

A study on relationship between rewarding board of directors and share liquidity

Hassan Ghodrati* and Gholamhassan Taghizad

Department of Management and Accounting, Kashan Branch, Islamic Azad University, Kashan, Iran

CHRONICLE

ABSTRACT

Article history:

Received January 20, 2014

Accepted 5 July 2014

Available online

August 23 2014

Stock liquidity

Reward of board of directors

ROA

ROE

Q-Tobin

Operational cash flow

This paper presents an empirical investigation to study the relationship between the liquidity and the reward of board of directors on 136 selected firms listed on Tehran Stock Exchange over the period 2007-2011. The study considers nine different factors including return on assets (ROA), return on equities (ROE), Q-Tobin, changes of ROA and ROE, etc. In our study, there is a direct relationship between firm sizes with reward of board's directors. In addition, there is a direct relationship between changes of ROE with reward of board's directors. Moreover, there is a direct relationship between changes of operational cash flow with reward of board's directors. Finally, there is a direct relationship between changes of Q-Tobin ratio with reward of board's directors but the relationship was reverse for some years. These evidences confirm that there was a meaningful relationship between rewarding board of directors and share liquidity.

© 2014 Growing Science Ltd. All rights reserved.

1. Introduction

One of the main functions of financial markets especially shares exchange is cost reduction, acceleration, and facilitation in the process of changing financial assets to liquidity or vice versa, that is so-called Liquid. Liquid is the susceptibility of fast buying and selling considerable amount of exchange with the least effects on the price. This matter draws the researchers' attention in both individual and marketing aspects of stock exchange over the past few years. In order to examine the relationship between liquid and liquid index in this study, optimized allocation of resources is considered as the main aspect of the process. Liquid capability shows financial assets proximity (nearness) to cash. Liquid capability of the financial property via its alteration capability to cash is being evaluated in every time without imposing loss (with nothing out of pocket). One can change negotiable exchange into cash (payment) any time via efficient sale in the market, but there is no guarantee about the loss. One of the main functions of financial markets specially Capital Market, is changing any kind of properties into exchange, and then increasing exchange liquid capability and reducing the risks on liquid. Financial markets facilitate cash payment access (YaqubNejad et al., 2011). Many organizations believe that human forces are considered as competitive advantage and the source of producing values (worthiness) in the organization. In this situation, each organization is

*Corresponding author.

E-mail addresses: dr_ghodrati42@gmail.com (H. Ghodrati)

responsible for saving its human resources and motivating them to increase utilization at work day by day by making use of various mechanisms, including giving rewards as the most important duty. Reward is a presentation of a desirable sequence to an individual in result of his good affair. In order to get people to repeat these tasks and increase the repetition possibility everyone has his/her own personal interest to this issue depending on one owns' taste or popularity and wealth status.

2. Literature Review

Jensen and Meckling (1976) investigated the conflict between stockholders and managers and reported that managers should be rewarded based on the value created for stockholders, in order to reduce agency costs. Reward based on the created value is a sound way to achieve this goal. Lambert (1983) studied the Agency theory in the form of long-term contracts. He reported that if the reward contract were performed for more than one year, both stockholders and managers would be in a better condition. At the end of a period, the manager should be rewarded based on his/her performance during the period and also during the previous periods. Consequently, the optimal reward contract should include the current period and the following year, in order to motivate the manager. An optimal contract builds the manager's current incentive to the future incentives, but not to the extent that the manager commits himself to stay at firm until the due date of contract.

Murphy (1985) reported in a study that managers' long-term reward schemes were influential in improving corporate performance. He stated that executive directors' resources depend on corporate performance through stock adoption, long-term performance schemes, and foremost, stock ownership. Conducting a comprehensive study, he indicated that there was a substantial positive relationship between executive managers' reward and performance. In addition, executive managers' resources depended on corporate performance through stock adoption, long-term operational schemes, and foremost, stock ownership, even if there were no relationship between executive managers' reward and performance. Jensen and Murphy (1990) studied the relationship between the reward paid to executives and their performance and argued that reward paid to executives was not an incentive to their performance. They, also, stated that the managers' reward depended on their performance in public joint stock company.

