

## The effect of the main variable of Money Market on stock price index in Iran

**Zahra Haeri Nasab**

Ph.D. Candidate, Department of Economic, Faculty of Social Science, Razi University, Kermanshah, Iran. (Email: zhairinasab72@gmail.com)

**Kiomars Sohaili\***

\*Corresponding author, Associate Prof., Department of Economic, Faculty of Social Science, Razi University, Kermanshah, Iran. (Email: ksoheili@razi.ac.ir)

### Abstract

The Stock Exchange is a private sector savings and liquidity fund to fund long-term investment projects. The indicators of this market are influenced by several factors, one of which are economic variables. Banks are also one of the most important investors in the financial market. In this study, the effect of exchange rate, bank interest rate, liquidity and inflation rate on stock price index using time series data of 1978-1988 and using equation system model of four equations of the stock price index, inflation rate, profit rate Deposits, and facility interest rates were estimated using the three-stage least squares method. The results showed that the effect of the exchange rate, deposit interest rate and positive liquidity volume and the effect of inflation rate on stock price index was negative. Other equations have been estimated because of the relationship between the bank interest rate and inflation rate, and the results show that both deposit interest rate and facility interest rate have a positive relationship with the inflation rate.

**Keywords:** Stoke Price Index, Three Stage Least Square, Interest Rate, Iran.

## Introduction

By looking at the macroeconomic structure of each country and the various markets in each economy, one can see that one of the most fundamental markets in any economy is the capital market. The securities market is a component of the capital market and is part of the economy as a whole. A securities market is an organized and formal sale of companies' stocks subject to specific rules and regulations. One of the tasks of this market is to help justify the price of securities and speed up transactions. The Stock Exchange is a private sector savings and liquidity center to finance long-term investment projects. It is one of the most important markets of any economy. The indices of each economy are affected by several factors, one of which is macroeconomic variables. On the other hand, banks as one of the most important economic institutions of the country play a key role in advancing economic developments. The claim that economic variables such as inflation, liquidity, exchange rates, etc. are driving and influencing stock price changes is accepted as a theory. However, efforts have been made in the past decade to examine the impact of economic forces theoretically and empirically measure their effects. The dynamic relationship between macroeconomic variables and stock returns has been extensively studied. The basis of this research is based on the theory that stock prices reflect the present value of future cash flows. For this reason, both future cash flows and the expected rate of return are needed. Therefore, economic variables affect both cash flow and expected rate of return, so they can affect stock prices. Banking interest rate is one of the variables used in the research. The interest rate on bank facilities is a function of the rate of interest on deposits and the rate of interest on deposits. Reducing bank interest rates can lead to economic prosperity by lowering the rate of lending facilities to productive banks. A dramatic reduction in the interest rate on deposits, if it leads to a reduction in the flow of resources into the banking system, could lead to a more difficult supply of manufacturing facilities. On the other hand, with the decrease in the rate of interest on deposits, we should expect the increase in the volume of liquidity in the country, and with this increase in the volume of liquidity, the general level of prices and inflation will increase. Continued rising general price levels or a steady decline in money purchasing power are among the most pressing economic problems. With the rise of severe inflationary pressures, price stabilization has become a major focus of economists' interest in economic policy. Besides, developing countries' efforts to achieve higher growth rates over the past decades have generally been accompanied by high inflation rates.

On the other hand, the effect of exchange rate fluctuations is one of the most important determinants of the price of raw materials, intermediate goods, capital equipment and final goods, and given the high dependence of production and consumption on imports, it appears to be forming Inflationary pressures are effective Currency fluctuations have increasingly emerged as key and influential factors in economic policy, and the effect of fluctuations on inflation has become a mainstream economic debate (Piraei, 2002).

On the other hand, the interest rate of banking facilities has a great impact on the inflation index. Increasing the cost of banking facilities increases the cost of using capital, which leads to higher production costs. With rising production costs, the total supply curve shifts to the left, thereby increasing inflation (Jefreh, 2012).

