-year period from the beginning of 2014 to the end of 2021. The results show that there is a positive and significant relationship between the factors identified as environmental factors and the three levels of stock prices. Also, the results show that the effect of monetary policy on the high level of stock prices is more than the low level of stock prices and does not affect the average levels of stock prices. Also, the results show that the effect of monetary policy on the high level of the stock price is more than the low level of the stock price, and it does not affect the average level of the stock price. The results indicate that if the government implements an expansionary monetary policy, there is more available credit and economic activity will flourish. An increase in money supply relative to money demand will lead to a decrease in interest rates, which will lead to an increase in stock prices.

Keywords:

Environmental factors, Political communication, monetary policy, stock price level.

1. Introduction

Different theories have been proposed regarding stock price evaluation in organized markets. At the beginning of the 20th century, a group of experts with experience in evaluating securities firmly believed that it is possible to present a picture of the stock price through the study and analysis of the historical trend of stock price changes. More scientific studies, emphasizing the accurate identification of stock price behavior, led to the trend towards stock price valuation models. At first, the theory of random steps was proposed as a starting point in determining the stock price behavior. Then attention was paid to the characteristics and structure of the capital market, and the results of these studies and investigations led to the hypothesis of an efficient capital market (Boldeiro and Ashaku, 2016; Brom, 2018; Calado and Litau, 2018; Coleman, 2021; DeRosa, 2021). In the efficient capital market, it is believed that the stock price is a reflection of the current information related to that stock and the changes in the stock price do not have a specific predictable pattern (Mavlumian, 2022). So far, many studies have been conducted to identify and investigate the factors affecting stock pricing. Some of these studies tried to determine the correlation between selection factors (such as internal and external factors, market and non-market, economic and non-economic) and asset prices. The results of these studies are different according to the field of study, the type of assets and the investigated factors. In this research, unlike the previous researches, we have investigated the influencing factors on the three levels of the stock price, so that we can examine the different behavior of the stock price in the three levels, and at the end, by presenting a model, we can categorize the effectiveness of different levels of different factors. Now, the first question is: what is the trend of the stock price and under the influence of what factors and at what level does it increase or decrease. Due to the increase in the number of shareholders in the stock market and their attention to the stock price in trading, forecasting the movement of the stock price has become very important. Many people at the time of investment, when comparing different stocks, check the rising or falling trend of the share price to know how long this rising or falling trend will continue.

Today, due to the expansion of economic activities, financial markets and the boom in investment in the capital markets, especially the stock

exchange by natural and legal entities, access to accurate and timely information and their accurate and realistic analysis is the most important tool for making correct decisions and obtaining the expected benefit and optimal and desirable use of financial facilities. One of the most important information in the stock market for investors is stock price information. Stock prices are affected by a large number of macroeconomic factors such as political events, inflation rates, general economic conditions, expectations and investor behavior. Also, financial variables such as trading volume, E/P ratio, etc. have a great impact on the stock price of any company and, in fact, direct the behavior of investors (Struck, 2022). Generally, the value of each company is determined by checking the value of that company's shares in the market. Therefore, in making investment decisions in the stock exchange, the first and most important factor facing the investor is the "price" factor, and checking the trend of stock price changes is the most common starting point when buying stocks. Therefore, it is very important to know the factors affecting the stock price. But in the case of the stock price, unlike the price of goods and services, it seems complicated and difficult, because many factors such as the behavior and expectation of demand and stock suppliers, the economic situation of companies issuing stocks, monetary and financial policies, Inflation, liquidity and many other factors more or less affect stock prices (Ma et al., 2022). One of the main questions of newcomers to the stock market is, on what basis does the stock price change?! What factors increase or decrease the stock price of a company? In response to this question, we must first point out the nature of supply and demand in the capital market. Like many other markets (such as housing, cars, etc.), stock prices in the stock market are determined based on supply and demand. With the increase in demand, the sellers sell their shares at a higher price, and in case of an increase in the supply, the buyers offer correspondingly lower prices for the purchase of shares. Therefore, the trading mechanism in the capital market is completely based on supply and demand. But what could be the reasons for the increase in demand? Until now, while introducing stocks as the most important securities that are traded in the stock market, we compared stocks with partnership bonds and rental bonds and said that investing in stocks, compared to these bonds, has a higher risk and of course the expected return is also