Ely (1991) studied the relationship between managerial remuneration and performance evaluation factors including stock market return, assets return, return after interest, and tax for various industries, and reported that there was a slight difference between different industries considering the relationship between these factors and corporate performance. Amihud and Mendelson (1991) reported that firms tend to adopt policies, which increase their liquidity of their stock, because liquidity could increase the company's return and value. Moreover, they reported that managers could increase the liquidity of their companies' stock through changing the firms to a stock joint public company, voluntary disclosure, and distribution of stock among the stockholders. Mehran (1995) examined the relationship between reward structure paid to executives, ownership, and corporate performance. He stated that both QTobin and assets return had a significant positive relationship with the percentage of stock owned by managers and the percentage of reward paid according to ownership. Arora (1996), in different researches, investigated the basis for measuring management rewards, and argued that the relative weight of using measuring tools in a management reward contract could depend on the intrinsic disorder of the performance measuring tools. Darrough et al. (1998) concluded that there was a relationship between reward schemes and return manipulation in some Japanese firms. Datar et al. (1998) reported that liquidity had an important role in explaining cross sectional changes in stock returns. Bolton and Thadden (1998) stated that ownership concentration could reduce the number of stockholders willing to trade stock. Maug (1998) studied price rise caused by stockholders' monitoring on activities and concluded that firms owning liquidity stock could enjoy stronger governance system. Peasnell, et al. (1998) studied the relationship between return management and managers' reward. They used nondiscretionary accruals variable as a representation for return management. They reported that there was a negative significant relationship

between accruals increasing return and the proportion of outer board of directors' members. Anderson, et al. (1999) reported that both cash reward and stock based reward had a positive correlation with accounting output and market output, but the relative impact of market output on stock based reward, compared with accounting output, was much more than its effect on cash reward.

Sarin et al. (2000) stated in their findings that the difference between the proposed sales and purchase price was positively associated with the ownership. Anderson et al. (2000) experimentally stated that short-term reward schemes, such as cash rewards, could help managers run firms more appropriately. Heflin and Shaw (2000) selected a sample of 260 firms and concluded that there was a positive relationship between the percentage of stockholders' block stock and the difference between proposed sale and purchase price of stock. They reported that in firms that have concentrated ownership structure, major stockholders had access to private information, and thus trades in which they were involved could face the trading parties with the adverse selection hazard. Therefore, both stock parties could increase the sale and purchase price difference to reduce the adverse selection; thereby, increasing the price difference of stock sale and purchase, stock trades in market and the liquidity of stock market were decreased. Dennis and Weston (2001) stated that there was a negative relationship between the sales price difference with both internal ownership and institutional ownership. Jones and Sharma (2001) investigated the relationship between return management and free cash flow in Australia and in firms with high and low growth. Their results recommended that there was a direct substantial relationship between discretionary accruals and free cash flows, in firms with low growth.

Palmiter (2001) examined management payment and benefits, and stock prices and reported that if the managerial payments and benefits were functions of stock prices, company value would be increased. Wang (2002) studied the relationship between liquidity and operational performance with firm value, comparing Taiwanese and Japanese companies. He used two indicators of assets return and stockholders' payment return for corporate performance and concluded that companies looking for bold policies in liquidity management, were capable of improving their operational performance, and as a result, they could increase their company value. Hartzel and Starks (2003) examined the relationship between managers' reward and institutional investment. In this study, they reported that even after controlling the firm size, industry type, investment opportunities and performance, there was a positive relationship between the institutional ownership structure and the amount of performance –based payment, and a negative relationship with the amount of reward. Elayan et al. (2003) studied executives' reward scheme and its effect on the performance of 73 firms listed in New Zealand Stock Exchange over the period 1994-1998. Their results indicated that firm size and business risk were factors influencing on the amount of reward.

Park and Shin (2004) studied the effect of board of directors' reward on return management in Canadian firms. Their results indicated that, unlike the outer board of directors, the action of return management was first decreased by non – bound board of directors, and then it was decreased more by the agency of the board of directors' active institutional stockholders. Mortal and Lipson (2004) concluded from their researches that there was a strong relationship between liquidity and capital structure-related decisions, and also, increasing the liquidity could raise the amount of stock distribution. Greg, et al. (2005) investigated the relationship between managerial cash reward and corporate performance for a large sample of English companies over the period 1994-2002. Their results indicated that, in general, there was a weak relationship between cash rewards and performance. Chung, et al. (2005) studied the relationship between return management and free cash flow in firms with low growth and reported that there was a significant direct relationship between mentioned variables.

