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A STUDY OF MENTAL ACCOUNTING IN SANCTION CONDITIONS IN IRAN

МЕНТАЛНО РАЧУНОВОДСТВО У УСЛОВИМА САНКЦИЈА У ИРАНУ

Summary: *Share price is one of the most important data used in economic analysis by decision makers. By comparing the share price of 141 companies before the recent imposed sanctions on Iran (in February 2012) with the share price of the very companies after imposing sanctions (in March 2012), this study aims at finding whether the sanctions have affected the investors' behavior in buying, selling and their investments or not. For testing the hypothesis, numerical analysis method has been applied; the findings of the study show an increase in total share price index after the sanctions. Consequently, it has been concluded that the sanctions had no significant effect on Iran's stock market.*

Key words: *Mental Accounting, Share (Stock) Price, Sanctions, Tehran Stock Exchange.*

JEL Classification: *M41*

Резиме: *Цијена акција је један од најважнијих података који се користе у економској анализи од стране доносиоца одлука. Поређењем цијена акција 141 компаније прије недавних санкција наметнутих Ирану (у фебруару 2012.године) са цијеном акција тих компанија после увођења санкција (у марту 2012.године), овај рад има за циљ да утврди да ли су санкције утицале на понашање инвеститора при куповини, продаји и њиховим инвестицијама или не. За тестирање хипотезе примијењен је метод нумеричке анализе; резултати студије показују раст укупног индекса цијене акција након санкција. Према томе, закључено је да санкције нису имале значајан утицај на берзу Ирана..*

Кључне ријечи: *ментално рачуноводство, цијена акције (берза), санкције, Техеранска берза.*

ЈЕЛ класификација: *M41*

1. INTRODUCTION

Comprehensive research as well as stock exchanges analyses and accurate conclusions can lead to an increase in the rate of the growth and blossoming of these markets. Doing research on different aspects of stock market can help shareholders to make correct decisions, it can also lead to a better optimal allotment of economical resources and improvement of investment conditions (Ghaemi et al 2003).

Mental accounting is the study of how the individuals interpret the data for making a decision based on their analyses of past events, which may overpass the rationality axiom. Mental accounting is a better understanding of cognitive psychology. In mental accounting, we try to understand the influence of human emotions on the process of decision-making. Men tend to keep special events in their mind as imagery; sometimes these imaginations have more effects on individuals' decision making rather than the events themselves. The term "mental accounting" was first described by Thaler (1980) as: the tendency of people for coding, clarifying and evaluating economic outcomes by grouping their grades in a set of mental accounts. Based on this behavioral mistake, people open a separate account in their minds for their financial decisions to evaluate each decision, and try to examine the consequences of each decision (whether positive or negative) on their own (Thaler 1980). Therefore, they prevent themselves from having a general view on their own set of decisions (like

portfolio), and they may make decisions that will not lead to maximizing their wealth. Mental accounting is a part of prospect theory that shows the tendency of individuals to put special events in their different mental accounts based on their apparent features. Indeed, mental accounting helps to define the idea that in an open trade costless world, people distinguish between dividend and economic consumption. If accounting is defined as a system for registering, classifying and précising financial and commercial events, then mental accounting will be defined as how families and individuals would implement such a system. Families have the same motivations of organization in using accounting for management: i.e. their goal is to control expenditure in order to detect what expenditures they pay for. Mental accounting is a definition of methods in which they do these affairs (Khajavi and Ghasemi 2006).

Thaler (1980) defined mental accounting as “The perception of gains, losses and bets which are under the influence of a special mental edition”. For example, a 100 dollars loss along with a 50 dollars gain is not perceived the same as perception of a 50 dollars gain alone. Thaler (1999) defines mental accounting as a set of conscious actions that are used by individuals and families for organizing, evaluating and tracing transactions. Mental accounting itself is a scientific and useful method used by consumers as a guideline for simplifying calculations, recognition and perception (Schelling 1984), and for automatic justification of costs (Thaler 1990). Based on the concept of mental accounting, people open a separate mental account for evaluating each decision in their financial decisions, and try to examine the consequences of each decision (whether positive or negative) separately. Thaler’s (1999) results indicate that in evaluating the decisions, not only do individuals examine each decision separately, but also a change in decision’s type and expending time and taking advantage is impressive.

