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Examining the Relationship between Inflation Rate, Industrial Products, Trade Balance, and Oil Income with Stock Market

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ABSTRACT

Background :Economic stability is grouped into one of the most crucial and influential factors in any country's investment **Objective** :The current research aims to examine the relationship between macroeconomics variables (inflation rate, industrial products, trade balance, and oil income) and stock market return in Tehran stock exchange. Macroeconomics variables have been used as independent variables and also, dependent variable is stock market return. The methodology is correlative in terms of studies, and descriptive in terms of method, and applied in terms of goal. The time period starts from 2001 to 2010. To analyze data, econometrics and Regression, value determining test of Regression, Expanded Dickey Foulter, Phillips Prone, and Dourbin Watson statistic, and self-Axis Regression (VAR) have been implemented to test the research hypotheses. **Results** :The research findings indicate the relationship between independent variables including: inflation rate, industrial products, trade balance, and oil income and dependent variable which is stock market return. **Conclusion** :All hypotheses of the research have been proved at the 99% confidence level.

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INTRODUCTION

Economic stability is grouped into one of the most crucial and influential factors in any country's investment, and also plays an important role in capital markets and investment volume in these markets. Macroeconomics variables and their fluctuations affect stock market return. During the economic flourishing with relative stable prices, there are three different groups of savers, investors, and the people dealing with money and stock exchange, and these groups of people treat based on various motivations, manufacturing investors follow their natural trend, and investors invest for constructing factory, purchasing product equipment, and increasing stock, therefore, economic capacity increases, and it leads to increase in economic efficiency (Tafazolli, 1999).

As firms and manufacturing institutes play an important role in any country economic flourishing, recognizing factors and causes of its advancement is of high importance. Examining macroeconomics variables are among these factors. Growth and development is due to more investment, and commercial units need to be supported financially to reach this objective (Afshar, Nikbakht).

Regarding the fact that in majority of the countries, evidence shows that there is a relationship between macroeconomics variables and stock market return. In this research, we are going to investigate this issue in Tehran stock exchange market. Then theoretical considerations and review of the literature will be presented, and finally analysis of regression models are inserted.

Theoretical considerations and review of literature:

Inflation:

It means a situation or condition in which prices are constantly increasing, in a way that if prices are not controlled, they will increase tightly. The countries encountering inflation, usually try to control prices by passing some laws to stop increasing inflation to some extent.

Industrial products:

Industry means something is made by human's hand or thought, and is not deriving from nature. Industry, generally speaking, means applying human's creativity in natural resources and preparing them for human use.

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Industry, in particular, as opposed to agriculture and services, is considered to be a part of society whole economy. Industrial products growth particularly in macro level, led to decreasing production cost and price, and as long as extra value of industry is high in total national economy extra value, then inflation is more likely to be ceased. Besides, industrial growth helps efficient using human resources with high productivity, capital, industrial machinery and equipment increase, and stops inflation speed. When standard price of domestic industrial products falls, importing similar products with competitive price is more likely to happen and import inflation rate increases too. In addition, industrial growth with suitable interest rate and advancement in export growth, cash flow in society is directed toward investment in production, and in middle run helps stop inflation speed in national economy. Industry has been deemed as not only a method of production but also as the only path of growth in societies (Viky, 2011).

Oil income:

Ideal raw oil should have special features. Of course, criteria change according to the atmosphere of the market. It is ideal that a high quality oil moves freely in market and reaches to the final market of consumption. As a conclusion, it competes with other oils. Trade freedom ensures that oils which have geographical or quality limitations lose their chances to be ideal. Being accessible is vital for a kind of oil and it should be controlled by a producer's policies or decisions. Therefore, the number of ideal oil producers sets the ground for competitive prices.

Producing ideal oil should be increased and has less sensitivity and attention among sellers and buyers. In addition it should not have abnormal features, and wide financial rules and uncertain rules should not be applied in it. Besides, ideal oil should have capacity of shipping in huge ships so that it can be transported in various areas easily (Energy Economy Journal, vol 35-36).