higher. Also, stating that the owner of the company's shares is considered the owner of the company as much as his share and will share in the company's profit and loss, some advantages of investing in shares, including the possibility of obtaining higher returns compared to fixed income securities, the possibility of participating in key decisions Company, we mentioned the priority for buying new shares and also the possibility of receiving prize shares. In addition to all the advantages mentioned for stocks, it is very important to pay attention to this important point that the selection of a company's stocks should be done with full knowledge of the current and future status of the concerned company (Liu et al., 2023). In other words, it is necessary for the investor to buy the concerned shares after getting to know and sufficiently analyzing the factors affecting the price of the company. But what factors can affect the stock price? In general, three categories of factors can affect the stock price of companies: the factors affecting the stock price are divided into three categories of environmental or macro factors, industry-related factors and internal factors, which in this research is focused on environmental factors. Environmental or macro factors are factors that are not in the company's control and depend on the overall economic and political system. By identifying the environmental factors, we will examine its role in the increasing or decreasing trend of the stock price at separate levels, so that we can reach the conclusion that which of the environmental and industrial factors and at which level of the stock price has the most increasing trend in the stock price cause and vice versa.

2-Literature Review

The stock price can be changed at any moment due to changes in market supply and demand. If the number of buyers of a share is more than the number of its sellers, that is, the demand for buying a share is more than its supply for sale, the price of that share increases and vice versa. It is very easy to understand the supply and demand and the resulting price changes, but what is difficult is to understand what leads to the changes in supply and demand in the stock market and causes some to want or buy a certain share and others to turn away or be its seller. According to the economic theory of the pricing model of capital assets, the price of an asset is a function of its risk and conditional volatility. Therefore, predicting price

fluctuations or stock returns is very important in portfolio selection, asset management and even stock pricing of newly listed companies. All-round development and deepening of the capital market as the driving engine of economic development requires the public trust of the participants in its efficiency and correctness in determining the fair price of securities. A new share has no price in the market because it has not yet been traded in the open market (Zhao et al., 2023).

Determining the stock price is a very difficult task, obviously, the company that issued these securities wants to sell them at the highest possible price, and the buyers or those who want to invest in these stocks want to buy them at the lowest possible price. The price of companies' shares is mostly determined by supply and demand or by brokers, capital providing institutions, etc. For pricing, a price should be set that is reasonable, appropriate and fair for the issuing company. On the other hand, it should attract the attention of buyers and investors and motivate them to invest. Experience has shown that if the stock price is determined in a "reasonable and appropriate" manner, the price of that stock will gradually rise in the market. The stock price is affected by market conditions every day. In fact, the stock price is determined by market supply and demand. If the shareholders are willing to buy a particular stock, then the demand is greater than the supply and the prices will increase, and if the shareholders are willing to sell a particular stock, the supply will be greater than the demand and we will see a decrease in the price. Analyzing and understanding supply and demand is easy, but the important thing is to identify what factors have caused shareholders to show interest in a stock, while this stock was not of interest to them before (Bao et al., 2020).

In order to answer this question, many factors can be stated, and these factors are the positive and negative announcements and news about the company's shares, which can be about the company's management, financial ratios and other matters. Of course, it should be noted that each shareholder has its own ideas and strategies. In theory, stock price volatility reflects how investors feel about a company's value. Of course, it cannot be said that a company with more expensive shares is more valuable, or vice versa, we should consider the total value of the company's shares (Mustafa and Suleiman, 2023).

One of the most basic foundations of investment theory is that investors want high returns and avoid risk. The term value change is used to show the return on an investment over a certain period of time, which is called the holding period return. Complex stock returns are one of the concepts and interests of investors and decision makers. To explain and predict stock returns, various models and theories have been proposed, including capital asset pricing model, factor or index models, arbitrage model, technical analysis and technical analysis. In grounded analysis, stock returns are a function of macroeconomic conditions, industry conditions, and specific company conditions (Liu et al., 2020).

Sobhanipour et al. (2021) investigated the effect of passive monetary policies on the stock price index (using the Markov switching model). The results of their research show that the behavior of monetary policy and monetary shocks do not have consistent behavior and the same effect on the stock price index in any time period. In fact, the application of monetary policy effectively does not affect the stock price index. Also, the findings show that after one or at most three terms, a turn occurs in the state of Iran's economy, and they constantly rotate between periods of prosperity and recession and policies between active and passive.