Mental Accounting Main Components:

- The first component deals with how the results are incepted, how they are examined, how the decisions are based on these examined results and finally, how the adopted decisions are evaluated.
- Second component includes the allotment of actions to particular accounts.
- The third component deals with the amount of accounts’ evaluation.

2. DECISION MAKING IN MENTAL ACCOUNTING

Thaler (1980) believes that buyers enjoy their shopping in two ways: the joy of purchasing goods and services, and the joy of transaction. The joy of purchasing, like the economic concept of consumer’s surplus, is the proportion of purchased goods’ value to the price of those goods. Conceptually, the joy of purchasing the goods’ value for buyers consists of receiving a gift minus the paid price. The joy of transaction is the value received from an exchange, and it is defined as the difference between the paid price and the goods’ reference price. The reference price is the common price that the consumer expects to pay. Most of the empirical studies suggest that humans are placed in a tender framework when they do mental accounting. It means that they mostly pay attention to the gains and losses that are tender and sensitive. If one of the shareholders acts weakly, the investors may experience a feeling of regret about their decision to buy shares (Barberis and Huabg 2001).

3. MENTAL ACCOUNTING AND CAPITAL MARKET

Mental accounting is a sensory and innate behavioral mistake with lots of signals, and it can cause many problems for investors. The biggest problem among all is to put the invested assets in separate classes based on the type of the asset, without regarding the available potential correlations between the placed investments in different classes. Problems people encounter when considering the present interactions between different investments can lead them to establish layered (categorized) and pyramid-like portfolios. Each series choose a particular goal that is independent from other goals. For example, when the goal is to save the capital, the investors tend to aim low risk investments such as cash funds and investment funds shares in money market. However, if the goal is to gain current income, they emphasize mainly on debenture bonds and shares with pecuniary profits; and when the goal is to gain large profits, high risk investments such as newfangled markets’ shares and the first

public presentation of shares come into consideration. The combination of different assets, whose performances have no correlation and connection with other assets' performances, is a significant fact for reducing the risk. Nevertheless, this fact is almost rejected in this pyramidal method. Therefore, entering the investment situation without considering the present correlations may lead to portfolio deficiency, which is followed by yields less than optimal limit. In evaluating a potential investment based on its share in revenues and portfolio's total risk, people always encounter troubles and shortcomings, and they only consider the recent performance of the respective layer. This common harmful mistake is derived from mental accounting (Grinblatt and Han 2001). Tevrsky and Kahneman (1984) stated that hatred toward risk is one of the characteristics of risky decision-making model. The empirical evidences include the advantages and disadvantages of assets. Moreover, findings about hatred toward risk state that people are more sensitive to loss rather than benefit.

4. ADVANTAGES OF MENTAL ACCOUNTING

It is important for market participants to know the fact that mental accounting may have some advantages. For example, if consumers consider the saved funds a crucial matter for retirement period or continuing education in college, then they will be less inclined to ruin their long-term investment by putting their saved funds in good schemes. Of course, having the tendency to save and keep some assets is not a guarantee for optimal management of these assets. Market participants should advise their consumers about their saved funds for their kids' education costs, to put their money in more conservative investments in the time of the kids' adolescence. Such advice probably leads to less resistance against the changing of investments' place when reallocating the funds to more cautious investments. Some financial counselors are in favor of goal-based planning, in which the mental accounting is used as a lever so that the consumer can gain more benefits. The argument of these market participants includes that the clients should plan some independent investment projects, but this perspective contradicts many logics of the classical theory. Conventional viewpoints maintain that assets allotment should aim at total profit of portfolios. From this perspective, the risk is also used in the management level of portfolios by estimating the total capacity and the power of investor in taking the risks. It is hard to establish adjustment and consistency in portfolio frameworks and the existence of separate mental accounts related to particular investment goals (Barberis and Huang, 2001). An alternative for this traditional perspective is to allow the existence of more than one strategy. Each strategy is planned for one goal, and its management is based on the criteria related to the capacity of taking risks that best suits the goal. This perspective, which is called goal-based investment, is appropriate and consistent with mental accounting. Another advantage is that in this perspective, we manage the risk of failure in fulfilling the goals, rather than focusing on the traditional criteria for measuring the risk. In practice, mental accounting has potential advantages too. Therefore, market participants can use this behavioral mistake as a lever for increasing the investors' benefits (Philip et al 1999).