Trade balance:

It is a part of payment balances which is obtained from the difference between imports and exports. Exporting goods is listed in credit accounts by receiving foreign currency, in contrast, importing goods leads to paying foreign currency and is listed in debit accounts. The balance in this part is considered to be visible trade balance. As trade with world has a direct relationship with economic growth, decreasing commerce shows weak point, and increasing commerce shows the strength point of government (Daneshvar, 2010).

Stock return:

Investors seek to maximize their capital. They look for the stock they think is the best and always tend to keep this type. On the other hand, they believe that high risk should be accepted to reach higher return. Investment return rate in normal stock in one period is obtained by dividing sum of dividend of each stock and normal stock price change to stock price in the beginning of the period. This return rate shows change percent in normal stock holders capital in one period.

$$R_t = \frac{P_t - P_{t-1} + DPS}{P_{t-1}}$$

DPS: cash interest of each stage

Pt: current time stock price

Pt-1: previous stage stock price or (t-1)

Rt: stock return

The review of the literature

Soheil and Hasan (2011) did a research entitled macroeconomics variables and stock return in their methodology. Yohanson model and VECM model have been used in Pakistan stock exchange statistical population. The results show that inflation and gross domestic product and foreign currency rate have a positive effect on stock market index. And cash volume and store statement rate for three months have a negative effect on stock return. The results of different analyses show that among macroeconomic variables, more inflation shows prediction mistake difference.

Bayazid Ali (2011) conducted a research entitled macroeconomic variables' effect on stock market return. The methodology consists of OLS model, and Granger causality model from 1996 to 2010 in Bangladesh stock exchange. Regression coefficient shows that inflation and paying currency has negative effect. Industrial products and average growth of monthly percent has a positive effect on capital market stock return.

Aljafari and Mohammad Salame (2011) did a research entitled examining the relationship between stock market return and macroeconomic variables. The methodology consisted of Granger causality model and Panel pedroni tests have been used in the time period of 2002 to 2008 in the appeared and developed markets. The results show that there is an important causality relationship between macroeconomics variables except interest rate and cash volume for appeared and developed market stock price, in addition, there is an important causality

relationship between stock prices and macroeconomics variables for appeared and developed markets except foreign currency rate and cash volume for developed markets. The findings indicate that there is long-run relationship true economy activities level and stock price for developed markets. Besides, the results show that there is a relationship between macroeconomics variables and stock return is more stable in stable markets than developed markets.

Adam and Tweneboah (2005) conducted a research entitled macroeconomics variables and stock market movement. In this research, Jomanson and new accounting procedures have been used from 1991 to 2006 in Ghana. They showed that there is consistency between macroeconomics variables and stock prices in Ghana. The results of the function show that interest rate and foreign direct investment is the key to stock prices movement in Ghana.

Kandir (2008) did a research named macroeconomics variables and firms features and stock return. Granger causality model has been used from 1997 to 2005 in Turkey stock exchange. The experimental findings show that foreign currency rate and interest rate and global market return affect portfolio return, while inflation is significant for three of twelve portfolios. On the other hand, industrial products, cash volume, raw oil price have a remarkable effect on stock return.

Gan and Lee (2005) did a research entitled macroeconomics variables and stock market interaction. In this research, granger causality model, Johanson have been used from 1990 to 2003 in Newsland stock exchange. The results show that Newsland stock market has been determined compatible with interest rate, cash volume, and gross domestic product that there is no evidence that Newsland stock index is a scale for changes in macroeconomics variables.

Maysami and hwe (2004) conducted an investigation entitled macroeconomics variables and stock market index. In this research, Angel-Granger and Johanson test have been used in Singapore stock exchange. The results show that Singapore's stock market and assets index has a relationship with industrial products interest rate, cash volume.

Methodology:

The present research is applied in terms of goal, causative in terms of method. After developing hypotheses, experts collected data relevant to the research variables. Finally, by the software of econometrics..... these hypotheses have been tested. And also, the procedure to analyze data is VAR. Statistic population contains all firms accepted in Tehran stock exchange, and samples have been selected by omission method. The time period starts from 2001 to 2011.