Philippon (2006) examined the relationship between managerial incentives and return management and reported that during the years when the amount of discretionary accruals were increased, the managers had sold assets to achieve the desired level of return. Kato and Kubo (2006) evaluated the corporate performance for 10 years (1986-1995) based on accounting standards and reported that

Japanese managers' cash reward was sensitive to corporate performance. Rubin (2007) found that the amount of ownership was an index for trading activities, and ownership concentration was an index for distort switching and asymmetric information. Osma and Noguera (2007) studied the role of board of directors' reward and having a monitoring committee for the board of directors on limiting return management in some Spanish firms and reported that return manipulation was set through board of directors' reward, significantly. Agarwal (2007) investigated the relationship between liquidity and institutional ownership using adverse selection approach and information efficiency and concluded that there was a nonlinear relationship between them. Lesmond et al. (2008) conducted a research study on capital structure and stock liquidity and reported that using debts could lead to a reduction in stock liquidity. Bharath et al. (2009) investigated the relationship between capital structure and stock liquidity. They reported that firms with higher debt financing, had lower stock liquidity. Shah, et al. (2009) studied the relationship between board of directors' reward and return management and reported a negative relationship between institutional ownership and return management.

Fang et al. (2009) reported on the positive relationship between stock liquidity and corporate performance, using feedback theory. Quito (2009) studied the relationship between ownership structure and market liquidity in Brazil and Chile and concluded that the owners of large stock blocks were the reason for the reduction of accessibility to floated stock in market, and consequently, the reduction of market liquidity. Chung et al. (2010) examined corporation strategic effects and ownership structure on liquidity and found that institutional owners had created more liquidity. Tariq (2010) studied the relationship between the reward paid to executive director and corporate performance in 30 large Swedish firms over the period 2004-2008. They reported that there was a significant negative relationship between the payment and performance. Pereira and Zhang (2010) investigated the relationship between stock returns and liquidity fluctuation and reported that investors could benefit from the fluctuations, around the average of liquidity, and this benefit was decreased with the increase in the fluctuations range of liquidity. Bharath et al. (2011) studied the percentage of reward paid to five senior managers and corporate performance in the USA. They found that the higher percentage of reward paid to 5 senior managers leads to a lower QTobin ratio (weaker performance). Lang, et al. (2012) studied the relationship between transparency and liquidity and reported that the firms having more transparency had lower transaction costs and more liquidity. ZareStahriji (2002) investigated the factors influencing the capability of stock liquidity on Tehran Stock Exchange and concluded that in Tehran Stock Exchange and among the active firms, the capability of stock liquidity was associated with the amount of stock trading. Khoshtinat, et al. (2003) investigated the relationship between return management and managerial reward and reported that managers tend to practice return management in the periods of return and loss to increase their reward. Khani (2003) performed similar study on investigating the relationship between return management and managerial reward and reported that the method of paying reward to managers in Iran, was usually based on annual return. Namazi and Moradi (2004) investigated factors influencing on determining board of directors' reward using the information from Tehran Stock Exchange over the period 1999 – 2003. They reported that there was a significant relationship between assets return ratio and its changes, firm size, ownership concentration, financial risk with board of directors' reward in all companies. Namazi and Sirani (2004) studied the relationship between managerial rewards in Iranian companies and accounting return, return growth, and the market value growth, and investigated important factors in determining the reward of executive directors. They found that the longer and more stable the duration of contract, the more value for the company.