Asefi et al. (2021) investigated the effect of monetary policy on financial development through the asset price channel. The results of the impulse reaction functions indicated that the housing price channel increased production in the medium and long term, but it also had significant inflationary effects in the short and medium term. Also, considering the significant impact of the stock price channel on production, it can be said that the capital market plays an important role in directing resources and funds towards productive activities, which ultimately increases investment and production. Based on the results and the significant role of the stock price channel in transferring the monetary shock to the price level, it can be said that this channel has a significant role in reducing the inflationary effects of monetary policy.

Najafian (2021) examined the relationship between political relations, the simultaneity of stock prices and the cost of debt in companies. The results of the research showed that there is a negative and significant relationship between political connections and the cost of debt in companies. The findings of the research also showed that there is a positive and significant

relationship between the political relations of companies and the synchronicity of their stock prices. In other words, the political relations of the company's managers cause the simultaneous rise of the company's stock price.

Marer (2022) examined the price levels in the European Monetary Union. In his study, he analyzed the behavior of the real exchange rate time series between the member countries of the European Monetary Union. This study analyzed the behavior of the time series of the real exchange rate between the member countries of the European Monetary Union. The results of the research showed that the real exchange rates caused by the price levels are usually random and its components are generally not combined. There is no evidence of specific convergence clusters and no systematic differences are discernible for tradable and non-tradable goods.

Calvin Hay (2021) examines whether changes in monetary policy can provide the public with more information about the economic outlook. This channel is known as "information effect". The results indicated that, contrary to the predictions of the information effect, an unexpected monetary contraction caused by the monetary policy announcement leads to a decrease in stock prices. In stock markets, the information effect is not an important factor of monetary policy.

Zinivand et al. (2017) investigated the effect of monetary policy and the general level of prices through the asset price channel on the stock price bubble in Iran. The results of the research showed that in the short term, one percent increase in the interest rate and one percent increase in the volume of real liquidity will reduce and increase the stock price bubble by 1.3% & 3.5 percent, respectively. Also, according to the stock price bubble error correction equation, if there is any imbalance in the price bubble variable, about 27% of it is adjusted in each period.

Roudpashti and Mohseni (2017) investigated political connections, cash dividends and stock returns in companies listed to the Tehran Stock Exchange. The research results showed that there is a positive and significant relationship between political connections and cash dividends. In other words, with the increase of political connections, the cash dividend will be increased. Also, the research findings show a positive and meaningful relationship between political connections and stock returns. In other words, with the increase in political connection, the stock returns of

companies increase. These results imply that political connection can be considered as an important factor in cash dividends and stock returns.

3- Hypotheses

There is a significant relationship between environmental factors and three levels of stock prices.

- 1) There is a significant relationship between political connections and the high level of stock prices.
- 2) There is a significant relationship between political connections and the average level of stock prices.
- 3) There is a significant relationship between political connections and the low level of stock prices.
- 4) There is a significant relationship between monetary policy and the high level of stock prices.
- 5) There is a significant relationship between monetary policy and the average level of stock prices.
- 6) There is a significant relationship between monetary policy and the low level of stock prices.

4-methodology

The method of this research is descriptive- correlation type. Mixed data regression has been used to test the hypotheses. The present study is a practical research in terms of purpose, because it is done with the purpose of using these results in the capital market. The geographical scope of the research is the companies listed in the Tehran Stock Exchange and the time scope is from 2015 to 2021. In this research, 143 companies were considered as a statistical sample of the systematic elimination method, which is divided into three parts based on the high, medium and low levels of stock prices. In this way, after sorting the observations related to the stock price, it is divided into three parts from the highest to the lowest number of observations. If more than four years of an observation were seen in a department, we assigned that observation to that department. Thus, 40, 37, and 60 companies were placed in the group of companies with high, medium, and low levels of stock prices, respectively. To collect the data needed to measure the variables of the research, information from financial

statements and the Novin Rahavard software were used. Finally, the research hypotheses were tested using Eviuse software.

5-The statistical model

The hypothesis and statistical models used in this research were carried out following the research of Kenton and Boyle (2020).