Data coollection procedure:

In the current research, to collect data, field procedure is used. To do so, through refering to informational data in central bank of Islamic Republic of Iran and also Iran center of Statistics and stock exchange, data has been collected.

Table 1: ADF test of data in time series of 2001 to 2010.

Null Hypothesis: Unit root (individual unit root process)				
Date: 07/18/12 Time: 17:45				
Sample: 1380 1389				
Series: inflation, rate of excahnge money, industrial production, cashevolom, interest of rete, balance state ment, oil income				
Exogenous variables: Individual effects				
Automatic selection of maximum lags				
Automatic selection of lags based on SIC: 0 to 1				
Total number of observations: 20				
Cross-sections included: 3				
Method	Prob.**	Statistic		
ADF - Fisher Chi-square	-2.214553311	-3.17895500		
ADF - Choi Z-stat	-2.751880558	-1.84554541		
** Probabilities for Fisher tests are computed using an asymptotic Chi -square distribution. All other tests assume asymptotic normality.				
Intermediate ADF test results UNTITLED				
Series	Prob	Lag	Max Lag	Obs
inflation	0.00000	1	1	7
industrial production	0.00000	1	1	7
balance state ment	0.00000	1	1	7
oil income	0.00000	1	1	7

Resreach hypotheses:

1. There is a relationship between inflation rate and stock market return.
2. There is a relationship between industrial products and stock market return.

3. There is a relationship between oil income and stock market return.
4. There is a relationship between trade balance and stock market return.

The research findings:

Unit root test and stationarity of model variables:

To test variables stationarity, Advanced Dickey Foulmer and Phillips Prone has been used which is the most applicable tests to test data stationarity. As usual, using prices logarithm differences causes omission of stationarity effects and unit root from time series (Keshavarz haddad, Babaei, 2008, p:1-87). Therefore, H0 and H1 are presented as follows. In this method, three crisis values in levels 1, 5, 10 percent are considered, and H0 is rejected and series is static.

H0: The given variable has unit root. (lack of variable stationarity)

H0: The given variable has no unit root. (variable stationarity)

Table 2: Data Philips Prone test in time series 2001 to 2010.

Null Hypothesis: Unit root (individual unit root process)			
Date: 07/18/12 Time: 18:44			
Sample: 1380 1389			
Series: inflation, rate of excahnge money, industrial production, cashevulum, interest of rete, balance state ment, oil income			
Exogenous variables: Individual effects			
Newey-West bandwidth selection using Bartlett kernel			
Total (balanced) observations: 21			
Cross-sections included: 3			
Method	Statistic	Prob.	
PP - Fisher Chi-square	- 3.6451201	0.00000	
PP - Choi Z-stat	-3.542155	0.00000	
** Probabilities for Fisher tests are computed using an asymptotic Chi-square distribution. All other tests assume asymptotic normality.			
Intermediate Phillips-Perron test results UNTITLED			
Series	Prob	Bandwidth	Obs
inflation	0.00000	1.0	7
industrial production	0.00000	1.0	7
balance state ment	0.00000	1.0	7
oil income	0.00000	1.0	7

The summary of ASF test and PP test for data in time series 2001 to 2010 has been presented in table 1 and table 2.

As it is shown, based on the results of these tests, data is static during the time. Therefore, all data relevant to time series is static.

The first hypothesis test results:

The first hypothesis: there is a relationship between inflation rate and stock market return.

H0: there is no relationship between inflation rate and stock market return.

H1: there is a relationship between inflation rate and stock market return.

Generally speaking, in VAR test dealing with the research hypotheses to make a break in the model, Eviews software automatically implements the breaks 1 and 2. The correct way of finding breaks is using sequenced test. Break should begin to the model repeatedly so that the best results be given (regarding model statistics). Finally the break which has the best results based on informational indexes (Akaike, Schwarz, Likelihood) is chosen as the best break. It happens through repeating the test.