The purpose of this study is to investigate the effect of macroeconomic and banking variables on the stock price index. In the second part of the article, the theoretical foundations of the subject are explained. The third part of the article explores the empirical literature of the subject at home and abroad. In the fourth section, the model will be defined and the research variables introduced. In the fifth part, the equations of the variables are estimated using the simultaneous equation system model. The paper concludes with policy recommendations.

## **Theoretical Basic**

In this study, we consider portfolio factors and Fischer's basic theory by considering economic factors to investigate the relationship between the stock price index and macroeconomic variables.

### **1-1. Portfolio Theory**

A portfolio is a portfolio held by investors with a variety of different combinations of financial assets. Portfolio theory represents the selection of an effective portfolio of assets to affect the portfolio. Some financial assets such as bank deposits have fixed and risk-free returns and others like stocks and currencies etc. have uncertain and risky returns. Since individuals hold various combinations of cash, stocks, bank deposits, bonds, gold and currency in their financial assets. Changes in the volume of money, exchange rates, bank interest rates, and inflation rates affect the demand for each of these components, including demand for stocks, which in turn affects stock prices.

## 2-1. Fisher Theory

The basic Fischer equation states that the real interest rate is the difference between the nominal interest rate and the inflation rate, so that:

$$R_t^r = R_t^n - INF$$

$R_t^r$ : Real interest rate

$R_t^n$ : Nominal interest rate

INF: Inflation Rate

Fisher also states a relationship for stock returns, such that

$$R_t^r = R_t^n - INF$$

Wherein:

$R_t^r$ : Real stock return rate

$R_t^n$ : Relative stock returns

In 1981, Fama states that in the Fisher equation some macroeconomic variables, such as liquidity and interest rates, are ignored. Fama uses the money market equilibrium to corroborate its claim concerning the money market and the stock market. Such is the balance of the money market.

$$M_t/P_t = M(Y_t, R_t)$$

$M_t$ : Liquidity in the economy (banknotes and coins in the hands of individuals and long-term deposits and deposits),

$P_t$ : The general level of prices

$Y_t$ : National income

$R_t$ : Interest rate

So Fama introduces the following money demand:

$$\ln(M_t/P_t) = a \ln Y_t - b \ln R_t$$

Fama offers equations for stock prices:

$$\ln R_s = \beta_0 + \beta_1 \ln Y_t + \beta_2 R_t + \beta_3 \ln M_t + \beta_4 P_t + U_t$$

As noted in Fisher's theory and the Fama adjustments, the relationship between variables such as inflation, interest rates and stock prices are expressed (Ebrahimi, 2012).

## 2. Exchange rate effect on the stock price index

Currency exchange rates in developing countries are one of the economic variables affecting the stock price index. Whereas companies and institutions in these countries mainly meet their needs as imports from developed countries. Therefore, exchange rate changes are considered as one of the most important factors affecting debt settlement. Increasing the exchange rate, on the one hand, increases the amount of foreign debt and on the other hand, increases the expense of the products and services provided by these companies. Given that the increase in corporate debt leads to liquidity shortages and the liquidity shortages of firms have a negative effect on profit distribution, stock returns and price indices. As well as an increase in the cost of manufactured products, there is a decline in the company's profit margin, a decline in stock prices and returns, and consequently a stock price index. According to economic theories, there is a bilateral relationship between stock prices and the exchange rate. The effect of exchange rate changes on stock prices can be examined from both the traditional and portfolio approaches. Stock prices, in turn, affect the exchange rate; Exchange rate changes can have two different effects on stock prices. On the one hand, the increase in the exchange rate leads to an increase in the profits of exporting companies and, consequently, to an increase in their stock prices, and on the other, to a decrease in the profits of importing intermediary firms and a decrease in their stock prices. Can (Abouoori, 2007). Theoretical models such as empirical evidence are mixed with predictions of the facts and the causal relationship between the foreign exchange market and the stock market. In general, models regarding the relationship of these two variables are classified into two groups: models with exchange rate orientation and models with stock orientation. Models of exchange rate orientation assume that exchange rates affect the export competitiveness of domestic firms, which ultimately affect trade and production equilibrium. Stock prices are reduced by the present value of future cash flows. Because of this, the exchange rate directly affects stock prices. Finally, there is a relationship between the price of the currency and the price of the stock. The model focuses on cash accounts in determining exchange rates, with more stock price orientation. These models include portfolio models and monetary models. Portfolio models assume that capitalists hold foreign and domestic assets for a variety of purposes. The causal chain of stock prices to exchange rates in portfolio models can be explained by the following trends:

