



## STUDY OF MACROECONOMIC VARIABLES AND ITS IMPACT ON PROFIT QUALITY FROM THE POINT OF VIEW OF FINANCIAL CRISES IN TEHRAN STOCK EXCHANGE

Dr. Hamidreza Kordlouie<sup>1</sup>, Nahid Sadeghi<sup>2</sup> and Leila Sadeghi<sup>3</sup>

<sup>1</sup>Associate Professor, Accounting & Management Department, Islamshahr Branch, Islamic Azad University, Islamshahr Tehran, Iran.

<sup>2 & 3</sup>Ph.D. student, Accounting & Management Department, Qeshm International Branch, Islamic Azad University of Science and Research, Qeshm, Iran.

### ABSTRACT:-

Considering the conditions prevailing on the economy of the country, the study of the relationship between macroeconomic variables and its impact on profit quality in Tehran Stock Exchange is of particular importance. In this research, we will seek to find an answer to the question whether financial crises resulting from macroeconomic variables are associated with manipulating the profits of companies admitted to the Tehran Stock Exchange. In this regard, 112 companies were studied from 2009 to 2014. The data were collected through financial statements, explanatory notes and annual reports of the stock market. To analyze the research data, a multivariate regression model in econometric software was used. In this research, the dependent variable of accruals quality was used as a criterion profit manipulation and independent variables included exchange rate fluctuations, economic growth rate, GDP and inflation. The results confirmed the direct relationship between exchange rate fluctuations, inflation rate, economic growth rate and profit manipulation, while the relationship between domestic production rate and the manipulation of profits was not approved. Since management, investors, creditors, investors, trustees and legal entities are most affected by the financial crisis, the relationship between macroeconomic variables, manipulation of profits, and the quality of reported profits by accepted companies is important in decision making.

**KEYWORDS:** financial crisis, macroeconomic variables, profit manipulation, grossdomestic product (GDP)using library resources and services.



### INTRODUCTION :

Despite much research on the quality of profits, it is still necessary to investigate the effects of macroeconomic factors on arbitrary accounting decisions. Recent financial crises are one of these factors which have to be considered. Thus, the literature on the existence of the relationship between the quality of profit and the economic downturn has been useless. Focusing on the survival of the organization is one of the goals of profit management, which can be changed by manipulating profits (Trombetta, & Imperatore, 2014). During a period of the financial crisis (especially financial instability), accounting quality can be affected

by the manipulation behavior of profits, especially by selecting accounting directors (Choi, Kim, & Lee, 2011).

Despite the claims of some analysts that the global financial crisis does not affect Iran's economy, its capital market has been indirectly affected by the global crisis due to the lack of integration of its financial markets with global financial markets. This crisis has affected the capital market and, in particular, the profitability of companies admitted to the stock exchange and the attractiveness of the capital market by affecting the business environment and limiting available financial resources. Research in this field has not made a clear distinction between the links of profits management and macroeconomic factors; therefore, it is difficult to predict the link between crisis and profits manipulation. Align with the issue discussed, and since Iran also faces short and long-term crises over different periods, it is important to examine the profit management and the quality of the profits reported by the accepted companies. Therefore, in this research we are looking for the answer to the question of whether financial crises resulting from macroeconomic variables are associated with manipulating the profits of companies admitted to the Tehran Stock Exchange. Given that so far in Iran, no research has been conducted on the relationship between financial crises resulting from macroeconomic variables and profit manipulation. This study can provide a basis for this important financial and accounting issue and provide relevant empirical evidence in this regard.

The current paper presents the relevant research literature and previous related studies are presented to provide the theoretical foundation for the current study, followed by the research method including hypotheses, statistical sample and population, the method of measuring variables and statistical methods for testing hypotheses are presented, and the analysis of the results. Finally, the conclusions derived from the study along with implications and suggestions for further research are presented.

