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## The Examining and Evaluating of the Relation between Common Fundamental Factors and Share Value Increase of the Listed Companies in Tehran Stock Exchange

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### ABSTRACT

In line with theoretical basics of share value, the current research, has dealt with the examining and evaluating of financial statements' common factors and share value increase of the listed companies in Tehran stock exchange. The paper is a descriptive and applied-research. The spatial domain of the study consists of the all listed companies on Tehran stock exchange during 20/3/2002 to 19/3/2012. Hence, 48 companies are the samples of the research. To examine the relation between the variables of the study, financial statements' common factors (long-term liability, cash flows, stock price increase, and initial stock price) and the amount of stock price growth of companies which their share values became double, were considered as independent and dependent variables, respectively. Then, the relation of each variable was examined. Hence, there has been provided 8 hypotheses and the related data were collected. Eviews 7 software is used to examine the hypotheses. Additionally, Chow and Hausman, and Regression test have been used to examine the relation between the variables of the study (financial statements' common factors and share value).

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## INTRODUCTION

Some philosophers believe that "The future is not predictable; nevertheless, it must be made by ourselves", hence, to achieve the success, it is necessary for people to intervene efficiently in order to make something reality. Since Prediction plans a future outlook, it provides a framework to decision-making among unknowns. A capital market is also an unknown market (Afshari, 2013). According the empty potentials in Iran's capital market and the ability to fundraising, in one hand, and the effort of authorities for expanding capital markets in recent years, on the other hand, it provides a background to research about Iran's capital market. Regarding various effective factors in the capital market and their continuous changing with passing of time, the importance of these investigations are highlighted. The objective of establishing a stock market is: "using of natural and juridical persons' savings in outside or inside of the country to financing of investment plans". The national capital market should not only depend on the owners of macro capitals, but also includes public participation in order to meet the economic goals with participation of all social classes. Since a stock market deals with all people, the reason of fall or rise of stock prices is not realizable for everyone, that's why the market value to be stayed away from some people. Hence, some researches dealing with the behaviors which effective on rising and falling a stock prices are highlighted, because a stock price and its changes-whether it is close to intrinsic value of the company or not- form the all behavior of a capital market like others. According to economic experts, the actual stock price of each enterprise is determined by its revenue and efficient management. Of course, economic and management performance of economic production unit have essential role in determining a stock value (Shariat panahi, Khosravi, 2008).

A capital market has various functions as reaction of the economy. One of the essential mechanisms is to create mechanisms which help the financing tools to be increased in liquidity that finally result in investment security increase (Pourzamani *et al.*, 2013). The main role of a stock exchange which is the central basic of market that composed of capital is fundraising and directing savings and dispersed liquidities in society toward the optimized paths. In fact, the role of stock exchange is to dedicate optimized scarce financial resources, but meeting the above goal by a stock exchange and acceptance of all people about it is subjected to creating

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investment security for investors. Because investors (including people and investment companies) are worried about various issues and companies' share which is mainly resulted from high fluctuation in stock prices. It is also led to investment recession and lack of efficient use of resources (Sajjadi, 2013). It is clear that many factors can influence on the stock value of the listed companies in stock exchange and their role in increasing profit has been investigated. Most investors face with a question that what information can help people to make an optimized decision. The accounting process would provide the information related to operation, operation results and source of companies' cash for a one year period. Investors and analysts use this information to identify the situation of the economic unit (Shariat panahi, Khosravi, 2013). The general objective of this paper is to examining and evaluating of the relation between common fundamental factors and share value increase of the listed companies in Tehran stock exchange.

Conducting various investigations which became the basis of Miller theory in optimized capital structure, Modigliani and Miller (1958-1963) stated that tax savings resulting from the use of debt would increase firm value. Kahneman and Tversky (1974) said that people give more weight to available information without examining previous information or paying more attention to the basis of providing information. They have also found that the investors have considered some patterns in random processes. In his investigations, Benz (1981) demonstrated that those stocks with low market value have higher average yield than those stocks with high market value (1981, p: 3-18). Myers & Majlof (1984) and Stein (1992) studies indicates that the companies with relatively high ranking and value in the market are faced with devaluation of stocks, if their share issue and selling them get increased. Skate and Molliner (1986) concluded in their research that averagely, when companies issue their stocks, the stock price is lessen and if they decide to redeem the stocks, the stock price is increased. Stool (1990) believes that managers increase wealth to expand the firm size, hence, they tend to give bonus to themselves which result in negative impacts on stock price. Collin *et al*, have empirically dealt with the relation between book value and profit value with American companies during a 40 years period (1945-1993). Their findings indicated that there was no significant change between book and profit value with firm value, yet the relation between book and profit value with firm value has been regularly increased, while the relation between profit and firm value has been continuously decreased during this period.