- 1) High Price $i,t = \alpha_0 + \beta_1 Pcon_{i,t} + \beta_2 Size_{i,t} + \beta_3 Lev_{i,t} + \beta_4 CFO_{i,t} + \epsilon_{i,t}$
- 2) Average Price $i,t = \alpha_0 + \beta_1 Pcon_{i,t} + \beta_2 Size_{i,t} + \beta_3 Lev_{i,t} + \beta_4 CFO_{i,t} + \epsilon_{i,t}$
- 3) Low Price $i,t = \alpha_0 + \beta_1 Pcon_{i,t} + \beta_2 Size_{i,t} + \beta_3 Lev_{i,t} + \beta_4 CFO_{i,t} + \epsilon_{i,t}$
- 4) High Price $i,t = \alpha_0 + \beta_1 MPE_{i,t} + \beta_2 Size_{i,t} + \beta_3 Lev_{i,t} + \beta_4 CFO_{i,t} + \epsilon_{i,t}$
- 5) Average Price $i,t = \alpha_0 + \beta_1 MPE_{i,t} + \beta_2 Size_{i,t} + \beta_3 Lev_{i,t} + \beta_4 CFO_{i,t} + \epsilon_{i,t}$
- 6) Low Price $i,t = \alpha_0 + \beta_1 MPE_{i,t} + \beta_2 Size_{i,t} + \beta_3 Lev_{i,t} + \beta_4 CFO_{i,t} + \epsilon_{i,t}$

The variables of political communication and monetary policies are used as independent variables in the above statistical models.

In the above models, the three levels of the stock price have the role of the dependent variable, and **High Price** i,t : indicates the high level of the stock price.

Average Price i,t : represents the average level of the stock price.

Low Price i,t : indicates the low level of the stock price.

Environmental factors are considered as independent variables in this research. Although many factors can be classified as environmental factors, there is still no consensus on which environmental factors can have the greatest effect on stock prices. Therefore, in order to identify factors, factors were extracted from various articles. Due to the fact that the number of identified factors is large and the collective opinions of experts on the effectiveness of factors are different and variable, in order to identify local factors, factors have been screened. To do this, a questionnaire with 7 questions in the field of environmental factors affecting stock prices, including the economic situation, macroeconomic policies, laws and regulations, the country's annual budget, political connections and interest rates (where each question represents one factor) was designed. And 25 questionnaires, which are the number of expert

respondents and university professors, were provided to them, and all the questionnaires were comprehensive and complete. These questionnaires are written qualitatively and based on a 5-point Likert scale from extremely important to unimportant. After distributing and collecting the questionnaire, the fuzzy Delphi method is used to determine the most important factors, the steps of which are given below.

In the first stage survey, the conceptual model presented along with the description of the factors was sent to the members of the expert group, and their level of agreement with each of the factors was obtained and their suggested and corrective points were divided. The absolute mean obtained shows the intensity of experts' agreement with each of the research factors.

In the second phase survey, the second questionnaire was prepared and sent to the members of the expert group together with the previous point of view of each person and the extent of their difference with the point of view of other experts. In the second stage, the members of the expert group answered the questions again, taking into account the points of view of the other members of the group. According to the views presented in the first stage and comparing it with the results of this stage, if the difference between the two stages is less than the threshold of 0.2, then the survey process will be stopped. As the above table shows, the members of the expert group reached a consensus on some factors and the amount of disagreement in the first and second stages was less than the threshold of 0.2. Therefore, the survey was stopped regarding the above factors. Among the mentioned factors, factors whose unphased average of expert opinions is less than 8 were removed from the conceptual model of the research. In this stage, 2 factors have been stopped and a poll should be conducted on the remaining 5 factors, which will be done in the third stage.

In the third phase survey, while making the necessary changes in the model components, a third questionnaire was prepared and sent to the experts along with the previous point of view of each person and the difference between them and the average point of view of other experts. The results show that the amount of disagreement between the experts in the second and third stages is less than the threshold of 0.2, so the survey is stopped at this stage. Therefore, during the three stages of survey, out of 7 factors, 5

factors were removed from the final conceptual model of the research and the final model had 2 factors. Finally, among the environmental factors affecting different levels of stock prices, using the opinion of experts, the variables of political communication and monetary policies have been identified as variables with the highest level of influence on stock prices, which are used as independent variables in the above statistical models.