## 2. LITERATURE REVIEW

The financial crisis refers to a situation where, the currency of the country is severely devalued as a result of the onslaught on the market. The financial crisis can be caused by disturbances in one of the fundamentals financial sectors which spread to the real sector of the economy because of the existence of financial relationships with other financial variables. Extreme changes in the exchange rate and the currency devaluation of a country are examples of crises in this area (Naderi, 2007). Exchange rate fluctuations is the price change of a foreign currency (here the dollar) in exchange for the currency of a country (Rafati, Asgari, & Mehregan, 1993). In terms of economics, the inflation rate means an increase in the general level of prices over a given time period. The inflation rate is equal to the change in a price index, usually the consumer price index (central bank site).

The quality of profit is the honest expression of the reported profit of the economic gain; in this case, financial professionals by making appropriate adjustments can reach a domain that is more accurately indicative of the quality of profit to the reported net profit. Therefore, the quality of the profit is not a fixed and defined issue that can be achieved, but rather a relative concept (Messiahhabadi, & Daneshvar, 2014). Profit manipulation is a change in profits by managers in a conscious and purposeful manner. In this research, the dependent variable of accruals quality was used as a profit manipulation benchmark. Exchange rate fluctuations, economic growth rate, GDP and inflation rate have been used as an independent variable.

Recent research has analyzed the role of financial reporting in economic crises. Trombetta, et al. (2014), in a study entitled "Dynamics of financial crises and its uneven effects on the quality of profit" concluded that the relationship between crisis and profit management is non-uniform but when the severity of crises is low or high, profit management also decreases or increases. Magnan, & Markarin (2011) and Barth, & Landsman (2010) argue that financial reporting has experienced several deficiencies during the crisis and have not adequately addressed uncertainty and have not accurately addressed monitoring, measurement and disclosure of the effect of Financial Statements' risk taking. Badertscher (2010), Laux, & Leuz (2009) found that legislators and financial institutions more than accountants have impact on the stability of financial markets.

Hansen (2010) further emphasized the importance of the contradictory and varied criteria in the study of profit management. He has argued that financial stress can be variables that have been ignored in the analysis of macroeconomic factors, and this can significantly affect the fundamentals of profit management. Jenkins, Kane, & Velury (2009) examines the relationship between business cycle and value related to profit and

payment, and provided evidences indicating that the relationship between profit and return is sensitive to the business cycle. He considered some criterion as a macroeconomic indicator and accepted the precise definition of macroeconomic metrics that regardless of direct factors is related to the capital market and can affect the incentive of managers to manipulate profits. Jenkins showed that conservatism and the relevance of the value of current profits during the recession are greater than economic development.

Another part of the research studies how quality profit may respond in a period of high financial stress. In particular, financial instability may affect the manager's choices in accounting, as well as the behaviors that are used to manipulate profits. Choi, et al. (2011) examined the market effects of Asian crises between 1998 and 1997. According to their data, profit management increases sharply during and after the crisis. Their focus was not directly on profit, but rather on the value of relevance of profit.

Baghumian, Mohammadi,&Naghdi (2016) in their study, "The effect of changes in macroeconomic factors on profit forecast error by managers of companies accepted in Tehran Stock Exchange", which considered 80 companies between 2007 and 2014, concluded that there is only a direct and significant relationship between changes in GDP & exchange rate changes and profit forecast error by directors. Other macroeconomic variables such as inflationary changes, liquidity changes, and trade balance changes have no significant relationship with profit forecast errors by managers.

ArabMazarYazdi,& Khuri (2015) in their study entitled "The Study of the Effect of Macroeconomic Variables on Dividend Policy" on 120 sample companies admitted to Tehran Stock Exchange during the period from 2001 to 2007, concluded that there was a direct and significant relationship between interest rate and dividend policy, and also the results of the research showed that there is a negative and significant relationship between exchange rate and dividend policy.

Yazdanparast,& Ahadi Sarakani (2013), examined the relationship between the financial crisis in major world capital markets and the indexes of the stock market in Tehran Stock Exchange. The findings indicate that there is a meaningful relationship between some of stock index in Iran Capital Market and global financial crisis index in the capital market.