Poor Haidari and Hemati (2004) studied debt contracts, political costs, reward schemes, and return management ownership, and concluded that there was not any relationship between reward schemes and return management. Zarea (2007) concluded that shares liquid at first step had a close relationship with transactions volume and secondly with company value. Baqeri Mehmandusti (2007) conducted a research on evaluating the relation between shares liquid and decisions about investment structure of accepted companies in Tehran Exchange market. They reported that there was a relationship between shares liquid and capital structure. Risk of lack of shares liquid had a positive

significant relationship with firms' ratio and increasing their lack of companies' shares' liquid led managers to make use of more debts to meet their own activities financially during the recent years. Mehrani and Baqeri (2009) dealt with the effects of institutional shareholders and free cash flows on profit management in Tehran exchange market. They reported that there was a direct significant relation between profit management great free cash flows among companies with slight. Tehrani and Aabi (2009) conducted a research on portfolio output and function of investing companies with liquid ability ranking and their results indicated liquid ability ranking could influence on the operation of investing companies based on sharp index throughout all steps of the research and also profitability ratios. Sajadi and Mehrizi (2010) evaluated the relationship between schemes of managers' rewards and economic criteria for operation assessment. Rahmani et al. (2010) evaluated sharers liquid ability and institutional ownership relation in Iran. In order to separate the effect of institutional owners' various operations on sharers' liquid ability, they used these two criteria, institutional ownership rate (scale) and concentration. They reported that there was a positive and significant relationship between institutional ownership and sharers' liquid ability and institutional ownership Centrality. Karami et al. (2010) reported that there was a significant and positive relation between economic values added and exchange market liquid while strong and significant correlation between variables and company emphasizes their interaction to each other on some firms listed on Tehran Stock Exchange. MoradzadeFard et al. (2010) dealt with the role of onus items management on shares liquidity of accepted companies in Tehran exchange market. They reported that onus items management had a negative and significant influence on companies' shares liquid so that profit management led rather in information asymmetry and increased transactional costs. Izadinia and Rasaian (2010) investigated the relationship between ownership dispersion and stock liquidity. They reported that there was no significant relationship between ownership dispersion and stock liquidity in Tehran Stock Exchange. Hosseini (2010) performed a study on relationship between corporate performance and stock market liquidity and reported that there was a strong significant relationship between liquidity factors and corporate performance. YaqubNejad et al. (2011) studied the impact of corporation strategic system on stock liquidity in Tehran Stock Exchange. They reported that there was a positive significant relationship between non bound members of board of directors and stock liquidity; and there was a negative significant relationship between ownership centralization and simultaneous tenure of two positions of board of director's chairman and executive manager and stock liquidity. JavadBalenga (2012) studied the impact of ownership structure on the relationship between managerial reward and performance. They reported that ownership centralization had a positive significant impact on the relationship between managerial reward and corporate performance. Roodgar (2012) compared the capability of stock liquidity in Tehran Stock Exchange during different periods, using a paired test. Mohseni et al. (2012) investigated the effect of board of directors' reward on company performance on 140 listed companies in TSE over the period 2008- 2011 and concluded that there was a negative significant relationship between the amount of board of directors' and corporation performance with the error level of less than 10%.

3. Research Hypothesis

The main hypothesis of the survey investigates that there was a relationship between stock liquidity with reward of director's board. There are also some sub-hypotheses as follows,

- 1) There is a relationship between Q-Tobin ratios with reward of director's board.
- 2) There is a relationship between Return on Assets (ROA) with reward of director's board.
- 3) There is a relationship between operational cash flow with reward of director's board.
- 4) There is a relationship between Return on Equity (ROE) with reward of director's board.

4. Research Methodology

The statistical community consists of corporations accepted in Tehran Stock Exchange but it does not consist of financial intermediaries. The selected corporations should not have any trading interruption for more than three months and their fiscal year should not have been changed. To state the sample

size, the general Cochran formula was used, so considering this formula and using random sampling method, 136 corporations were selected as sample size of this research. The financial of these firms was studied for 2007-2011 financial years. Therefore, the statistical community consists 680 year-firms. The research general relationship is stated as this formula:

$$y = f(x_1, x_2, x_3, x_4, x_5, x_6, x_7, x_8, x_9)$$

where y is reward of director's board as dependent variable, x_1 to x_9 are share liquidity, Q-Tobin ratio, Return On Assets (ROA), operational cash flow, Return On Equity (ROE), changes of ROA, changes of operational cash flow, changes of ROE, firm size, as in-dependent variables, respectively. The relationship between these variables were estimated with multi-variables linear-regression as following:

$$y = \alpha + \beta_1 x_1 + \beta_2 x_2 + \beta_3 x_3 + \beta_4 x_4 + \beta_5 x_5 + \beta_6 x_6 + \beta_7 x_7 + \beta_8 x_8 + \beta_9 x_9$$