Pcon _{i,t} shows the political connections that are used as independent variables in statistical models one to three. Political communication in this research is calculated based on the company's ability to provide external financial resources. In fact, this virtual variable has a value of zero and one. When a company has political connections, we assign it a number of one and otherwise a number of zero. However, it does not change conceptually, since it plays the role of an independent variable in the regression model and interacts with other variables, we define it in such a way that it does not look like zero and one, and we calculate the value for each of the observations. In this research, in order to measure political communication, the studies conducted by Fan et al. (2008), Fan and Wang (2006), Lin et al. (2015) and Ariforkhan et al. (2016) have been followed. A long-term debt criterion is used as follows: the ratio of long-term debt to total debt is calculated for each company and then the average of the observations for each year of this variable is calculated and finally from the following relationship, we calculate the political connections of each company.

The reason that in this research we will subtract the average of observations for each year from the ratio of total long-term debt to total debt is that this variable is an independent variable that will be used in interaction with another variable in the regression model. Since the interactive variable must have the nature of zero and one, therefore, we will remove the definition of this variable from the form of zero and one and calculate it as a numerical value with the help of the following formula. Because both interactive and independent variables cannot be defined as zero and one in the model.

$$Pcon = \text{Average of observations for each year} - \frac{\text{Long - term total debt ratio}}{\text{Total debt}}$$

MPE_{i,t}: It shows the monetary policies that are used as independent variables in statistical models four to six. Monetary policy can be contractionary or expansionary. Contractionary monetary policy refers to measures that meet the general objectives of monetary policies through a reduction in the money supply. In other words, any type of measures that reduce money supply is called contractionary monetary policy. Expansionary monetary policies refer to policies that, through an increase in supply, bring their money to the general goal of monetary policy. In other words, any policy or measure that increases money supply is called expansionary money policy. Monetary policies can be expansionary or contractionary. If liquidity decreases on average compared to the previous year, the company's policy is an expansionary monetary policy (Esmaeili et al., 2021). In order to calculate the expansionary monetary policy, we calculate the changes in the volume of liquidity. If these changes have a negative value, it means that this company had an expansionary policy in the financial year in question, and it is given a code of one. If the changes in cash volume are positive, it means that the company has a contractionary monetary policy in that financial year. Since the goal is to implement an expansionary monetary policy, we assign zero code to such companies that have contractionary monetary policy conditions. The control variables of the research are as follows:

Size_{i,t}: indicates the size of the company. In this research, we use the natural logarithm of the company's sales as a measure of the company's size (Tazik and Mohammad, 2014).

LEV_{i,t}: represents the return on assets. It represents financial leverage and is calculated by dividing total debt by total assets (Tazik and Mohammad, 2014).

CFO_{i,t}: indicates the ratio of operating cash flow, which is calculated from the ratio of operating cash flow to total assets (Khodadadi and Kargarpour, 2018).

6- Results

Descriptive Statistics

The first step in any statistical analysis and information analysis is the calculation of descriptive indices. In the descriptive statistics section, data analysis has been done using central indices such as mean and median and dispersion indices of standard deviation, skewness and kurtosis. In this table, the number of observations for each level in the models at high, medium and low levels is equal to 280, 259 and 462 observations, respectively. The average shows that most of the data related to each variable are concentrated around this point. The amount of the abundance curve elongation compared to the standard normal curve is called kurtosis. The positive kurtosis coefficients indicate that the data is higher than the normal distribution and the data is centered on the mean.

Table (1): Hypothesis test results

Descriptive statistics of the variables of the group of high levels of stock prices					
	HIGHPRICE	PCON	SIZE	LEV	CFO
Mean	9.462724	-0.016958	14.53044	0.525718	0.133269
Median	9.506695	0.024849	14.55084	0.525786	0.111801
Maximum	12.69903	0.072858	19.38042	1.824512	0.687213
Minimum	7.265430	-0.530594	11.16210	0.066015	-0.273056
Std. Dev.	1.031247	0.114223	1.421282	0.214722	0.140650
Skewness	0.197224	-2.525916	0.266332	0.677653	0.686617
Kurtosis	2.969969	9.895004	3.144891	7.037778	3.867186
Jarque-Bera	1.825732	852.3909	3.555111	211.6392	30.77417
Probability	0.401372	0.000000	0.169051	0.000000	0.000000
Observations	280	280	280	280	280
Descriptive statistics of variables of the group of average levels of stock prices					
	AVERAGEPRICE	PCON	SIZE	LEV	CFO
Mean	9.099413	-0.045289	14.46355	0.546605	0.117253
Median	8.859505	-0.004358	14.34663	0.543923	0.104667