Exogenous increases in domestic asset prices increase demand for domestic assets and often sell foreign assets, thereby strengthening local currency. In other words, the price of domestic assets can change the exchange

rate, when the price of domestic assets increases, it increases wealth and demand for money. More money demand raises domestic interest rates, which in turn attracts more foreign capital. The inflow of foreign capital inwardly strengthens domestic money. The foregoing arguments suggest that the share price is negatively affecting the exchange rate (Subayyal, 2011).

### **3. The effect of liquidity volume on the stock price index**

There are different theories about the relationship between liquidity and stock prices. The volume of money as a macroeconomic variable can have a significant impact on the interest rate and the general level of prices in the money market. But since there is no interest rate in Iran and interest rates are also set by the central bank, changes in the price level can be considered. For example, an increase in the volume of money leads to an increase in the general level of market prices. Also, if an increase in the volume of money results from a government deficit, it can have a negative impact on stock prices. As a result, money supply volatility can affect positive or negative changes in the price index. Increasing Money and Liquidity in Iran Many economists say at least the psychological impact of the stock market is negative (Eslamloueyan, 2007).

According to the monetary theory of inflation, a continuous increase in liquidity at a rate more than the multiplication of real income growth rate and the cash pull demand for money is a necessary and sufficient condition for continuous inflation. On the other hand, some believe that increased liquidity could increase demand for investments, including equities, Therefore, the relationship between liquidity and indicators should be positive. This hypothesis can be put forward when the growth of liquidity causes the expansion of investment and production activities. Given that the economic infrastructure in Iran is insufficient and appropriate to attract investment in manufacturing sectors, most of the liquidity is spent on speculative activities rather than just on production. Therefore, increasing the volume of liquidity mainly results in increased demand and current costs. Because research in monetary theory in Iran has also shown that increasing liquidity in society is not accompanied by an increase in GDP and is a factor that exacerbates inflation. The relationship between the liquidity growth rate and the stock market indices seems to be negative (Sajadi, 2010).

### **4. The effect of bank interest rate on stock price**

Investors are looking for an efficient portfolio of investments, so they fill their portfolio with a variety of components such as cash, stocks, bank deposits, and bonds and so on. Given the experience gained from the results, the return on

investment in the Iranian stock market and its riskiness, investors do not consider the return on investment in the stock market sufficiently risky. On the other hand, the existence of risk-free long-term bank deposit interest rates in Iran makes this macroeconomic variable a competitor for equity investment. In order to actualize the bank deposit interest rate, the inflation rate is deducted from the nominal bank deposit rate. Hence, the increase in real bank interest rate is expected to be negatively correlated with the stock price growth rate.

### **5. Effect of Inflation Rate on Stock Price Index**

Inflation has long been considered as one of the most important economic variables affecting stock prices. The relationship between inflation and stock returns is a controversial topic among scholars. Market equilibrium is not based on face values and investors consider inflation as one of the most important macroeconomic variables influencing the decision on an investment. It is stated that the actual return on a stock is equal to the difference of the return on the share based on the face value of inflation during the investment period.