The summary of Least Squares Test for the relationship between variables and VAR test results for the first hypothesis to determine and examine the relationship between inflation rate and stock market return is presented in table (4). According to the results of this test, it is seen that variables during the time period and also regarding the comparison between this test statistic and crisis amounts, it shows that the amount of this test statistic is bigger than the amount in all significant levels. Therefore, H1 is significantly proved. In other words, according to the results of this test, it can be said that there is a relationship between inflation rate and stock market return, and the test proves the significance of this relationship to 99%. Also, statistic coefficient of Dourbin Watson test determines existence of this relationship. Because it is supposed that if this test coefficient goes toward 2, the research data supports the research hypothesis. Therefore, because in testing the first hypothesis, Dourbin Watson coefficient is 1.486794, it can be said that there is a relationship between inflation rate and stock market return, and it is significant up to 99%.

Table 3: VAR test for the first hypothesis.

Vector Autoregression Estimates		
Date: 08/10/12 Time: 11:07		
Sample (adjusted): 1382 1389		
Included observations: 8 after adjustments		
Standard errors in () & t-statistics in []		
	SER01	SER02
SER01(-1)	-4.45279 -2.27352 [-1.95855]	0.000558 -0.00233 [0.24009]
SER01(-2)	3.220607 -1.46018 [2.20562]	-0.00059 -0.00149 [-0.39625]
SER02(-1)	-1029.69 -732.06 [-1.40656]	0.084676 -0.74898 [0.11305]
SER02(-2)	-7296.24 -2257.92 [-3.23140]	-0.2507 -2.31011 [-0.10852]
C	278411.6 -107273 [2.59536]	22.7304 -109.753 [0.20711]
R-squared	0.952047	0.369158
Adj. R-squared	0.88811	-0.47197
Sum sq. resids	92422952	96.74516
S.E. equation	5550.464	5.678766
F-statistic	14.89038	0.438887
Log likelihood	-76.4013	-21.3221
Akaike AIC	20.35032	6.580516
Schwarz SC	20.39997	6.630167
Mean dependent	66485.1	15.4375
S.D. dependent	16593.34	4.68064
Determinant resid covariance (dof adj.)		3.86E+08
Determinant resid covariance		54252957
Log likelihood		-93.9397
Akaike information criterion		25.98492
Schwarz criterion		26.08422

Table 4: VAR construct equation to test the variables relevant to the model in the first hypothesis in Tehran stock exchange in time series from 2001 to 2010.

stimationProc:	
=====	
LS 1 2 SER01 SER02 @ C	
VAR Model:	
=====	
SER01 = C(1,1)*SER01(-1) + C(1,2)*SER01(-2) + C(1,3)*SER02(-1) + C(1,4)*SER02(-2) + C(1,5)	
SER02 = C(2,1)*SER01(-1) + C(2,2)*SER01(-2) + C(2,3)*SER02(-1) + C(2,4)*SER02(-2) + C(2,5)	
VAR Model - Substituted Coefficients:	
=====	
SER01 = - 4.452790871*SER01(-1) + 3.220607425*SER01(-2) - 1029.687848*SER02(-1) - 7296.236352*SER02(-2) + 278411.6008	
SER02 = 0.0005584735687*SER01(-1) - 0.000591971212*SER01(-2) + 0.08467588172*SER02(-1) - 0.250696038*SER02(-2) + 22.73039598	

The second hypothesis test results:

The second hypothesis: there is a relationship between industrial products and stock market return.

H0: there is no relationship between industrial products and stock market return.

H1: there is a relationship between industrial products and stock market return.

Table 5: VAR test for the second hypothesis.