Maximum	12.14105	0.076072	19.59147	1.269042	0.505472
Minimum	7.100027	-0.590202	10.32925	0.059871	-0.460088
Std. Dev.	1.010495	0.115847	1.621884	0.199250	0.122546
Skewness	0.866988	-1.755153	0.572874	0.171667	0.013292
Kurtosis	3.166440	6.396956	3.707482	3.053723	4.951083
Jarque-Bera	32.74594	257.5060	19.56818	1.303255	41.08855
Probability	0.000000	0.000000	0.000056	0.521197	0.000000
Observations	259	259	259	259	259
Descriptive statistics of variables of the group of average levels of stock prices					
	AVERAGEPRICE	PCON	SIZE	LEV	CFO
Mean	8.363680	-0.043743	14.24465	0.564866	0.061781
Median	8.027472	-0.018333	14.06323	0.570765	0.053314
Maximum	11.44775	0.076072	20.46713	1.273940	0.542838
Minimum	6.565265	-0.533241	8.504513	0.031431	-0.460088
Std. Dev.	1.093192	0.099159	1.840171	0.195333	0.125218
Skewness	0.890512	-1.331983	0.468872	-0.108073	0.147978
Kurtosis	2.884960	5.222873	4.627659	3.075009	5.245535
Jarque-Bera	61.31662	231.7291	67.92624	1.007653	98.75282
Probability	0.000000	0.000000	0.000000	0.604214	0.000000
Observations	462	462	462	462	462

Estimation of the model by the panel data method

In order to test the hypotheses of the research, first the time-fixed effects model is estimated, then to see whether these widths of origin are statistically significantly different from each other, the Chow test is used, which in case of acceptance of the model based on the panel, we have to determine the type of pattern using the Hausman test.

Considering that the results related to the acceptance or non-acceptance of each of the research

hypotheses are determined from the regression model test, therefore, first of all, we must check the status of each model in terms of the type of model, which is fixed effects or random effects. If the significance level of Limer's F test is less than 0.05, then the panel model is chosen for them. By doing the Hausman test, we need to test random effects against fixed effects. Therefore, the panel model with random effects and if the Hausman test is smaller than 0.05, then the panel model with fixed effects is selected for it.

Table (2) Leimer's F and Hausman test

Hypotheses	Leimer's F			Hausman test		
	Statistics	probability value	Model	Statistics	probability value	Pattern type
H1	8.78	0.00	panel	132.42	0.00	Fixed effects
H2	8.20	0.00	panel	193.03	0.00	Fixed effects
H3	7.75	0.00	panel	392.45	0.00	Fixed effects
H4	8.88	0.00	panel	129.53	0.00	Fixed effects
H5	8.01	0.00	panel	180.14	0.00	Fixed effects
H6	7.59	0.00	panel	376.68	0.00	Fixed effects

The result of testing hypotheses one to three:

Table (3): Hypothesis test results

	Sig.	The first model High level of stock price	The second model Average stock price level	The third model Low stock price level
PCON	coefficient value	0.22	1.26	0.09
	Sig.Level	(0.00)	(0.04)	(0.04)
Size	coefficient value	1.01	1.23	1.28
	Sig.Level	(0.00)	(0.00)	(0.00)
Lev	coefficient value	-0.04	-0.71	-0.13
	Sig.Level	(0.84)	(0.09)	(0.66)
CFO	coefficient value	0.20	0.08	-0.70
	Sig.Level	(0.43)	(0.85)	(0.04)
C	coefficient value	-5.35	-9.19	-9.94
	Sig.Level	(0.00)	(0.00)	(0.00)
F statistic	coefficient value	33.66	9.10	8.26
	Sig.Level	(0.00)	(0.00)	(0.00)
Adjusted coefficient of determination		0.83	0.55	0.52
Durbin-Watson statistic		1.59	1.56	1.56

The results of model 1 in the above table considering that the variable PCON (political communication) has a significant level (0.00). Therefore, there is a positive and significant relationship between political connections and the high level of stock prices. Therefore, model 1 is statistically accepted. The variable coefficient of political communication (0.22) shows that if political communication increases by 1%, the stock price level increases by 0.22 %.