If inflation is well predictable, investors simply add the percentage to their expected return and the market reaches equilibrium. In inflationary terms, the average nominal profits of companies increase after a period of time the profitability has not increased but nominal profits have increased due to inflation. As the nominal gain increases, the nominal share price will also increase. The other effect of inflation is that it reduces the intrinsic value of each share. In the years when inflation is high, the quality of real corporate profits declines. In addition, inflationary conditions reduce purchasing power. Increasing the cost of living will be such that the investment and savings opportunities are taken away and the incomes spend more on current expenses. On the other hand, a decrease in investment leads to a decrease in the demand for an investment in the stock market and consequently a decrease in the stock index.

### **Review of the research literature**

Saeed and Akhtar (2012), in an article entitled *The Impact of Macroeconomic Variables on Banks Stock Indexes in Pakistan, Using Seasonal Data 2000-2010 and Conventional Least Squares Method*, concluded that the exchange rate, Long-term interest rates and oil prices had a positive and significant effect on this index, and money supply and short-term interest rates and industrial outputs had a negative effect.

Menager et al. (2012), in an article entitled *Long-Term Relationship*

between Stock Price Index and Monetary Variables in Pakistan 2001-2007 Using the Granger Test, obtain the results that cointegrate vector and long-term relationship between There are no stock price indices and monetary variables.

Raymond (2009), in an article entitled Long-Term Relationship between Stock Price Index and Monetary Variables in Jamaica Using Vector Error Correction Method during 1990-2009 .Based on the long run results, there is a long-run relationship between the Jamaica stock price index and the monetary variables. According to the findings of this study, the stock price index is positively correlated with inflation and volume of liquidity and negatively with the exchange rate and interest rate.

Evanidiz and Contanikas (2007) discussed in an article the effect of monetary policy on stock returns using the single-equation and vector autoregressive methods for 13 member countries of the Organization for Economic Cooperation and Development over the 30 years 1972-2002. In general, the results of monetary policy changes have a significant effect on stock returns based on the results. This conclusion confirms the mechanism of monetary policy transfer through the stock market.

Hamp and McMillan (2006) have shown in the paper the effect of macroeconomic variables on long-term movements in the stock market. To achieve this goal, they provided a coherent analysis explaining the factors influencing the long-term movements between the US and Japanese stock markets for the period 1960–2004. The results show a positive relationship between industrial production, consumer price index and short-term interest rate in the stock market and a negative relationship between the long-term interest rate and the stock market.

Kurihara (2006), in an article entitled The Relationship between Macroeconomic Variables and Stock Prices for the Japanese Economy Using Data from 2001 to 2005. The results of his research show that the domestic interest rate has no effect on the Japanese stock price. The results also show that the US exchange rate and the stock price are the factors influencing the Japanese stock price.

Puytras (2004), in an article entitled The Impact of Macroeconomic Variables on US Stock Prices. The major variables used by him are consumer price index, producer price index, US trade balance for goods and services, unemployment rate, total non-agricultural employment, money supply. Estimation results for the years 1980-1988 indicate that, in general, predictor variables do not have significant explanatory power for changes in the stock price index the above variables, except for the discount rate, have little power



to explain changes in the stock price index.

Ebrahimi and Shokri (2011), in an article entitled *The Impact of Macroeconomic Variables on Stock Price, Emphasizing on the Role of Monetary Policy Using Structural Vector Auto Regression*. For this purpose, the seasonal data of 1999-2007 have been used and the effects of liquidity, oil price, GDP, inflation and exchange rate variables have been studied. The results of this study indicate that stock prices in Iran are more affected by the general economic conditions such as oil prices and the status of competing assets. The reasons for this are the small effect of monetary policy in justifying stock price index changes, the reliance of the financial sector on the bank, the lack of public awareness of the capital market and the lack of securities diversification as well as the inactivity of the interest rate channel.