5. SANCTIONS

Sanction is a social and punitive phenomenon, which includes required diplomatic, economic or military actions against a country that has acted against the international legislations. Several interpretations have been proposed about the reasons of sanctions imposed on Islamic Republic of Iran; but a brief look at the official statements and viewpoints made by people who had a power in establishing the sanctions, indicates that the United States refers to Iran's behavior as the reason of imposed sanctions. From their point of view, Iran is a terrorist country and is planning to access nuclear weapons. They believe that Iran has aggressive behavior and opposes peace in Middle East and in general, it does not obey international laws and systems.

Sanctions History in Iran

From the early years of Islamic Revolution of Iran up to now, the US has imposed many sanctions on Iran in different steps. Historically, these sanctions include:

Carter's presidency term:

1. Oil sanctions (i.e. no oil imports from Iran).

2. Blocking Iran's assets.
3. Boycotting goods import from Iran.
4. Boycotting goods export to Iran; After the Algiers Accords, all the items were cancelled except the second one..

Regan's presidency term:

1. In 1983, Iran was known as a terrorist supporter and as a result, the international donation of aids and facilities to Iran was limited.
2. In 1986, arms deal with Iran was prohibited.
3. In 1987, importing oil from Iran was prohibited.
4. In 1988, the US representatives in The World Bank were ordered to vote against Iran; and the US warned global organizations that in the case of giving loans to Iran, its reliefs to these organizations would be reduced.

Bush Sr.'s presidency term:

In 1992, the prohibition of dual-purpose goods deal with Iran was declared.

Clinton's presidency term:

In this term, US imposed 161 sanction items against 35 countries of the world, which included 2.3 billion populations. The US imposed sanctions on Iran were:

1. In 1995, investing for developing Iranian oil fields was prohibited.
2. Several months later, every economic tie with Iran was prohibited.
3. In 1996, the last laws on sanctions were intensified.

Bush Jr.'s presidency term:

In the presidency term of Bush Jr., the previous sanction items were extended.

Obama's presidency term:

In this term, the previous sanctions were extended again.

In addition, the Security Council influenced Iran's economic fluctuations indirectly by issuing resolutions No 1737, 1747, 18030 and 1835 against Iran's peaceful nuclear programs. These resolutions extend the sanctions imposed on Iran, strengthened the financial sanctions and enforced American companies and their related organizations to obey these sanctions against Iran. Under the pressures of US, Iran's Central Bank was the subject of sanctions in the midst of March 2011. This study examines the effects of mentioned sanctions on stock price and investors' decisions based on mental accounting.

6. SHARE PRICE

The stock exchange is a place for trading securities such as common stock, bonds, right for buying and selling securities, and future contracts. The most important duty of stock exchange is to create a market for securities, so that every time you can buy securities in a fair price, mostly close to the price of last transaction. In such a market, investors will be able to change their securities to cash immediately, or devote their assets to stock exchange for investment. Another important duty of stock exchange is to set securities' price. The prices in this market are justified based on the orders for buying and selling (supply and demand) securities; all the orders for buying and selling securities are collected in the market, and the share price is determined based on the amount of supply and demand. An efficient market should have the ability to evaluate the published information in the stock exchange and reflect it in the securities' price. In other words, stock exchange acts sensitively toward different events and evolutions. In other countries, the companies who tend to sell their shares to the public use the services of investment banking firms for determining their shares' value and offering them to public. These firms, which are experienced in determining the companies' equity securities, set the price of the shares according to public conditions of capital market, analysis of financial conditions, Outlook for corporate profitability, and the share price of similar companies. In addition to setting the share price, these firms are responsible for public supply and demand of shares. Because of the high risk and related concerns about lack of trading experience and the ambiguity of liquidity ability, the share price of companies whose shares are being offered to public for the first time is often lower than the share price of similar companies that are more experienced in shares transactions. There