Namazi,& Rezaei (2012) have conducted a study on "Influence of Inflation Rate on profit quality of companies accepted in Tehran Stock Exchange". To this end, four profit sustainability models, predictive value of profits, honest and timely reporting of profits has been used to evaluate the company's quality of profits. This study was conducted in the period between the years 2000-2009 and the sample was consisted of 130 companies. To do this research, they designed four main hypotheses that examine the impact of the inflation rate on the assessing criteria of corporate profits during the period in question. So, to test the hypothesis of the research, the statistical method of the combined data has been used. The results of the research indicate that inflation in any of the selected criteria has not a significant effect on the quality of profit in the whole industries, but studying it at the level of each industry showed that in some industries there is a significant relationship between the quality of profit criteria and the inflation rate.

Mashayekhi,Ganji,&Asgari (2010). in the study of "The effect of macroeconomic variables on the relationship between fundamental variables extracted from financial statements and stock returns" found that the variables of the total stock price index, gross domestic product at the base price without oil, gross domestic cost, oil revenue, inflation rate, and stock gross domestic product have a significant effect on the relationship between stock combined score and stock returns, and other variables including investment deposit loss, current account balance, unemployment, tax revenue, Gini coefficient, unofficial exchange rate market and budget deficit (surplus) has not affected this relationship.

Ghaemi,& Moieni (2007), in their research entitled "Investigating the relationship between macroeconomic factors using multiple regression techniques and factor analysis", selected 21 different macroeconomic variables and all selected economic variables of P/E and showed that there is a strong linear relationship between P/E confirmation coefficient and the relationship between dependent and independent variables of the research was confirmed.

In his research, Osulian (2005) investigated the relationship between the three macroeconomic variables (exchange rate, and inflation) with the price index of industries accepted in the Tehran Stock Exchange.

He showed that the macroeconomic variables used in the research did not correlate with changes in the price index.

Bayati (2005), in his study of "Reviewing the effect of exchange rate changes on various industries' productivity", concluded that there is no significant relationship between exchange rate changes stock returns and P/E variables.

Given the importance of this issue nationally and internationally, it seems that there is no research inside the country to examine the relationship between the financial crisis (derived from macroeconomic variables) and the quality of profit (profit manipulation); therefore, the current study aimed at filling this gap in the current body of the research literature, and hopefully help to a better insight on this issue.

### 3. HYPOTHESES

According to the theoretical foundations and the research literature, the main and secondary hypotheses of the research presented in this paper are as follow:

There is a significant relationship between macroeconomic variables: exchange rate fluctuations, economic growth, Gross Domestic Product, inflation rate, and profit manipulation in companies admitted to the Tehran Stock Exchange.

#### 3.1. Main hypothesis:

There is a significant relationship between macroeconomic variables and profit manipulation in companies admitted to the Tehran Stock Exchange.

#### 3.2. Sub-hypotheses:

**H1:** There is a significant relationship between exchange rate fluctuations and profit manipulation in companies admitted to the Tehran Stock Exchange.

**H2:** There is a significant relationship between economic growth and the manipulation of profits in companies admitted to the Tehran Stock Exchange.

**H3:** There is a significant relationship between Gross Domestic Product and profit manipulation in companies admitted to the Tehran Stock Exchange.

**H4:** There is a significant relationship between inflation rate and profit manipulation in companies admitted to the Tehran Stock Exchange.

### 4. METHODOLOGY

This research is aimed to determine the relationship between macroeconomic variables and profit manipulation, thus it is a correlational study. And since the determination of the relationship between macroeconomic variables and profit manipulation can be used by a large group of users of corporate financial information, it is an applied one. The post-event research (ex-post facto) approach was used to conduct the research. This approach is used when the researcher studies the subject after the occurrence of the events; besides, it is not possible to manipulate independent variables (Sarmad, Bazargan, & Hejazi, 2015). In this research, the data and variables were collected through referring to financial statements, explanatory notes and annual reports of the stock exchange and using the Rahavard-e- Novin software.