Mousaei (2010), in an article entitled *Coexistence and causality between macroeconomic variables and stock price index*, for this purpose the seasonal data of total stock price index and a set of macroeconomic variables including money supply, GDP, exchange rate, and also used the Granger and Parasite approach, and the error correction model. The results show that in the estimated models there is a long-run relationship between the variables in the model and the total stock price index. According to the Granger causality test of the total stock price index, it has no significant effect on GDP, while macro variables affect the boom or the recession of the stock market.

Abbassian (2008), in an article entitled *The Impact of Macroeconomic Variables and Alternative Assets on the Tehran Stock Exchange Index*. In this study, the effect of macroeconomic variables such as exchange rate, trade balance, inflation, liquidity and interest rate on the total stock index in the years 1377-1777 was studied with seasonal data. The method used in this study is the cointegration method, and error correction models and implicit reaction functions and variance analysis. The results show the positive effect of the long-term exchange rate and trade balance on the stock exchange and the negative effect of inflation, liquidity and interest rates.

### **Introducing Research Methodology and Databases**

In this study, all the data used for the central bank time series are collected. The research period is from 1977 to 1978. The research variables including the stock price index (total) of the short-term deposit interest rate and the inflation rate have also used the index of the price of public goods and services, the free market exchange rate. The volume of liquidity is another variable in the research that is equal to the sum of money and quasi-money that comes from

the sum of banknotes and coins in the hands of people plus sight deposits plus non-sight deposits (long-term). Collected from the central bank, Another variable is the interest rate of the facility, which is used as the average rate of interest on the five sectors of export, trade and services, housing and construction, industry and mining and agriculture.

### Simultaneous equations System

In most applied studies, the models used are merely an equation. These models have one dependent or endogenous variable (Y) and one or more explanatory variables (X), in which the causality is from X to Y. On the other hand, one of the assumptions of the classical model is that the explanatory variables are non-random or exogenous. But in such cases, such conditions may not exist and an endogenous variable may be a function of other endogenous variables that need to introduce another equation. So instead of an equation, we face a system of equations.

For example, suppose that the relation  $Y_1$  and  $Y_2$  are:

$$Y_{1t} = \alpha_1 + \beta_1 x_t + \gamma_1 Y_{2t} + U_t \quad (1)$$

$$Y_{2t} = \alpha_2 + \beta_2 x_t + \gamma_2 Y_{1t} + U_{2t} \quad (2)$$

The relation  $Y_1$  and  $Y_2$  is a two-way relation. An important feature of the above equation system is that these two variables appear as explanatory variables in addition to being dependent variables. This means that  $Y_1$  and  $Y_2$ , which is a function of  $u$ , respectively, are random variables that appear as explanatory variables. On the other hand, in the first equation,  $y_2$  is a function of  $u_1$ , which means that another classical assumption is violated, because according to the second equation,  $y_2$  is a function of  $y_1$ , where  $y_1$  is also a function of  $u_1$  according to the first equation. So if  $u_1$  changes, then  $y_1$  will change  $y_2$ . Thus, OLS estimators will be scarce and incompatible. There are two methods for estimating the system of simultaneous equations: the single equation method and system method.

There are two methods for estimating the system of simultaneous equations: the single equation method and system method. Single equation methods include OLS method, ILS method, IV method, 2SLS method and FILM method.

Systematic methods include:

Three-stage least squares and full information maximization method. In single-equation methods, each equation is estimated only by the constraints of the equation in question and without the constraints of the other equations. But in systematic methods, all the information in the equation system is used to estimate the coefficient (Souri, 2016).