is no investment bank in Iran, so Tehran Stock Exchange is responsible for setting the base price. Unfortunately, disregarding scientific basis in pricing the shares and considering the opinions of governmental organizations responsible for supplying share has caused the determined share prices not to have a close and systematic relationship with the real values of these shares.

7. THE SIGNIFICANCE OF CHANGES IN SHARE PRICE

The fluctuation in the share price in stock exchanges is not only a normal matter, but also a routine since the price of shares and other securities represent all the effective factors, including outer and inner factors. Therefore, whenever there is a particular change in the effective factors, it will be reflected unconsciously in the share price. Investors' expectations are expressed in the shape of their expected yield. Yields and benefits of investment in companies' shares can be in the shape of annual cash flow benefit, bonus shares, and granting preferential shares which are directly under the influence of company's decisions, especially the management and/or due to the changes in the share price. The share price is under the influence of factors inside and outside the organization, and with each one of them, it is exposed to fluctuation and changes. The prediction of changes in the share price needs to detect behavioral patterns of share price. As long as these behavioral patterns are detectable, investors can choose the best shares by evaluating their own shares and other available shares in the market; and therefore, they can keep, sell or sometimes substitute their shares with other shares. The changes in share price attract the attention of every investor. Investors, who have long-term goals in investment, somehow act against the share price and the related changes. The price change is an effective source of information for evaluation of the institutions' conditions, comparative evaluation with other units, evaluation of managers' proficiency, and most important amongst all, it influences the investors' decisions.

Stock Valuation Schools:

There is a lot of sensitivity toward the process of prices in stock exchange. It has caused the changes related to this phenomenon to be analyzed regularly. In general, there are two analyzer groups in market, which include:

- a) Technical analysts or chartists.
- b) Fundamental analysts or fundamentalists.

8. LITERATURE REVIEW

Hill (1997) investigated the response of investors to the political-social changes in South East Asia's market, and his research's statistical population consisted of 1450 investors with minimum capital of 30,000 dollars. He investigated 13 factors in the evaluation of political risk and its interference in investors' decision-making, the most important of them included political economy expectations, failure in governmental planning, political leader effectiveness, confliction and agitation in foreign policy, government administrative corruption, militarism in politics, political tensions. According to him, the most significant feature of political factor was its unexpectedness and its suddenness (in comparison with economic factors). This factor is one of the most important factors affecting the investors' decision and price changes, especially in South East Asian developing countries that have unstable political structures. Grinblatt and Han (2001) showed in their study that does not necessarily correspond to logical models of decision making in economic texts, as mental accounting appears as a different approach of decision-making scenarios. Based on mental accounting, which is known as a behavioral basis, people open independent accounts in their mind for evaluating each financial decision, so that they can evaluate each decision's outcomes (positive or negative) separately. Mental accounting prepares a framework in which decision makers can determine a set of reference points for each account and estimate its gains and losses, and then observe the difference between different kinds of accounts by using prospect theory, and finally make their decision. Investors' decision-making models based on mental accounting can explain the exceptions in financial markets reported by behavioral-financial management. Rob et al. (2006) showed in their study that although the annual yield rate is an important feature for credit decisions, overall cost is more

important for evaluating payback schemes, because most of the consumers examine the credit schemes based on mental accounting.

9. RESEARCH HYPOTHESIS

The following hypothesis is postulated in the study:

H1: In the time of sanctions, investors make their investment decisions based on mental accounting.