Vector Autoregression Estimates		
Date: 08/10/12 Time: 13:23		
Sample (adjusted): 1382 1389		
Included observations: 8 after adjustments		
Standard errors in () & t-statistics in []		
	SER01	SER02
SER01(-1)	3.536879	-0.0004
	-1.29937	-0.00101
	[2.72200]	[-0.39037]
SER01(-2)	-0.95694	-0.00019
	-0.88177	-0.00069
	[-1.08524]	[-0.28193]
SER02(-1)	1349.742	-0.91755
	-632.595	-0.49414
	[2.13366]	[-1.85688]
SER02(-2)	2053.315	-0.95899
	-1727.45	-1.34935
	[1.18864]	[-0.71070]
C	-162385	80.81371
	-93956.8	-73.3919
	[-1.72830]	[1.10113]
R-squared	0.902136	0.564489
Adj. R-squared	0.771651	-0.01619
Sum sq. resids	1.89E+08	115.0875
S.E. equation	7929.273	6.193747
F-statistic	6.913713	0.972116
Log likelihood	-79.2547	-22.0165
Akaike AIC	21.06368	6.754128
Schwarz SC	21.11333	6.803779
Mean dependent	66485.1	13.5375
S.D. dependent	16593.34	6.144205
Determinant resid covariance (dof adj.)		2.40E+09
Determinant resid covariance		3.38E+08
Log likelihood		-101.257
Akaike information criterion		27.8143
Schwarz criterion		27.9136

Table 6: VAR construct equation to test the variables relevant to the model in the second hypothesis in Tehran stock exchange in time series from 2001 to 2010.

Estimation Proc:	
=====	
LS 1 2 SER01 SER02 @ C	
VAR Model:	
=====	
SER01 = C(1,1)*SER01(-1) + C(1,2)*SER01(-2) + C(1,3)*SER02(-1) + C(1,4)*SER02(-2) + C(1,5)	
SER02 = C(2,1)*SER01(-1) + C(2,2)*SER01(-2) + C(2,3)*SER02(-1) + C(2,4)*SER02(-2) + C(2,5)	
VAR Model - Substituted Coefficients:	
=====	
SER01 = 3.536879424*SER01(-1) - 0.9569395146*SER01(-2) + 1349.741749*SER02(-1) + 2053.315433*SER02(-2) - 162385.4163	
SER02 = - 0.0003962130037*SER01(-1) - 0.0001941883412*SER01(-2) - 0.9175521467*SER02(-1) - 0.9589856159*SER02(-2) +	
80.81371229	

Generally speaking, in VAR test dealing with the research hypotheses to make a break in the model, Eviews software automatically implements the breaks 1 and 2. The correct way of finding breaks is using sequenced test. Break should be given to the model repeatedly so that the best results be given (regarding model statistics). Finally the break which has the best results based on informational indexes (Akaike, Schwarz, Likelihood) is chosen as the best break. It happens through repeating the test.

The summary of Least Squares Test for the relationship between variables and VAR test results for the first hypothesis to determine and examine the relationship between industrial products and stock market return is presented in table (6). According to the results of this test, it is seen that variables during the time period and also regarding the comparison between this test statistic and crisis amounts, it shows that the amount of this test statistic is bigger than the amount in all significant levels. Therefore, H1 is significantly proved. In other words, according to the results of this test, it can be said that there is a relationship between industrial products and stock market return, and the test proves the significance of this relationship to 99%. Also, statistic coefficient of Dourbin Watson test determines existence of this relationship. Because it is supposed that if this test coefficient goes toward 2, the research data supports the research hypothesis. Therefore, because in testing the first hypothesis, Dourbin Watson coefficient is 1.726881, it can be said that there is a relationship between industrial products and stock market return, and it is significant up to 99%.

The third hypothesis test results:

The third hypothesis: there is a relationship between oil income and stock market return.

H0: there is no relationship between oil income and stock market return.

H1: there is a relationship between oil income and stock market return.

Table 7: VAR test for the third hypothesis.

Vector Autoregression Estimates		
Date: 08/10/12 Time: 12:38		
Sample (adjusted): 1382 1389		
Included observations: 8 after adjustments		
Standard errors in () & t-statistics in []		
	SER01	SER02
SER01(-1)	2.399941	-8.09949
	-0.78121	-2.25636
	[3.07208]	[-3.58963]
SER01(-2)	0.580025	-9.51182
	-1.19671	-3.45644
	[0.48468]	[-2.75191]
SER02(-1)	0.272956	-2.53835
	-0.1202	-0.34717
	[2.27086]	[-7.31153]
SER02(-2)	0.048133	0.091361
	-0.14611	-0.422
	[0.32943]	[0.21649]
C	-207178	1938675
	-108164	-312408
	[-1.91540]	[6.20558]
R-squared	0.918988	0.980156
Adj. R-squared	0.810972	0.953697
Sum sq. resids	1.56E+08	1.30E+09
S.E. equation	7214.344	20837.1
F-statistic	8.507894	37.04455
Log likelihood	-78.4988	-86.9841
Akaike AIC	20.8747	22.99603
Schwarz SC	20.92435	23.04568
Mean dependent	66485.1	203657.9
S.D. dependent	16593.34	96835.13
Determinant resid covariance (dof adj.)		1.19E+16
Determinant resid covariance		1.68E+15
Log likelihood		-162.922
Akaike information criterion		43.23061
Schwarz criterion		43.32991