In their researches about evaluating of stock issue and long-term facilities impact on dividend yield and stock price of the listed companies in Tehran stock exchange, Bohrani & Ghatebi (2012) have examined the listed companies in Tehran stock exchange during 1386 to 1390 and concluded that there is a significant difference between the stock price of companies issuing their stocks and the companies which have received long-term facilities. However, it can be said that the stock price of the companies which issued their stocks is higher than the companies which have received long-term facilities. According the obtained results, it is recommended that financing through capital market and stocks for companies is put in the first priority, if the past behavior of the market can be the right basis for the future behavior. Also, Galitzo & Salvador (2006) predicted that the period of firm activity and asset turnover ratio effects on stock price, while the results indicating there is no significant relation between these variables. The result of this research which is similar to Bernard (1995) demonstrated that there is a meaningful relation between book value per share and share price. It is generally concluded that some accounting variables (such as dividend yield, return on assets and book value per share and some characteristics of the firm (previous share price and firm size) influence on share price. The results of Ebrahimi (2008) research, namely "the influence of accounting variables and firm characteristics on share price of the listed companies in Tehran stock exchange" indicates that there is a significant and direct relation between dividend per share and share price that is corresponded with Dichev (1997) result.

## 2. Methodology:

### 2.1. The research hypotheses:

- There is a significant relation between long-term liabilities and the amount of stock price growth of companies which their share values became double.
- There is a significant relation between companies' cash flows and the amount of stock price growth of companies which their share values became double.
- The greatest increase occurred in stock prices of companies which their stock value became double in the first year of price growth.
- There is a significant between the initial stock price and the amount of stock price growth of companies which their share values became double.

### 2.2. The scope of the research:

The present study is placed in accounting and financial management frameworks in which examines and assesses the financial statements' common factors and share value increase of the listed companies in Tehran stock exchange. The research started on March 2001 and ended in February 2012. During this period, various steps are progressed including case studies, collecting data, extracting and analyzing of results and preparation of reports.

### 3.2. Research method, population and statistical sample:

Unlike the other human sciences issues, there are different comments and views about research method. In the most general classification, the research method was library and field kind which both of them are applied here. The current method is a kind of Non-experimental survey method. Totally, if we consider the classifications based on the objective, the current study is regarded as practical research, and if the classifications are regarded as their nature and methods, it can be assumed as descriptive and non-experimental (field and survey). The statistical population of the research is the listed companies in Tehran stock exchange until 19/3/2012, because the scope of issued financial statements ranged from 20/3/2002 to 19/3/2012. Finally, the listed companies in Tehran stock exchange are included in statistical populations which have the following conditions :

- They have been accepted in Tehran stock exchange during 2002 to 2012.
- They should have not been related to financial sector, financial services, insurance corporations, holding and banks due to different natures.
- Their financial year ends in 18/3/2002 and their activities should have not been stopped during this period.

According to the above conditions, 125 companies remain and regarding the main hypothesis of the research, there are just remained 48 companies during the 5 years period which their share value became two fold. We finally have decided to select all 48 companies. After initial examinations, it was indicated that just a few companies got their share price doubled during the 5 years period. Therefore, we extended this time to 10 years. Then, it was recognized that the number of companies which their share value became doubled got two fold. The statistical population of the current research covers all automobile companies listed on Tehran stock exchange during 2008 to 2012. 28 companies are determined as statistical samples based on this formula.

### 4.2. Data collecting method:

In this research, financial information were obtained from financial statements and descriptive notes related to the studied companies with the help of Tehran stock exchange CD's, stock exchange website, and Tadbir Pardaz and Rah Avard Novin software.

### 5.2. Operational definition of the research variables:

However, there have been considered some indexes to measuring common basic factors and we deal with operational description of each index:

*Long-Term Debt (LTD)*: is obtained from the total LTD of each company's balance sheet.

*Cash Flows (CF)*: is obtained from the total cash flows of each company during its financial year which is determined in balance sheet as net increase (decrease) in cash during the period.

*Share price increasing in the first year growth (FP5)*: is the market share price at the end of fiscal year in the first year growth.

*Growth price of each share (GP)*: is obtained from the below equation:

$$GP = \frac{P_t - P_{t-1}}{P_{t-1}}$$

Where,  $P_t$  is the share price in the year  $t$  and  $P_{t-1}$  is the share price in previous year.

*The growth of five years stock price (GP5)*: is obtained from the above equation, but the base year is  $t-5$  and  $t$  is the last growth year which share price became two folded.