10. RESEARCH METHODOLOGY

Numerical analysis deals with adjusting, examining and using approximate calculation methods for solving those continuous mathematics problems against discrete problems that are not solvable using analytical and accurate methods. Some of the problems related to numerical calculations come directly from calculus. Numerical linear algebra and the solution of linear and nonlinear differential equations related to physics and engineering are other fields that use numerical analysis. Estimating the present errors in solving the problems is one of the most important parts of numerical analysis. These errors exist in repetitive methods, because they obtained approximate answers are somehow different with the problems' exact answers; or when direct methods are used for solving the problems, the errors are derived from rounding off the numbers. In numerical calculations, we can estimate the amount of error at the end of the method, which has been used for solving the problem. Rounding off is a procedure in which a number is substituted with another one that has the closest value to the original number, so that the numbers become shorter or simpler. For example, 23.4476 dollars is rounded off to 23.45 dollars. Rounding off the numbers leads to the creation of rounding error, which is the difference between the original number and the rounded number. There are many ways for rounding off a number like y to a whole number such as q . The most common methods include:

Round down (or take the floor): $q = \text{floor}(y) = \lfloor y \rfloor = -\lceil -y \rceil$

Round up (or take the ceiling): $q = \text{ceil}(y) = \lceil y \rceil = -\lfloor -y \rfloor$

Round towards zero: $q = \text{truncate}(y) = \text{sgn}(y) \lfloor |y| \rfloor = -\text{sgn} \lceil -|y| \rceil$

Round away from zero: $q = \text{sgn}(y) \lceil |y| \rceil = -\text{sgn} \lfloor -|y| \rfloor$

Another issue in numerical analysis is relative and absolute error. Absolute error is the difference between the initial or original amount of a quantity and its secondary amount. If X shows the initial amount and X' the secondary amount, then according to definition, the absolute error would be: $X - X' = \pm \Delta X$.

Relative error is the ratio between the absolute error of a quantity with its original value. If the absolute errors of the a, b, \dots, c original values are Da, Db, \dots, Dc , and S is the sum of a, b, c original values, and DS is the absolute error of S , the following equation will always relate them together:

$$Dcc + Dbb + Daa = DsS + \dots$$

It means that the relative error of the sum is equal to the sum of relative errors of plural component quantities. In other words, the absolute value of the absolute error divided by the original value is called relative error:

$$\text{Relative Error} = \left| \frac{\pm \Delta x}{x} \right|$$

According to the definition, the relative error multiplied by 100 that is shown as percentage, is called the percent error or the percent relative error:

$$\left| \frac{\pm \Delta x}{x} \right| \times 100 = \% \dots$$

In Probability and Statistics, standard deviation is the measurement of dispersion for a probability distribution or random variable, and its values' diffusion representative is around the mean value. Standard deviation is often demonstrated by σ which can be calculated by:

$$\sigma = \sqrt{\frac{1}{N} \sum_{i=1}^N (x_i - \bar{x})^2}$$

Where the average \bar{x} is the mathematical expectation of data, which is in turn calculated by the following equation:

$$\bar{x} = \frac{1}{N} \sum_{i=1}^N x_i = \frac{x_1 + x_2 + \dots + x_N}{N}$$

The relationship of variance and standard deviation: If X is a random variable with the mean of μ , then:

$$E[X] = \mu$$

Where the E operator is the sign of mathematical expectation or the mean of X ; as a result, the standard deviation of X is estimated as:

$$\sigma = \sqrt{E[X - \mu]^2} = \sqrt{Var(X)}$$

Where σ is the standard deviation, and is equal to the square root of variance.

By using the above-mentioned equations in this research and then grouping the companies according to their types, the procedure of prices during two intervals was compared (March 2012 and April 2012).

11. DATA EXTRACTION PROCESS

Required financial data for testing the hypothesis were extracted from Tadbir Pardaz applications and Tehran Stock Exchange official website. In addition, we used EXCEL software for creating required databases.