The results of model 2 in the above table considering that the variable PCON (political communication) has a significant level (0.00). Therefore, there is a positive and significant relationship between political connections and the average level of stock prices. Therefore, model 1 is statistically accepted. The variable coefficient of political communication (1.26) shows that if political communication increases by 1%, the stock price level increases by 1.26 %.

The results of model 3 in the above table considering that the variable PCON (political communication) has a significant level (0.00). Therefore, there is a positive and significant relationship between political connections and the low level of stock prices. Therefore, model 1 is statistically accepted. The variable coefficient of political communication (0.09) shows that if political communication increases by 1%, the low stock price level increases by 0.09 %.

The results found in the above table show that the effect of political communication on the average level of stock prices is more evident than other levels.

Studies conducted in companies with political connections show that political connections can affect the company in both positive and negative ways. On the one hand, some studies have pointed out the great benefits of political communication, including: easier access to financial resources such as bank loans and budgets with suitable conditions; Increasing self-confidence in the legal system, improving performance, high probability of being saved from seizure; Increase in equity value, for example through equity appreciation, lower cost of capital, transaction privileges such as priority in government contracts. On the other hand, some studies have shown that political communication can have a negative effect on the company, including lower quality accounting information, selection of managers and board members with low qualifications, reduction in long-term performance of the company due to reduced managerial incentives or inefficiency, higher cost of debt (Shleifer and Vishni, 1994). As the results found in this research show, political connections in each of the three levels lead to an increase in price and thus lead to an increase in the value of the company. Therefore, it can be said that there is a positive relationship between political connections and stock price levels, which will ultimately lead to the creation of value for the company. Such cases strengthen the argument that if political connections are important in determining the price of shares of companies, the value of companies, the survival of companies, their strength and other characteristics of companies; In this

case, it should be systematically reflected in the stock market

The result of testing hypotheses four to six:

Table (4): Hypothesis test results

	Sig.	The first model High level of stock price	The second model Average stock price level	The third model Low stock price level
MPE	coefficient value	1.48	0.06	0.56
	Sig.Level	(0.00)	(0.32)	(0.00)
Size	coefficient value	1.01	1.13	1.30
	Sig.Level	(0.00)	(0.00)	(0.00)
Lev	coefficient value	-0.11	-0.19	-0.001
	Sig.Level	(0.59)	(0.56)	(0.90)
CFO	coefficient value	0.22	0.06	0.69
	Sig.Level	(0.40)	(0.87)	(0.00)
C	coefficient value	-5.26	-7.40	10.21
	Sig.Level	(0.00)	(0.00)	(0.00)
F statistic	coefficient value	32.08	16.46	17.27
	Sig.Level	(0.00)	(0.00)	(0.00)
Adjusted coefficient of determination		0.82	0.70	0.70
Durbin-Watson statistic		1.57	1.72	1.61

The results of model 1 in the above table considering that the variable MPE (monetary policy) has a significant level (0.00). Therefore, there is a positive and significant relationship between monetary policy and the high level of stock prices. Therefore, model 1 is statistically accepted. The variable coefficient of monetary policy (1.48) shows that if the monetary policy increases by 1%, the stock price level will increase by 1.48 %.

The results of model 2 in the above table considering that the variable MPE (monetary policy) has a significant level (0.32). Therefore, there is not a positive and significant relationship between monetary policy and the average level of stock prices. Therefore, model 2 is not accepted statistically.

The results of model 3 in the above table considering that the variable MPE (monetary policy) has a significant level (0.00). Therefore, there is a positive and significant relationship between monetary policy and the low level of stock prices. Therefore, model 3 is statistically accepted. The variable coefficient of monetary policy (1.58) shows that if the monetary policy increases by 1%, the stock price level will increase by 1.58 %.