*The increasing of share price at the first growth year (DPI)*: is obtained from the difference of share price in the first two years of the study for each company.

*The increasing of share price at the first growth year (DP5)*: is obtained from the difference of share price at the last growth year between the share prices at the first growth year.

### 6.2. Data analysis method:

The research method is calculated by panel and cross-sectional techniques. Chow (F-limer) and Hausman test has been used to select the methods of cumulative least squares, fixed effects and random effects. To estimating the above models and conducting the mentioned tests, EvIEWS 7 software has been used after initial data processing.

### 3. Research results:

The research method is conducted by panel and cross-sectional techniques. Chow (F-limer) and Hausman test has been used to select the methods of cumulative least squares, fixed effects and random effects. To estimating the above models and conducting the mentioned tests, EvIEWS 7 software has been used after initial data processing.

**Table 1:** Central indexes and distribution of the research variables.

Variable statistical quality	Average	Mean	Max.	Min.	SD
Share price increasing in the first year growth	-1127.18	-563.5	1199	-100016	1990.96
Long-term liability	69286.796	23374	1269210	613	135726
Cash flows	9602.796	970	664187	-368357	68981.53
The initial price in the first year growth	2473.04	1388	9812	209	2243.7

To test whether the model is fitted to the first hypotheses tests (the first and second hypotheses), we should firstly test the methods of cumulative least squares, fixed effects and random effects via Chow test. If the cumulative least squares model is accepted, we go on to examine and test the hypotheses without referring to the other methods, otherwise Hausman test is used to select between fixed effects and random effects methods in order to pick up the best one. To do so, we should firstly provide our hypotheses :

H1: Cumulative least squares method

H2: Cumulative least squares with fixed effects method

The statistics of Chow test is :

**Table 2:** Chow test

Confidence level	Degree of freedom	Statistics	Chow test
0.000	(51.182)	2.807638	Q oss-section/period f
0.000	51	139.296358	Q oss-section/period

As it can be seen, According to the test results, the acceptable error level is lower than 0.05, hence the H0 is rejected and we are not allowed to use the least squares with cumulative data. Therefore, the least squares with fixed effect are confirmed. Now, we should examine the fixed effects and random effects methods using hausman test. We provide our hypothesis :

H0: The least squares with random effects method

H1: The least squares with fixed effects

The Hausman test statistics are :

**Table 3:** Hausman test

Confidence level	Degree of freedom	Statistics	Hausman Test
0.000	6	46.22362	Q oss-section random

According to the test results, the acceptable error level is lower than 0.05, hence the H0 is rejected and we select the least squares method with fixed effects to examine the hypotheses. The estimation results are offered in the following table based on this method.

**Table 4:** The results of the first and the second hypothesis test.

Dependent variable: The stock price growth rate				
Variable	Coefficient	Standard error	t-statistics	Prob
Long-term liability	-1.66	6.38	-2.6.	0.0098
Cash flows	-2.92	7.56	-0.38	0.7000
F-statistics	3.89		Durbin-Watson statistic	2.454537
Prob (F-statistic)	0.000		(R) coefficient of determination	0.549326

**Table 5:** The results of the third hypothesis.

Dependent variable: The increasing of five years stock price				
Variable	Coefficient	Standard error	t-statistics	Prob
The increasing of stock price in the first year of growth	-0.000394	0.000292	-1.348618	0.1841
F-statistics	1.818769		Durbin-Watson statistic	1.639780
Prob (F-statistic)	0.184		(R) coefficient of determination	0.038035

**Table 6:** The results of the fourth hypothesis.

Dependent variable: The increasing of five years stock price				
Variable	Coefficient	Standard error	t-statistics	Prob
The increasing of stock price in the first year of growth	0.11	0.79	0.14	0.8823
F-statistics	0.022179		Durbin-Watson statistic	1.835227
Prob (F-statistic)	0.882		(R) coefficient of determination	0.000482

*The first hypothesis:* There is a significant relation between long-term liability and the stock price growth rate of the companies which their stock value became doubled.

The statistical assumption of the above hypothesis is provided here:

$H_0$ : There is no significant relation between long-term liability and the stock price growth rate of the companies which their stock value became doubled.

$H_1$ : There is a significant relation between long-term liability and the stock price growth rate of the companies which their stock value became doubled.

According to the obtained results and regarding to table 4, since 0.0098 is fewer than 0.05 acceptable error level, the  $H_0$  is rejected and the opposite hypothesis (the researcher's claim), i.e. the relation between long-term liability and stock price growth rate is confirmed. On the other side, the coefficient of -1.66 indicates that there is a reverse relation between the two variables (confirming the first hypothesis).