#### 4.1. Data and sample description

For the purpose of estimating the research models for hypotheses testing first, a sample of companies listed in Tehran Stock Exchange for the time period of 2009-2014 (period of 6 years) is used. Using a screening method, only companies that have all of the following conditions were selected as the statistical sample. These conditions are as follows:

- Has been accepted in the Tehran Stock Exchange by the end of March 2008 and its financial year will end by March.
- Companies should not change their fiscal year during the desired period. The financial information required

to complete this research has been fully provided during the period from 2009 to 2014.

- Each industry has at least 3 companies in the sample.  
According to the condition mentioned above, 112 companies were selected as samples.

## 4.2. variables description

In order to test the hypotheses, the variables of this research are divided into three groups: independent, dependent and control variables. Independent variables used in this study as macroeconomic measures are:

### 4.2.1 Independent variables:

they used in this study as macroeconomic measures are: All the macroeconomic metrics are introduced as macroeconomic variables in the economic time series database available on the Central Bank of the Islamic Republic of Iran website and their relevant information has been archived for decades. These variables are as follow:

**Exchange rate fluctuations:** The exchange rate is the price of a foreign currency (here the dollar) in interchange for the currency of a country (Rafati, Asgari, & Mehregan, 1993).

**Economic Growth:** Economic growth is, in simple terms, an increase in the production of a country in a particular year compared to its base year. On a macro level, growth in GDP or GNP in the year under discussion is relative to its value in a base year, is considered as economic growth (Hribar, & Nichols, 2007).

**Gross Domestic Production:** GDP is one of the scales of the economy size which measures the value of total goods and services produced in the country at a given time interval in relation to the current currency (Central Bank website).

**Inflation:** Inflation in terms of economics means increasing the general level of prices over a given time. The inflation rate is equal to the change in a price index, usually the consumer price index (central bank website).

### 4.2.2 The dependent variables :

They used in this study are the profit manipulation benchmark, which includes optional accruals. By reviewing previous studies, the revised Jones model has been used to obtain optional accruals, which is currently accepted and popular for accruing accruals management in articles.

In this method, optional accrual items are estimated in two stages. At first, the variable of total accruals (which is the difference between net profit and operating cash flow) is placed in the regression consisting of the key variables that are expected to affect it. As follows:

$$\frac{TA_{it}}{A_{it-1}} = \alpha_1 \frac{1}{A_{it-1}} + \alpha_2 \left( \frac{\Delta REV_{it}}{A_{it-1}} - \frac{\Delta AR_{it}}{A_{it-1}} \right) + \alpha_3 \frac{PPE_{it}}{A_{it-1}} + \alpha_4 \frac{Netincome_{it-1}}{A_{it-1}} + \varepsilon_{it} \quad (1)$$

In which, *i* is the index of the company and *t* time index, *TA<sub>it</sub>* net profit minus cash flow resulted from operations, *ΔREV<sub>it</sub>* change in sales, *ΔAR<sub>it</sub>* change in accounts receivable and *PPE<sub>it</sub>* total assets, machinery and equipment, and *A<sub>t-1</sub>* the assets of the company last year. The calculated coefficients of 1a, 2a, 3a and 4a are used to calculate optional accruals in the form below.

$$DA_{it} = \varepsilon_{it} = \frac{TA_{it}}{A_{it-1}} - \left( \alpha_1 \frac{1}{A_{it-1}} + \alpha_2 \left( \frac{\Delta REV_{it}}{A_{it-1}} - \frac{\Delta AR_{it}}{A_{it-1}} \right) + \alpha_3 \frac{PPE_{it}}{A_{it-1}} + \alpha_4 \frac{Netincome_{it-1}}{A_{it-1}} \right) \quad (2)$$

Higher volumes of optional accruals are interpreted as the greater profit management. Since optional accruals can be positive, when the company inflames the profits, or negative, when the manager hide it in the good years for future use, both modes indicate profit management, hence the amount of value obtained is used (Jones, 1991).

#### 4.2.3. The control variables:

They used in this study follow the previous research and other factors affecting the reaction of investors are:

Company size: This variable is equal to the natural logarithm of the total sales at the end of the fiscal year. Companies with more sales are likely to be more capable of meeting their obligations on time.