12. STATISTICAL POPULATION

The statistical population of this study includes listed companies in Tehran Stock Exchange that have met the following conditions: their fiscal year should end in the end of March; they shouldn't have a change in their fiscal year during the time of investigation; they should not be investment companies, financial brokers, banks or leasing companies; their data should be available.

13. RESEARCH SCOPE

Domain Scope:

Tehran Stock Exchange was the domain scope of this study for choosing the statistical population, choosing statistical sample, collecting data, and testing the hypothesis.

Time Scope:

The period for collecting data and testing the research hypothesis was before the sanctions in March 2012 and after sanctions in April 2012.

14. RESEARCH FINDINGS

As shown in Table 1, we divided the 141 available companies to 15 groups according to their type of business.

Table 1. Statistical Populations

Type	Number
Mass Production	13
Automobile and Auto Parts	12
Electrical Devices	7
Others	9
Investments	13
Cement, Lime, and Gypsum	10
Chemicals	13
Foods except Sugar and Sugarloaf	8
Oil Products	9
Base metals	9
Tile and Ceramic	6
Non-metal Minerals	8
Machinery and Equipments	7
Metal Products	5
Pharmaceuticals	12
All the Companies	141

Among these companies, automobile and auto parts, oil products, and pharmaceutical companies faced with negative growth of their prices, and other companies faced with growth of prices, and the price index for all the companies had a positive growth. Chemical companies had the highest positive growth with total sum of 9680 and average of 745 units, and the utmost decline belonged to automobile and auto parts with total sum of – 1993 and average of – 99 units. We observed increment for all the companies with total sum of 29840 and average of 212 units (Table 2).

Table 2. Growth Index

Type	Average Differential Index
Mass Production	52.69230769
Automobile and Auto Parts	-99.41666667
Electrical Devices	245.1428571
Others	798.5555556
Investments	8.846153846
Cement, Lime, and Gypsum	261.10
Chemicals	744.6153846
Foods except Sugar and Sugarloaf	449.50
Oil Products	-415.6666667
Base metals	769.2222222
Tile and Ceramic	131.1666667
Non-metal Minerals	99.125
Machinery and Equipments	1970
Metal Products	89.70
Pharmaceuticals	-95.58333333
All the Companies	211.6312057

Another index is the total sum and average of the fluctuations' difference absolute values, in which the chemical companies and food companies except sugar and sugarloaf companies, which comes after that, had the highest amount of fluctuations in their prices, as the amount of fluctuations for chemical companies was total sum of 11238 and average of 846 units, and for food companies except sugar and sugarloaf companies, this amount was total sum of 9934 and average of 1168 units indicating the magnitude of price changes for these companies, while the lowest price fluctuations belonged to ceramic and tile, and non-metal minerals companies with total sums of 1025 and 1063 units and average of 171 and 133 units, respectively. In addition, for all the companies, the total sum and average of the fluctuations' difference absolute values were 64944 and 461 units (Table 3).

Table 3. Average of the Fluctuations' Difference Absolute Values

Type	Absolute Values of Average Divided by Number
Mass Production	225
Automobile and Auto Parts	160.5833333
Electrical Devices	475.7142857
Others	899.6666667
Investments	165.9230769
Cement, Lime, and Gypsum	261.1

Chemicals	864.4615385
Foods except Sugar and Sugarloaf	1168
Oil Products	739.4444444
Base metals	807.6666667
Tile and Ceramic	170.8333333
Non-metal Minerals	132.875
Machinery and Equipments	205.5714286
Metal Products	559.4
Pharmaceuticals	255.5833333
All the Companies	460.5957447

Regarding the percentage change and the prices' fluctuations in two time periods (without regarding increase or decrease in the prices), chemical companies with 23.30%, base metal companies with 19.10%, and food companies except sugar and sugarloaf companies with 18.70% had the highest percentage in price fluctuations respectively, and the lowest percentage in price fluctuations belonged to pharmaceutical companies with 2.90% and non-metal mineral companies with 7.30%. For all the companies, the prices' fluctuation percentage was 13.10% (Table 4).