Table 8: VAR construct equation to test the variables relevant to the model in the third hypothesis in Tehran stock exchange in time series from 2001 to 2010.

Estimation Proc:
=====
LS 1 2 SER01 SER02 @ C
VAR Model:
=====
SER01 = C(1,1)*SER01(-1) + C(1,2)*SER01(-2) + C(1,3)*SER02(-1) + C(1,4)*SER02(-2) + C(1,5)
SER02 = C(2,1)*SER01(-1) + C(2,2)*SER01(-2) + C(2,3)*SER02(-1) + C(2,4)*SER02(-2) + C(2,5)
VAR Model - Substituted Coefficients:
=====
SER01 = 2.399941418*SER01(-1) + 0.5800245147*SER01(-2) + 0.2729557899*SER02(-1) + 0.04813255789*SER02(-2) - 207177.4854
SER02 = - 8.099493868*SER01(-1) - 9.511817863*SER01(-2) - 2.538347773*SER02(-1) + 0.09136070856*SER02(-2) + 1938675.16

Generally speaking, in VAR test dealing with the research hypotheses to make a break in the model, Eviews software automatically implements the breaks 1 and 2. The correct way of finding breaks is using sequenced test. Break should be given to the model repeatedly so that the best results be given (regarding model statistics). Finally the break which has the best results based on informational indexes (Akaike, Schwarz, Likelihood) is chosen as the best break. It happens through repeating the test.

The summary of Least Squares Test for the relationship between variables and VAR test results for the first hypothesis to determine and examine the relationship between oil income and stock market return is presented in table (8). According to the results of this test, it is seen that variables during the time period and also regarding the comparison between this test statistic and critical amounts, it shows that the amount of this test statistic is bigger than the amount in all significant levels. Therefore, H1 is significantly proved. In other words, according to the results of this test, it can be said that there is a relationship between oil income and stock market return, and the test proves the significance of this relationship to 99%. Also, statistic coefficient of Durbin Watson test determines existence of this relationship. Because it is supposed that if this test coefficient goes toward 2, the research data supports the research hypothesis. Therefore, because in testing the first hypothesis, Durbin Watson coefficient is 1.696965, it can be said that there is a relationship between oil income and stock market return, and it is significant up to 99%.

The fourth hypothesis test results:

The fourth hypothesis: there is a relationship between trade balance and stock market return.

H0: there is no relationship between trade balance and stock market return.

H1: there is a relationship between trade balance and stock market return.

Generally speaking, in VAR test dealing with the research hypotheses to make a break in the model, Eviews software automatically implements the breaks 1 and 2. The correct way of finding breaks is using sequenced test. Break should be given to the model repeatedly so that the best results be given (regarding model statistics). Finally the break which has the best results based on informational indexes (Akaike, Schwarz, Likelihood) is chosen as the best break. It happens through repeating the test.

The summary of Least Squares Test for the relationship between variables and VAR test results for the first hypothesis to determine and examine the relationship between trade balance and stock market return is presented in table (10). According to the results of this test, it is seen that variables during the time period and also regarding the comparison between this test statistic and critical amounts, it shows that the amount of this test statistic is bigger than the amount in all significant levels. Therefore, H1 is significantly proved. In other words, according to the results of this test, it can be said that there is a relationship between trade balance and stock market return, and the test proves the significance of this relationship to 99%. Also, statistic coefficient of Durbin Watson test determines existence of this relationship. Because it is supposed that if this test coefficient goes toward 2, the research data supports the research hypothesis. Therefore, because in testing the first hypothesis, Durbin Watson coefficient is 1.905656, it can be said that there is a relationship between trade balance and stock market return, and it is significant up to 99%.