In this study, the three-stage least squares estimation method was used. Single equation methods are compatible but not asymptotic. That is, by increasing the sample size, their bias and variance tend to zero, So they are compatible, But because they do not have the least variance, they do not work. The reason for their asymptotic inefficiency is to ignore the correlation of the error equations of the equations

According to the theoretical foundations presented in the research the system of simultaneous equations consists of 4 equations as follows

$$BS=C(1)+C(2)EXR+C(3)INF+C(4)IRD+C(5)M2+\varepsilon_0 \quad (3)$$

$$INF=C(6)+C(7)M2+C(8)EXR+C(9)IRF+\varepsilon_0 \quad (4)$$

$$IRD=C(10)+C(11)INF+\varepsilon_0 \quad (5)$$

$$IRF=C(12)+C(13)INF+\varepsilon_0 \quad (6)$$

The first equation relates to the most important research variable, namely the stock price index, which relates to the exchange rate, inflation rate, bank interest rate, and volume of liquidity according to the theoretical foundations presented in the second part of the study, And we are going to measure the impact of these variables on the total stock price index.

The second equation relates to the inflation rate, which is theoretically related to the interest rate of the facility and the exchange rate and the volume of liquidity. The third equation is the interest rate on the deposit, which is obviously related to the inflation rate. And the last equation is the equilibrium interest rate bank transaction that is mutually related to the inflation rate.

The above equation system is estimated simultaneously with the three-stage least squares method. In the equation method, good regression fitting criteria (coefficient of determination, f, standard error, etc.) are not widely used.

### Unit Root Test

The time series of the variables used in the study (1978-2018) was tested

by the generalized Dickey-Fuller (ADF) test. The results of this test are presented at the 0.05 level in Table 1:

Table 1. Results of the ADF test at the data level

Test result	ADF statistic	Critical value	Variable
stationary	3.56	6.96	BS
non-stationary	3.54	1.17	EXR
stationary	3.52	4.30	INF
stationary	3.55	11.6	M2
non-stationary	3.52	2.80	IRD
non-stationary	3.52	1.6	INF

According to the results, it is clear that the three variables of the exchange rate, deposit interest rate, and interest rate of the facility have become unmanageable. We perform the generalized Dickey-Fuller test with a one-time differential. As we can see, these variables were mana-discriminated once.

Table 2. Results from ADF with a first-order difference

Test result	ADF statistic	Critical value	Variable
stationary	6.54	4.24	EXR
stationary	3.53	5.08	IRD
stationary	3.52	6.29	IRF

**Johansen & Juselius co-integration test**

It is worth noting that the use of variable variables causes the loss of information about the main values of variables. To solve this problem we come up with a coincidence. Therefore, the Johansson-Juselius co-integration model is used to investigate the co-integration of the model. The assumption of zero means that there is no coincidence According to the results of this test, co-integration is confirmed at 0.05 level. Hence the null assumption that the coincidence is non-cumulative is rejected.

Table 3. zivot Andrews test for variable

Critical value 0.05	t-statics	Variable
-4.93	-1.83	BS
-4.93	10.80	EXR
-4.93	-4.82	INF
-4.93	-3.13	M2
-4.93	-5.54	IRD
-4.93	-3.12	INF

As shown in the table in all variables except interest rates on bank deposits Failure to reject the null hypothesis of the zivot Andrews test for the existence of a single root may be due to a failure in the process.

Table 4. The results of the Johansen & Juselius cointegration test

Maximum Eigenvalue test	Effect test	Relationship
17.1 (0.00)	25.6 (0.00)	No relationship
2.5 (0.02)	8.4 (0.04)	A maximum of one relationship
2.8 (0.52)	2.88 (0.58)	A maximum of Two relationship

### Model Estimation Results and Research Findings

Model Estimation Results and Research Findin .Because the estimation is done using Huber white in Eviews 9 software and with this option, we no longer need to report autopsy.