*The second hypothesis:* There is a significant relation between the firms' cash flows and the stock price growth rate of the companies which their stock value became doubled.

The statistical assumption of the above hypothesis is provided here:

$H_0$ : There is no significant relation between the firms' cash flows and the stock price growth rate of the companies which their stock value became doubled.

$H_1$ : There is a significant relation between the firms' cash flows and the stock price growth rate of the companies which their stock value became doubled.

According to the obtained results and regarding to table 5, since 0.7000 is more than 0.05 acceptable error level, the  $H_0$  is not rejected, therefore the assumption of relation between cash flows and the stock price growth rate (rejecting the second hypothesis).

*The third hypothesis:* The maximum stock price growth rate of the companies which their stock value became doubled is occurred in the first year of price growth.

The statistical assumption of the above hypothesis is provided here:

$H_0$ : The maximum stock price growth rate of the companies which their stock value became doubled is occurred in the first year of price growth.

$H_1$ : The maximum stock price growth rate of the companies which their stock value became doubled is not occurred in the first year of price growth.

According to the obtained results and regarding to table 6, since 0.8823 is more than 0.05 acceptable error level, the  $H_0$  is not rejected. Also, the regression significance of this hypothesis has not an acceptable confidence level; therefore the third hypothesis is rejected (rejecting the third hypothesis).

*The fourth hypothesis:* There is a significant relation between the initial stock price at the beginning of growth and the stock price growth rate of the companies which their stock value became doubled.

The statistical assumption of the above hypothesis is provided here:

$H_0$ : There is no significant relation between the initial stock price at the beginning of growth and the stock price growth rate of the companies which their stock value became doubled.

$H_1$ : There is a significant relation between the initial stock price at the beginning of growth and the stock price growth rate of the companies which their stock value became doubled.

According to the obtained results and regarding to table 5-4, since 0.1841 is more than 0.05 acceptable error level, the  $H_0$  is not rejected. Also, the regression significance of this hypothesis has not an acceptable confidence level; therefore the fourth hypothesis is rejected (rejecting the fourth hypothesis).

#### 4. Conclusion and recommendation:

In the first hypothesis, there is a significant relation between long-term debt and the stock price growth rate of the companies which their stock value became doubled. According to it, Fen *et al.* (2008) results demonstrate that selecting leverage (using debt) has positive relation with assets fluctuations and firms size and has negative relation with profitability and price to book ratio. Also, Arotis (2007) found the hypothesis demonstrating the negative relation between the companies' debt ratio and their growth with quick ratio and interest coverage ratio is justified.

In the second hypothesis, there is a significant relation between the firms' cash flows and the stock price growth rate of the companies which their stock value became doubled. According to it, Bradsha, Richardson and Slowan (2006) concluded that there is a reverse relation the net cash related to each financing classification (share issue and borrowing) with dividend yield and profitability of a company. Moradzadeh *et al.* (2010) found out that there is no significant relation between them in 95% confidence level. However, the results obtained from Haghghat and Bakhtiari (2010) studies indicate that there is a significant relation between free cash flow and market value of owners' equity, but the relation is weaker than the other profit components.

Regarding the third hypothesis, the reactions of people are not reasonable in some cases and cause to create malformations, such as excessive increasing and decreasing in prices. Although the market would find his error after some time and return to the balanced situation, economic behavior is assumed as unreasonable behavior in a market that it is maybe considered a reasonable reaction to investors' lack of confidence (Haghghat &

Bakhtiari, 2008). Measuring the third hypothesis, the fact that tells share price of the companies which their share values become doubled occurring in the first year growth is rejected.

In the first hypothesis, the results of statistical tests indicating there is no relation between initial stock price at the beginning of growth and stock price growth rate. Ebrahimi *et al*, (2010) came to a conclusion that there is a strong and direct relation between stock price of the previous period and the future share price which it is compatible with the studies of Antonidis and Van Der Sar (2011), but it is in confliction with random walk model. The notable point is that Galizow and Salvador (2006) demonstrated that there is no significant relation between return on assets and share price.

The research's results indicate that the possibility of using quantitative method for processing accounting information and preparing them for decision-making is still existed. The scientific understanding of reason for accounting profit changes and the companies' cash flows is the opportunity for replacing the scientific analyses for the subjective findings which should never be ignored. The results indicate that there is a significant relation between long-term debt and share price growth. Thus, it seems the companies and conservative managers who fear from debt and liability tending to avoid reasonable and suitable due to the risk of them should revise their views and decisions. The results of the research may increase the knowledge of firms' managers and the other users of stock market value. Hence, it is suggested that people should have avoid from wasting the scare economic sources using these information.

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