Table 4. The Share Prices' Fluctuations

Type	The prices' fluctuations percentage in two time periods (without regarding increase or decrease in the prices)
Mass Production	10.35373846
Automobile and Auto Parts	9.107341666
Electrical Devices	12.52949571
Others	13.29421111
Investments	17.43423077
Cement, Lime, and Gypsum	9.502865
Chemicals	23.3305
Foods except Sugar and Sugarloaf	18.7361375
Oil Products	16.1245778
Base metals	19.13268889
Tile and Ceramic	5.206581667
Non-metal Minerals	7.38584625
Machinery and Equipments	14.69994286
Metal Products	17.034912
Pharmaceuticals	2.9670575
All the Companies	13.17323142

Regarding the percentage change and the prices' fluctuations in two periods (regarding increase or decrease in the prices), chemical companies with 18.90% and base metal companies with 18.30% had the highest percentage in price increment, and the highest percentage in price decline belonged to automobile and auto parts companies with -1.90% and pharmaceutical companies with -0.6%. For all the companies, there was a 7.60% increase in prices (Table 5).

Table 5. The Share Price Fluctuations

Type	The prices' fluctuations percentage in two time periods (regarding increase or decrease in the prices)
Mass Production	3.672121538
Automobile and Auto Parts	-1.949633333
Electrical Devices	10.49030286
Others	8.737096667
Investments	8.680076923
Cement, Lime, and Gypsum	9.502865
Chemicals	18.9685
Foods except Sugar and Sugarloaf	2.47753375
Oil Products	4.386334444
Base metals	18.390233333
Tile and Ceramic	2.209793333
Non-metal Minerals	5.676275
Machinery and Equipments	14.11286143
Metal Products	13.981956
Pharmaceuticals	-0.682026667
All the Companies	7.623134397

In addition, the amount of standard deviation for two periods of March 2012 and April 2012, and the ratio of standard deviation in April 2012 to the same amount in March 2012 are demonstrated in Table 6.

Table 6. Results of the study

Type	First Standard Deviation	Second Standard Deviation	Ratio of Second Standard Deviation to First Standard Deviation
Mass Production	809.6053	793.1296	0.979649713
Automobile and Auto Parts	775.5246	593.091	0.76476104
Electrical Devices	3506.134	3333.825	0.950854987
Others	15371.78	17208.91	1.119506605
Investments	792.7488	648.7699	0.818380173
Cement, Lime, and Gypsum	1927.116	2004.935	1.0403881067
Chemicals	4676.517	5430.245	1.147171068
Foods except Sugar and Sugarloaf	4017.136	5430.245	1.351770266
Oil Products	5173.785	3682.053	0.711674915
Base metals	3154.084	4376.338	1.387514727
Tile and Ceramic	2211.271	2307.124	1.043347468
Non-metal Minerals	3980.159	4041.64	1.01544687
Machinery and Equipments	805.9359	906.0862	1.124265838
Metal Products	5840.489	5117.193	0.876158315
Pharmaceuticals	4171.621	4010.719	0.961429382
All the Companies	5114.665	5552.463	1.085596613

15. CONCLUSIONS

The share price is one of the most important data used in economic analysis by decision makers. The fluctuation in the share price in stock exchanges is not only a normal matter, but also a routine one, since the price of shares and other securities represent all the effective factors, including outer and inner factors. Therefore, whenever there is a particular change in the effective factors, it will be reflected unconsciously in the share price. An efficient market should have the ability to evaluate the published information in the stock exchange and reflect it in the securities' price. The purpose of this study is to find whether the sanctions have affected the investors' behavior in buying and selling their investments or not. According to the test of hypothesis in this study, it was concluded that total share price index showed a positive growth during the sanctions and after that, consequently, the recent sanctions imposed on Iran had no significant influence on the Stock Exchange.

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