The results of the estimation of the system of simultaneous equations in the study by 3SLS method are as follows:

Table 5. Results of Equation One: Stock Price Index as Independent Variable

prob	t-statistic	Standard deviation	coefficients	Variable
0.03	-2.17	14545.8	-31701.67	intercept
0.05	1.71	3.2441	5.56	exchange rate
0.74	-0.32	289.8	-95.50	Inflation
0.10	1.653	2918.2	4824.8	Deposit Interest rate
0.84	0.19	0.0019	0.0003	liquidity level

The results of the third equation show that the intercept in this equation is Negative and significant. This means that if the explanatory variables of the stock price index are included, they have a negative value. The coefficient of the exchange rate has been positive and significant, indicating a positive and significant effect of the exchange rate on the stock price index. The value of the exchange rate coefficient is 5.56, which means that with an increase in the exchange rate, the stock price index is 5.56 which, contrary to the theory presented in the exchange rate, has a positive effect on the stock price index during this time. His forty years old inflation rate coefficient is negative

indicating a negative impact of inflation rate on the stock price index, with a 1% increase in the stock price inflation rate to -95.5 which is consistent with the theory stated in the research. The third variable is the bank deposit interest rate which indicates the positive effect of this variable on the stock price index, meaning that with a 1% increase in the bank interest rate, the stock price index is 4524.8. This result also differs from the theory presented in the research, although obviously, the results from different research years are different from the research carried out, and because of the grammatical interest rate in Iran, this result is different. Another variable is the liquidity level. The effect of the volume of liquidity on the stock price index has been positive, meaning that with the increase of one billion riyals in liquidity, the stock price index is 0.0003.

Table 6. The second equation results: Inflation rate as a dependent variable

prob	t-statistic	Standard deviation	coefficients	Variable
0.26	-1.12	21.22	-23.94	intercept
0.17	1.36	3.13	4.28	liquidity level
0.00	3.17	0.00	0.02	exchange rate
0.00	2.70	1.76	4.76	Facility Interest rate

The results of the estimation of the second equation show that the intercept is negative. That is, if the explanatory variables are included, the inflation rate is negative. The positive liquidity volume coefficient indicates a positive effect of the liquidity volume on the inflation rate, indicating that with the increase of one billion riyals in the volume of liquidity, the inflation rate will rise by 4.28%. Another variable is the exchange rate which has a positive and significant coefficient. The coefficient is 0.02 which indicates that by increasing one unit (rial) in the exchange rate, the inflation rate will increase by 0.02%. Facility interest rate also has a positive and significant relationship with inflation. The rate of interest rate coefficient is 4.76, which indicates that inflation increases by 4.76 per cent with a 1 per cent increase in the rate of the interest rate.

Table 7. The results of Equation 3: The interest rate on bank deposit as a dependent variable

Prob	t-statistic	Standard deviation	coefficients	Variable
0.00	10.06	0.80	8.08	intercept
0.98	0.014	0.38	0.0005	Inflation Rate

The results of the estimation of this equation also show that the intercept has been positive and significant, meaning that if the explanatory variable is involved, the interest rate on the deposit has a positive value. The coefficient of inflation has been positive, which indicates that the relationship between the rate of interest on deposits and the rate of positive inflation has been obvious. This coefficient is set at 0.0005, indicating that a 1% increase in the inflation rate will increase the deposit interest rate to 0.0005.

Table 8. Results of Equation Four: Facility Interest Rate as Dependent Variable

Prob	t-statistic	Standard deviation	coefficients	Variable
0.00	9.31	1.42	13.34	intercept
0.77	0.28	0.69	0.019	Inflation Rate

## Conclusion and suggestions

Given the importance of the financial markets and hence the most important pillar of this market, the Stock Exchange is important, and on the other hand, the importance of banks as one of the most important centers of saving and lending. In this study, the relationship between a number of macroeconomic variables including exchange rate, inflation rate, liquidity volume, bank deposit interest rate and total stock price index was investigated. For this purpose, the relationship between these variables and the stock price index (total) was estimated using the simultaneous equation system model and the three-stage least squares method. Due to the negative impact of inflation on stock prices and since inflation in the Iranian economy has been deeply rooted in inflation, the current inflation has been caused by an increase in the volume of money. Therefore, it is recommended to pay sufficient and thoughtful attention to the expansionary monetary policy and the injection of money into the economy. Given the positive effect of bank deposit interest rate on stock price index, and considering that in our country bank interest rate is set grammatically, it is suggested to measure all aspects including impact on the stock market. And make the necessary decisions and policies.