Growth opportunity: This variable is obtained through the ratio of market value to the book value of equity.

Profitability: This variable is obtained through the ratio of operating profit to total assets. Because of their greater ability to fulfill their obligations, more profit-making companies are less risk-averse.

#### 4.3. Data analysis and Model selection

This research studies the relationship between macroeconomic variables on profit manipulation in bourse companies using integrated/compound regression analysis in the form of regression model as follows:

DA = Discretionary Accruals

ERV = Exchange Rate Volatility

EGR = Economic Growth Rate

GDP = Gross Domestic Product

IR = Inflation Rate

SIZE = Firm size

GRO = Growth Opportunity

ROA = Return On Asset

The integration of time series and cross-sectional data (compilation data) and the necessity of using it, mostly due to the increase in the number of observations, the increase of the degree of freedom, the reduction of the heterogeneity of variance and the reduction of the multicollinearity between variables. Before estimating regression models in the above state, to test the hypothesis of the research, the appropriate model for the regression model is chosen. First, using the F lemmer test, the combined data model will be selected against the combined data model. If the probability of statistic of F lemmer is less than the significant level of 5%, the use of the combined data method is discarded. Otherwise, if the significance level is greater than 5%, then using the combined data method is appropriate. If the combined data model is not selected against the hybrid data, then the Hausman test is used to select the pattern of the constant effects of combined data against the pattern of the random effects of combined data. If the probability of the Hausman statistic is less than the significant level of 5%, we do not have enough reason to reject the pattern of fixed effects and to test the hypothesis we should use a constant effect pattern. Otherwise, if the level of significance is greater than 5%, using the random effects pattern is appropriate. In all statistical techniques, Eviews Econometrics Software and Excel software have been used.

The results of the reliability of the research variables are presented in Table 1. Based on unit root tools of Levine, Lin and Chow, since P-Value was less than 5%, all dependent, independent and control variables were in a robust level. Reliability means that the mean and variance of variables over time and covariance of variables have been constant between different years

**Table 1: Reliability test (static) of variables during research period**

Variables reliability statistics	Levin, Lin & Chui statistic value	Levin, Lin & Chui statistical probability
DA	-35.93	0.0000
ERV	-16.19	0.0000
EGR	-12.13	0.0000
GDP	-10.45	0.0000
IR	-24.64	0.0000
SIZE	-8.62	0.0000
GRO	-83.57	0.0000
ROA	-18.97	0.0000

Before testing assumption, profit alteration must be calculated (profit management variable). Following model coefficients are estimated according to explained method by the Eviews software:

$$\frac{TA_{it}}{A_{it-1}} = \alpha \frac{1}{A_{it-1}} + \alpha_2 \left( \frac{\Delta REV_{it}}{A_{it-1}} - \frac{\Delta AR_{it}}{A_{it-1}} \right) + \alpha_3 \frac{PPE_{it}}{A_{it-1}} + \alpha_4 \frac{Netincome_{it-1}}{A_{it-1}} + \varepsilon_{it} \quad (3)$$

To identify mixed data method and recognizing their homogeneous or heterogeneous, Chow test and Limer F statistics are used. The results of this test are given in table 2:

**Table 2: the results of Chow test to identify homogeneous or heterogeneous sections**

Null hypothesis	F	Meaningful level	Chow test Results
Cross sectional and time effects aren't meaningful. (Pooled data method is suitable).	2.291	0.000	.H assumption is rejected.

As it can be seen in table 3, according to Chow test results, obtained probability is less than 5% for F statistics. Therefore to test this assumption, data are used as panel form. Now, Hausman test is used to identify whether fixed effects models are used or random effects model for parameters estimation. Its' results are provided in table 3.

**Table 3: Hausman test to identify fixed effects model or random one**

Null assumption	K square statistics	Meaningful level	Test results
Using random effects model	0.121	0.998	Assumption .H isn't refused.

Meaningful level of Hausman test is more than 0.05. Therefore, to test assumption, random effects model must be used. Test result in mentioned model is provided in table 4 by using random effects model and estimated generalized least squares (EGLS).