The variables of this relation is computed as following:

$y = \text{reward of director's board} = \text{amount of director's board reward}$

$x_1 = \text{share liquidity} = (1 / ((1 / \text{number of share purchaser}) + (1 / \text{number of transaction time}) + (1 / \text{number of transaction day}) + (1 / \text{number of transaction share}) + (1 / \text{transaction turnover}) + (1 / \text{current value}))$

$x_2 = \text{Q-Tobin ratio} = \frac{(\text{number of common stock} * \text{current share price}) + \text{liabilitie}}{\text{equity book value}}$ $x_3 = \text{Return On Assets} = \frac{\text{Net profit}}{\text{total assets}}$

$x_4 = \text{operational cash flow}$

$x_6 = \text{changes of ROA}$

$x_5 = \text{Return On Equity} = \text{net profit} / \text{Equity}$

$x_8 = \text{changes of ROE}$

$x_7 = \text{changes of operational cash flow}$

$x_9 = \text{size of firm} = \text{logarithm of sales}$

5. The results

The historical data about Iranian corporation were collected and statistical calculations were computed. In this research 136 Iranian corporations were selected as random sample and was studied their financial performances during 2007-2011 five-year period. Summarize of description variables was as Table 1.

Table 1
The summary of descriptive Indices

| year | Index | EC | LIQ | Q-Tobin | ROA | CFO | ROE | T_ROA | T_CFO | T_ROE | Size |
|------|---------------|------|--------|---------|-------|-------|--------|---------|---------|---------|-------|
| 2007 | Mean | 3.60 | 145.41 | 1.56 | 0.16 | 0.17 | 21.26 | 0.18 | 0.58 | 2.74 | 12.86 |
| | Medium | 5.60 | 146.50 | 1.35 | 0.14 | 0.16 | 7.76 | - | -0.08 | -0.90 | 12.68 |
| | Mode | - | 1.00 | 1.06 | 0.10 | 0.16 | -79.52 | -0.07 | -0.29 | -1.18 | 11.99 |
| | St. Deviation | 3.18 | 81.80 | 0.75 | 0.11 | 0.13 | 60.82 | 1.10 | 6.88 | 44.13 | 1.40 |
| | Minimum | - | 1.00 | 0.67 | -0.04 | -0.38 | -79.52 | -4.91 | -11.47 | -109.39 | 9.31 |
| | Maximum | 7.60 | 286.00 | 5.78 | 0.52 | 0.65 | 351.47 | 6.25 | 76.46 | 485.24 | 17.78 |
| 2008 | Mean | 3.55 | 103.19 | 1.36 | 0.14 | 0.16 | 1.28 | -0.49 | 1.99 | -2.11 | 12.98 |
| | Medium | 5.70 | 101.50 | 1.23 | 0.13 | 0.14 | 0.14 | -0.10 | 0.16 | -1.01 | 12.86 |
| | Mode | - | - | 1.00 | .04 | 0.07 | -74.36 | - | -.37 | -1.20 | 12.52 |
| | St. Deviation | 3.30 | 86.44 | 0.54 | 0.11 | 0.12 | 32.54 | 5.90 | 18.75 | 8.50 | 1.39 |
| | Minimum | - | - | 0.67 | -0.17 | -0.11 | -74.36 | -64.13 | -23.06 | -59.77 | 9.16 |
| | Maximum | 8.30 | 258.00 | 4.52 | 0.57 | 0.63 | 108.13 | 19.27 | 211.55 | 28.19 | 17.98 |
| 2009 | Mean | 1.41 | 144.65 | 1.26 | 0.12 | 0.14 | 56.77 | -0.44 | 0.38 | -2.04 | 13.04 |
| | Medium | - | 153.50 | 1.18 | 0.10 | 0.13 | 31.08 | -0.08 | -0.13 | -1.40 | 12.98 |
| | Mode | - | - | 0.91 | 0.05 | .07 | -41.27 | -0.21 | -.16 | -1.40 | 13.08 |
| | St. Deviation | 2.66 | 89.81 | 0.41 | 0.10 | 0.14 | 111.69 | 3.64 | 2.73 | 17.52 | 1.43 |
| | Minimum | - | - | 0.64 | -0.20 | -0.15 | -41.27 | -40.11 | -4.51 | -157.39 | 9.16 |
| | Maximum | 7.30 | 294.00 | 3.44 | 0.55 | 0.65 | 734.14 | 4.13 | 20.17 | 81.52 | 18.24 |
| 2010 | Mean | 4.48 | 169.14 | 1.36 | 0.12 | 0.14 | 51.41 | 0.64 | 0.75 | 3.12 | 13.19 |
| | Medium | 6.20 | 178.50 | 1.24 | 0.11 | 0.12 | 37.28 | -0.08 | -0.18 | -0.50 | 13.10 |
| | Mode | - | - | 1.24 | 0.14 | 0.11 | 15.88 | 0.03 | -.23 | -0.29 | 12.98 |
| | St. Deviation | 3.18 | 90.08 | 0.49 | 0.11 | 0.14 | 57.28 | 6.94 | 5.84 | 54.14 | 1.42 |
| | Minimum | - | - | 0.76 | -0.17 | -0.22 | -46.77 | -79.89 | -15.04 | -143.88 | 9.89 |
| | Maximum | 8.50 | 322.00 | 3.33 | 0.43 | 0.58 | 271.41 | 3.08 | 49.27 | 600.73 | 18.41 |
| 2011 | Mean | 4.93 | 195.78 | 1.41 | 0.11 | 0.13 | 22.90 | -4.56 | -1.42 | -1.62 | 13.32 |
| | Medium | 6.30 | 206.50 | 1.28 | 0.10 | 0.12 | 9.07 | -0.12 | -0.15 | -0.85 | 13.22 |
| | Mode | - | 2.00 | 1.00 | .07 | .11 | -57.94 | -0.27 | -0.12 | -1.20 | 12.83 |
| | St. Deviation | 3.02 | 94.31 | 0.52 | 0.12 | 0.11 | 61.44 | 57.14 | 15.34 | 10.18 | 1.48 |
| | Minimum | - | 2.00 | 0.76 | -.17 | -.28 | -57.94 | -663.64 | -177.12 | -96.19 | 9.80 |
| | Maximum | 8.30 | 350.00 | 3.39 | 0.62 | 0.49 | 452.12 | 53.79 | 12.40 | 23.04 | 18.49 |