The results found in the above table show that the effect of monetary policy on the high level of stock prices is more than the low level of stock prices and does not affect the average levels of stock prices. One

of the reasons why the effect of monetary policy on the high level of the stock price is greater than the low level of the stock price can be attributed to the volume of liquidity. Therefore, a sharp increase in liquidity, if other factors are constant, will cause a sharp increase in stock prices and will cause a severe disruption in the allocation of economic resources. Therefore, if liquidity is not controlled, the possibility of transferring it to the stock market by people who do not recognize the difference between market value and intrinsic value will help to form a bubble in the market. According to the results found in this research, we found that the implementation of monetary policy has an effect on the high and low levels of stock prices. So that if the government implements an expansionary monetary policy, there is more available credit and economic activity will flourish. An increase in money supply compared to money demand will lead to a decrease in interest rates, which in turn will lead to an increase in stock prices. The results found indicate that the implementation of expansionary monetary policy when the stock price is at a high level is more effective than when the stock price is at a low level.

7-Discussion and conclusion

Basically, in the history of financial markets, stock markets have always faced speculative ups and downs. The rise and fall of prices is part of the nature of the

market; but sometimes these fluctuations were out of their normal form and gave way to unbridled ascents and sudden falls and inflicted irreparable blows on the stock market. But the important issue here is the abnormal quality and quantity of these changes. The existence of a bubble in the stock price usually affects the price of other assets; even if it does not have the conditions of the bubble. In recent decades, bubbles are a well-known phenomenon in the stock market, but there is no consensus about the mechanism of its occurrence. A bubble is a visible phenomenon in the economy, and economists often use the word bubble for an asset when the price of the asset does not move in the same direction as the fundamental economic factors, and their simplest effect is a severe price deviation from its original path. According to the results found in this research, which show that political communication leads to an increase in stock prices at all three levels and monetary policy leads to an increase in stock prices at the upper and lower levels, it is necessary to look for solutions so that the increase in stock prices does not deviate from its normal form. Therefore, it is suggested to pay special attention to macroeconomic factors because they have a great impact on stock prices and can lead to the formation of a bubble. Another thing that needs attention is micro-economic factors, such as the role of information on shareholder behavior and the impact of shareholder behavior on price changes and finally bursting the bubble.

According to the results found, since political communication has a significant relationship with the stock price level and leads to an increase in the stock price in each of the three levels, therefore, special attention should be paid to the cases that lead to strengthening the effect of political communication on stock price levels. One of these cases is the lower risk of politically connected companies compared to other companies. In such a way that from the perspective of investors, such companies are considered safer options for investment.

As the results of this research also show, another thing that affects stock price levels is monetary policy. The importance of financial markets can be understood by researching the macroeconomic structure of countries. Financial markets occupy an important part of the country's macroeconomics, so that the smallest incident in the economic and political field of the countries immediately has its effect on the financial

markets (Shokooh et al., 2016). Forecasting the trend of stock prices in the future is one of the main concerns of industry and financial market participants. The stock price depends on many factors and many fundamental and technical factors cause stock price fluctuations in the financial markets. One of the important effective factors is the financial and monetary policies of governments. Considering the close relationship between the money market and the financial market, the influence of financial markets on monetary policies is more than financial policies. By knowing the extent and direction of the impact of monetary policies on financial markets, correct and economic decisions can be made in response to these policies in the financial markets as well as in the industry (Li et al., 2015).

Based on the results found in this research, which indicates a significant relationship between monetary policy and high and low levels of stock prices, in order to improve and prosper the country's stock market and increase the degree of confidence of investors to invest more in the stock exchange, it is suggested that the policy makers optimize the portfolio of investors' assets in different economic conditions by applying exchange rate fluctuations and then apply monetary policy and analyze the results. It is also suggested that the policy makers take into account the boom and bust periods of the economy as well as the state of the stock market when planning and making decisions to implement the monetary policy. In this research, we came to the conclusion that monetary policy does not affect the average level of stock prices. Therefore, it is necessary to examine the two-way relationship between monetary policy instruments and the main variables of the stock market in business cycles and then implement monetary policy.

According to the results of this study and the conditions of the stock market and the method of applying monetary policy, when the implementation of monetary policy does not have much effect on stock prices, as the results found in this research also showed (between monetary policy and the average level of stock prices There is no significant relationship), the stock market cannot be a direct agent for transferring the effects of monetary policy. Therefore, in future research, monetary policy makers can pay attention to the importance of the role of markets and financial factors in the transmission mechanism and the intensity of monetary policy's effectiveness. And they

can protect the stock market from instability and apply efficient and effective policies by creating prosperity in economic activities and following the policy of targeting inflation in accordance with the specific requirements and conditions of the country and compatible with the conditions of the monetary policy.

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