**Table 4: Effects model and estimated generalized least squares (EGLS)**

Variable	coefficient	Standard error	T statistics	Meaningful level
Fixed value	0.149	0.167	0.891	0.373
Ait-1/1	12232.15	18112.2	0.675	0.499
REVit/Ait-1)- (?ARit/ Ait-1?)	-0.274	0.286	-0.956	0.339
PPEit/ Ait-1	0.01	0.04	0.268	0.788
Netincomeit-1/ Ait-1	-0.181	0.088	-2.055	0.04
F statistics	114.19	Identification coefficient Balanced		0.156
F statistics probability	0.000	identified coefficient		0.154
		Doorbin- Watson value		2.037

Next, by applying obtained coefficient, profit management will be computed. In a way that, discretionary accrual items are computed by setting calculated coefficient instead of  $\alpha_1$ ,  $\alpha_2$ ,  $\alpha_3$  and  $\alpha_4$  in following model.

$$DA_{it} = \varepsilon_{it} = \frac{TA_{it}}{A_{it-1}} - \left( \alpha_1 \frac{1}{A_{it-1}} + \alpha_2 \left( \frac{\Delta REV_{it}}{A_{it-1}} - \frac{\Delta AR_{it}}{A_{it-1}} \right) + \alpha_3 \frac{PPE_{it}}{A_{it-1}} + \alpha_4 \frac{Netincome_{it-1}}{A_{it-1}} \right) \quad (4)$$

It should be mentioned that obtained absolute value is used to profit management.

#### 4.4. Hypotheses Testing

Before testing Hypotheses, a suitable model is chosen to regression model. First, Limer F test is used to choose integrated data against mixed data model. The results of Limer F test is provided in table 5. Limer F probability value is less than 5% meaningful level in table 5, therefore, to test first assumption, using integrated data method is refused.

Table 5: Choosing integrated values vs. mixed data

Model	Test type	Test statistics value	Degrees of freedom	Test statistics probability
Limer F		1.93	(1114 & 111)	0.0000

Since the lack of choosing integrated data model vs. mixed data, Hausman test is performed to choose fixed effects model vs. random effects model. Hausman test results are provided in table 6. The value of Hausman statistical probability is less than 6% meaningful level in table 6, therefore, we don't have enough reasons to refuse fixed effects model and fixed effects model is used to test first assumption.

Table 6: choosing fixed effects model vs. random effects model

Test type	Chi-2 degrees of freedom	Chi- 2 statistics value	Test statistics probability
Hausman	6	28.49	0.0001



Mixed regression model of fixed effects and macroeconomic variables impacts in profit alteration is provided in table 7. According to table 7, obtained results present that the impact of exchange rate fluctuation on profit alteration is positive (0.0004) and therefore is meaningful by considering to t statistics probability (2.22). This issue presents that exchange rate fluctuation impact to profit alteration in exchange firms as one of the macroeconomic variables coefficient. In other words, firm management has more chances to alter profit by increasing exchange rate fluctuation.

### 5. The Results of Hypotheses Testing

Moreover the results present that the impact of economic growth rate to profit alteration is positive (0.0011) and t is meaningful (3.32) by considering to statistical probability. This item presents that economic growth rate as one of the macroeconomic variables index, impacts to exchange firms profit alteration. In other words, firm management has more chances to alter profit by increasing economic growth rate.

Moreover according to results, fluctuation rate on exchange firm profit alteration is effective as one of the macroeconomic variables index. In other words, firm management has more chances to alter profit by increasing fluctuation rate. On the other hand, for gross domestic product and its impact on profit alterations, obtained results are positive (0.1799) and isn't meaningful according to t statistics probability (-1.34). This item presents that economic growth rate as one of the macroeconomic variables index, impacts to exchange firms profit alteration. In other words, firm management has more chances to alter profit by increasing economic growth rate.