Table 1 shows the mean (average), Medium, Mode, standard deviation, Minimum and Maximum based on each financial year for all of variables. The multi-variables linear-regression was used for determination of the relationship between dependent and in-dependents variables. Before applying this method, the preliminaries of regression were evaluated. These preliminaries are variables normality, dependence of dependents variables etc. Table 2 demonstrates the results of Kolmogorov–Smirnov test and the results indicate that all components were normally distributed. In addition, Pearson correlation analysis was used for determination of the variables independency. Table 3 shows summarize of Pearson correlation analysis.

Table 2
Normality variables Test after Normalization

| Result | year | EC | LIQ | Q-Tobin | ROA | CFO | RS | Size |
|----------------|------|-------|-------|---------|-------|-------|-------|-------|
| Kolmogorov's z | 2007 | 1.47 | 0.84 | .820 | 1.35 | 1.26 | 1.73 | 1.12 |
| Sig. level | | 0.06 | 0.481 | 0030. | 0.052 | 0.083 | 0.062 | 0.162 |
| Kolmogorov's z | 2008 | 1.468 | 1.505 | 0.535 | 1.175 | 1.101 | 0.989 | 1.26 |
| Sig. level | | 0.075 | 0.216 | 0.180 | 0.127 | 0.177 | 0.282 | 0.083 |
| Kolmogorov's z | 2009 | 1.604 | 0.964 | 0.476 | 1.468 | 0.998 | 2.677 | 1.155 |
| Sig. level | | 0.055 | 00.31 | 500.2 | 2680. | 0.272 | 670.0 | 0.138 |
| Kolmogorov's z | 2010 | 1.379 | 0.776 | 0.881 | 1.372 | 1.181 | 1.33 | 1.289 |
| Sig. level | | 0.089 | 0.584 | 0.200 | 0.056 | 0.123 | 0.058 | 0.072 |
| Kolmogorov's z | 2011 | 1.24 | 1.079 | 0.852 | 1.325 | 0.891 | 0.742 | 1.288 |
| Sig. level | | 0.098 | 0.195 | 0.210 | 00.06 | 0.406 | 0.182 | 0.072 |