## References

Ebrahimi, Mohsen and Shokri, Nooshin (2011). Investigating the Impact of Macroeconomic Variables on Stock Price with Emphasis on the Role of Monetary Policy, *Journal of Economic Modeling*, No. 1, Page23-45.

Abounouri, Esmail (2006). The Effect of Macroeconomic Indicators on Petrochemical Stock Price Index in Iran Using ARDL Model, *Journal of Economic Research*, No. 21, Page17-46.

Eslamlouyian, Karim and Zare, Hashem (2006). Investigating the Impact of Macroeconomic Variables and Alternative Assets on Stock Prices in Iran, A Self-Reliant Model with Distributed Lags, *Iranian Journal of Economic Research*, No. 29, Page17-45.

Piraii, Khosro (2009). The Impact of Macroeconomic Variables on the Iranian Stock Exchange, *Journal of Economic Research*, No. 21, Page21-38.

Jafara, Manouchehr, Dashgarzadeh & Aqabae, (2012). Investigating the Rate of Interest Rate Reduction in Banking Facilities and Its Role in Inflation Index, *Bahada Bonds Journal*, No 2.

Sajjadi, Seyed Hossein and Farazmand, Hassan (2010). Investigating the Relationship between Macroeconomic Variables and Cash Returns Index in Tehran Stock Exchange, *Journal of Economic Sciences*, No. 39, Page123-150.

Souri, Ali (2013), *Econometrics*; Volume 2.

Abbassian, Ezatollah, Moradpour Oladi, Mehdi (2008). The Effect of Macroeconomic Variables on the Tehran Stock Exchange Total Index, *Iranian Journal of Economic Research*, No. 36, Page15-35.

Mousaei, Meysam, Nader Mehregan, (2010). Relationship between Stock Market and Macroeconomic Variables, *Journal of Economic Research and Policies*, Page 73-93.

Dornbusch, R., Fisher S. (1980) & Aggarwal (1981). Exchange Rates and the Current Account. *American Economic Review*, No. 70, PP. 960–97.

Subayyal, M. & A. Shah (2011). The Co Integration between Exchange Rates and Stock Prices in Highly Volatile Markets: Evidence from Pakistan, *Middle Eastern Finance and Economics Issue*, No. 15, PP.156-163.

Kurihara, Y. (2006). The Relationship between Exchange Rate and Stock Prices during the Quantitative Easing Policy in Japan, *International Journal of Business*, Vol. 11, No. 4, PP. 375-



Humpe, A. & P. Macmillan (2006). Can Macroeconomic Variables Explain Long Term Stock Market Movement? A Comparison of the US and Japan, *Boom Empirical Appreciate Co Integration*, Working Paper

Raymond, K. (2009). Is There a Lang Run Relation Ship between Stock Prices and Monetary Variables?, Evidence from Jamica

Ioanidis, CH., A. Kontonikas (2007). The Impact of Monetary Policy on Stock Prices. *Journal of Policy Modeling*, No. 28, PP. 6-15.

Poitras, M. (2004). The Impact of Macroeconomic Announcements on Stock Price: In Search of State Dependence. *Southern Economic Journal*, Vol. 70, No. 3, PP. 549-565.

---

**Bibliographic information of this paper for citing:**

Haeri Nasab, Zahra & Sohaili, Kiomars (2019). The effect of the main variable of Money Market on stock price index in Iran. *Iranian Journal of Finance*, 3(2), 88-104.

---

Copyright © 2019, Zahra Haeri Nasab and Kiomars Sohaili

پژوهشگاه علوم انسانی و مطالعات فرهنگی  
پرتال جامع علوم انسانی