Other results present that negative impacts of size controlling variables, growth chance and returning assets (profitability) on exchange firms profit alteration. This item presents that large firms have more growth chance and more profitability and have less profit alteration. Related results to F statistics present that in general this model is meaningful and doesn't have autocorrelation problem by considering to Durbin- Watson statistics. Moreover, related results to balanced identification coefficient present that in general of research period, about 49% of profit alteration changes are impacted by macroeconomic variables and control ones especially growth chance and returning assets (profitability).

#### Statistical results of Jarek Bera present that regression reminders are normal in mentioned model.

- By considering to exchange rate fluctuation impacts to profit alteration are meaningful, first assumption(H1) is supported.
- By considering to economic growth rate impacts to profit alteration are meaningful, second assumption(H2) is approved.
- By considering to domestic gross production impacts to profit alteration aren't meaningful, third assumption (H3)is approved.
- By considering to fluctuation rate impacts to profit alteration are meaningful, forth assumption (H4)is approved.

Table 7: the results of research assumption test

Variables statistics	Regression coefficients		T statistical value	Statistical probability t	
Constant value	1.62		1.67		0.0048
ERV	0.03		2.22		0.0004
EGR	0.2		3.32		0.0011
GDP	0.22		-1.34		0.1799
IR	0.22		2.04		0.0000
SIZE	-0.08		-1.98		0.0008
GRO	-0.05		-2.59		0.0098
ROA	-1.47		-2.32		0.0007
Identification coefficient	Jarque- Bera remaining value	Jarque- Bera remaining probability	Balanced identification coefficient	Statistical probability F	Dorbin Watson statistics
	0.49	1.941	0.379	0.56	0.0000
					2.16

## 6. Discussion and conclusion

Financial affairs duties have been increased increasingly by increasing companies and commercial institutes and creating complex economic and commercial relations. Governments' focus on economic growth helps to develop companies and institutes more than before and cause to more complexity in these affairs. On the other hand, technology development and extensive environmental changes cause to increasingly economic acceleration. Because of increasingly competition among institutes, obtaining to profit is limited and having tendency toward bankruptcy is increased. The level of financial crisis all over the world is more than before. During last two decades, statistics and figures present that unprecedented increasing of financial crisis. The existence of financial crisis in a country is an important economic index which draws attention generally. Moreover, economic costs of financial crisis are high. Therefore, the ability to predicting financial crisis and preventing to its occurrence are so important and prevent to unsuitable allocation of economic shortage. Providing exact definition about involved groups in financial crisis issues is too difficult. But it can be claimed that management, investors, creditors and legal institutes are affected by financial crisis phenomenon more than others. The goal of this research was investigating the relationship between macroeconomic variables and profit alteration in accepted firms in Tehran stock exchange. To this end, 112 exchange firms are studied during 2009-2014. Research data and related variables are collected by inferring to financial bills, explanatory notes and annual reports of stock exchange. Obtained results support that the relationship among exchange rate fluctuation, inflation rate and economic growth rate and profit alteration, although the relationship between domestic production and profit alteration isn't supported. Since management, investors, creditors and legal institutes are affected by financial crisis more than others, therefore, prediction of relationship path among crisis, profit alteration and the quality of reported profits by accepted companies are so important issues in decision making.