Table 9: VAR test for the fourth hypothesis.

Vector Autoregression Estimates		
Date: 08/10/12 Time: 12:59		
Sample (adjusted): 1382 1389		
Included observations: 8 after adjustments		
Standard errors in () & t-statistics in []		
	SER01	SER02
SER01(-1)	1.148188 -1.50339 [0.76373]	1.079072 -0.70842 [1.52321]
SER01(-2)	0.39351 -1.5999 [0.24596]	-2.52078 -0.7539 [-3.34366]
SER02(-1)	0.77381 -0.68172 [1.13508]	0.027724 -0.32124 [0.08630]
SER02(-2)	-0.74239 -0.65108 [-1.14024]	-0.03155 -0.3068 [-0.10283]
C	-50959.5 -68070.3 [-0.74863]	139272.5 -32075.9 [4.34197]
R-squared	0.830483	0.932407
Adj. R-squared	0.60446	0.842282
Sum sq. resids	3.27E+08	72547173
S.E. equation	10435.88	4917.559
F-statistic	3.674332	10.34578
Log likelihood	-81.4522	-75.4327
Akaike AIC	21.61306	20.10818
Schwarz SC	21.66271	20.15783
Mean dependent	66485.1	23468.75
S.D. dependent	16593.34	12382.53
Determinant resid covariance (dof adj.)		2.58E+15
Determinant resid covariance		3.63E+14
Log likelihood		-156.806
Akaike information criterion		41.70145
Schwarz criterion		41.80075

Table 10: VAR construct equation to test the variables relevant to the model in the fourth hypothesis in Tehran stock exchange in time series from 2001 to 2010.

Estimation Proc:	
=====	
LS 1 2 SER01 SER02 @ C	
VAR Model:	
=====	
SER01 = C(1,1)*SER01(-1) + C(1,2)*SER01(-2) + C(1,3)*SER02(-1) + C(1,4)*SER02(-2) + C(1,5)	
SER02 = C(2,1)*SER01(-1) + C(2,2)*SER01(-2) + C(2,3)*SER02(-1) + C(2,4)*SER02(-2) + C(2,5)	
VAR Model - Substituted Coefficients:	
=====	
SER01 = 1.148188034*SER01(-1) + 0.3935095437*SER01(-2) + 0.7738102291*SER02(-1) - 0.7423871179*SER02(-2) - 50959.50953	
SER02 = 1.079072479*SER01(-1) - 2.520774853*SER01(-2) + 0.02772434483*SER02(-1) - 0.03154936546*SER02(-2) + 139272.4777	

Discussion, conclusion and suggestions:

In the current research, we seek to examine the relationship between inflation rate, industrial products, trade balance, and oil income with stock market return in Tehran stock exchange. First data has statistically been described, and then sampling and selecting time period appears. To analyze data, Eviews econometrics software has been implemented. According to the results of ADF and PP tests, it is proved that all data is static. In addition, the summary of VAR tests has been presented for the research hypotheses to test the relationship

between variables. Based on the results of this test, it is shown that the variables during the time period, and crisis values, and statistic value is higher than all significance levels.

As a conclusion, H1 is strongly accepted, in other words, based on the test results, it can be said that there is a relationship between inflation rate, industrial products, oil income, and trade balance with stock market return.

Applied suggestions:

1. As the results show that there is a relationship between inflation rate and stock market return, inflation rate rise can be controlled by taking some financial measures to increase market return.
2. Regarding the fact that the results show that there is a relationship between industrial products and stock market return, it is suggested to increase country's industrial products which makes market return flow increase for each stock.
3. Since the results indicated that there is a relationship between oil income and stock market return, it is advised to increase market return value of each stock by measuring pricing strategy.
4. Because the results show that there is a relationship between trade balance and stock market return, it is suggested to increase country's trade balance so that market return flow increases which helps the firms' market return increase through taking conservative strategies of current assets.

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