## 7. REFERENCES

- Arab Mazar Yazdi, M., Khuri, M., (2015). The study of macroeconomic variables impacts on profit division policy in accepted companies in Tehran stock exchange, *Journal of Accounting Knowledge*(<http://jak.uk.ac.ir>), 14 (58), 65-71.
- Badertscher, B.A., Burks, J., Easton, P., (2010). A convenient scapegoat: Fair value accounting by commercial banks during the financial crisis, Thesis, University of Notre Dame .
- Baghumian, R., Mohammadi, H., Naghdi, S., (2016). The study of fluctuation macroeconomic variables and predicting profit by companies managers, *Empirical Studies in Financial Accounting Quarterly*(<http://qjma.atu.ac.ir>), 13 (50), 64-68.
- Barth, M.E., Landsman, W.R., (2010). How did financial reporting contribute to the Financial crisis? *Eur. Account. Rev.* 19 (3), 399–423 .
- Bayati, M., (2005). The relationship between inflation of shares price index and price index and stock cash return, master's thesis, Allameh Tabatabayi university, faculty of accounting and management.
- Choi, J.H., Kim, J.B., Lee, J.J., (2011). Value relevance of discretionary accruals in the Asian financial crisis of 1997–1998". *J. Account. Public Policy* 30 (2), 166–187.
- Ghaemi, M., Hossein Moieni, M.A., (2007). The study of coefficient relation P/E and macroeconomic variables, *Journal of The Accounting And Auditing Review* (<https://acctgrev.ut.ac.ir>), 14, 47-50 .
- Hansen, J.C., (2010). The effect of alternative goals on earnings management studies: an earnings benchmark examination. *J. Account. Public Policy* 29 (5). 459–480.
- Hribar, P., Nichols, D.C., (2007). The use of unsigned earnings quality measures in tests Of earnings management. *J. Account. Res.* 45 (5), 1017–1053.
- Jenkins, D.S., Kane, G.D., Velury, U., (2009). Earnings conservatism & value relevance Across the business cycle. *J. Business Finance Account.* 36 (9–10), 1041–1058.
- Jones, J.J., (1991). Earnings management during import relief investigations. *J. Account. Res.* 29(2), pp. 193–228.
- Kothari, S.P., Lester, R., (2012). The role of accounting in the financial crisis: lessons for The future, *Account. Horizons*, 26 (2), 335–351.

- Laux, C., Leuz, C., (2010). Did fair-value accounting contribute to the financial crisis? *J. Econ. Perspect.* 24 (1). 93–118.
- Leuz, C., Nanda, D., Wysocki, P.D., (2003). Earnings management and investor protection: An international comparison. *J. Financ. Econ.* 69, 505–527.
- Magnan, M., Markarian, G., (2011). Accounting, governance and the crisis: is risk the Missing link? *Eur. Account. Rev.* 20 (2), 215–231.
- Mashayekhi, B. A., Ganji, H.R., Asgari, M. R., (2010). Effect of macroeconomic Variables on the relationship between the fundamental variables extracted from financial statements and stock returns, *Quarterly Journal of securities Exchange* (<http://journal.seo.ir>), 84, 109-127.
- Messiahhabadi, A., Daneshvar Bondari, R., (2014). An overview of the concept of quality of profit with an emphasis on fundamental analysis, *J. Management and Accounting Researches* (<http://iranjoman.org>), 8, 68.
- Namazi, M., Rezaei H.R., (2012). Impact of Inflation Rate on the Profitability of Companies Accepted in Tehran Securities Exchange, 10th National Accounting Conference of Iran, Alzahra University, Tehran. <http://www.civilica.com/Paper-IAAC>.
- Osulian, M., (2005). The study of changes impact of some macroeconomic variables on Accepted industry price index in Tehran stock exchange from (1993)-(2002). Master's thesis, Tehran University, Faculty of Management.
- Rafati, M. R., Asgari, A., Mehregan, N., (1993). *foreign exchange from multi-rate to Single-rate* (second edition), Tehran, commercial studies institute.
- Sarmad, Z., Abbasi, B., Hejazi, E., (2015). *Research method in behavioural science* (27th publication), Tehran.
- Shafiei, S., Saburi Deilami, M.H., (2011). The study of interactive impacts of Macroeconomic variables of Iran from world financial crisis, *commercial studies* (<http://barresybazargani.itsr.ir>), 39, 15-17.
- Trombetta, M., Imperatore, C., (2014). The dynamic of financial crises and its non-Monotonic effects on earnings quality. *J. Account. Public Policy*, <http://dx.doi.org/10.1016/j.jaccpubpol>.
- Yazdanparast, A., Ahadi Sarkani, S.y., (2013). The Investigation of the Relationship of the Financial Crisis in the Capital Markets of the World with the Indices of Tehran Stock Exchange, *J. Financial Knowledge of securities Analysis* (<http://jfksa.srbiau.ac.ir>), 6(19), 1-3.



**Nahid Sadeghi**

Ph.D. student, Accounting & Management Department, Qeshm International Branch, Islamic Azad University of Science and Research, Qeshm, Iran.