Table 3
Pearson Correlation for variables

| Variable | X1 | X2 | X3 | X4 | X5 | X6 | X7 | X8 | X9 |
|----------|-------|--------|-------|-------|--------|--------|-------|-------|----|
| X1 | 1 | | | | | | | | |
| X2 | 0.153 | 1 | | | | | | | |
| Sig. | 0.000 | | | | | | | | |
| X3 | 0.231 | 0.145 | 1 | | | | | | |
| Sig. | 0.000 | 0 | | | | | | | |
| X4 | 0.213 | 0.118 | 0.158 | 1 | | | | | |
| Sig. | 0.000 | 0.000 | 0.000 | | | | | | |
| X5 | 0.119 | 0.219 | 0.311 | 0.095 | 1 | | | | |
| Sig. | 0.072 | 0 | 0.000 | 0.000 | | | | | |
| X6 | 0.089 | 0.271 | 0.114 | 0.116 | 0.156 | 1 | | | |
| Sig. | 0.000 | 0.000 | 0.000 | 0.000 | 0 | | | | |
| X7 | 0.318 | 0.198 | 0.312 | 0.068 | 0.075 | 0.194 | 1 | | |
| Sig. | 0.000 | 0.000 | 0.000 | 0.000 | 0.0000 | 00.000 | | | |
| X8 | 0.127 | 0.123 | 0.186 | 0.031 | 0.164 | 0.079 | 0.021 | 1 | |
| Sig. | 0.000 | 00.000 | 0.005 | 0.002 | 0.009 | 0.001 | 0.003 | | |
| X9 | 0.071 | 0.091 | 0.027 | 0.217 | 0.101 | 0.059 | 0.068 | 0.271 | 1 |
| Sig. | 0.004 | 0.007 | 0.000 | 0.005 | 0.001 | 0.002 | 0.009 | 0.009 | |

The correlation coefficients shown in Table 3 for all variables are generally less than 0.5 and then there is a weak linear relation between in-dependents variable. As we stated earlier, some of linear-regression preliminaries such as; normality of variables distribution and linear independency of in-dependents variables were accepted. Furthermore, based on previous research methodology, multi-variables linear-regression was used for variables relation analysis. This analysis was used for each financial year. Table 4 shows the summary of regression estimation parameters. Table 4 showed the constant parameter and slope of each variable that estimated with multi-variables linear-regression. In each row of this table was written the estimation results for each performance year. By substituting these parameters on variables relation, the relation between of variables are as Table 5:

Table 4
Multi-variables Linear-regression Parameters

| Year | Constant | Size | T ROE | T CFO | T ROA | ROE | CFO | ROA | Q-Tobin | LIQ | R ² |
|------|----------|-------|-------|-------|-------|-------|--------|--------|---------|-------|----------------|
| 2007 | 5.325 | 0.540 | 0.988 | 0.949 | 0.825 | 0.440 | 0.163 | 0.124 | 0.042 | 0.024 | 0.235 |
| 2008 | 6.581 | 0.002 | 0.374 | 0.666 | 0.506 | 0.004 | -0.330 | -0.048 | -0.009 | 0.422 | 0.341 |
| 2009 | 5.054 | 0.690 | 0.436 | 0.904 | 0.878 | 0.547 | 0.212 | 0.129 | 0.086 | 0.045 | 0.256 |
| 2010 | 1.351 | 0.003 | 0.081 | 1.607 | 0.134 | 0.002 | -0.015 | 0.024 | -0.024 | 0.085 | 0.375 |
| 2011 | 50249 | 0.571 | 0.631 | 0.302 | 0.753 | 0.477 | 0.239 | 0.121 | 0.052 | 0.034 | 0.215 |

According to the results of Table 4, there is a direct relationship between firm sizes with reward of board's directors. In addition, there is a direct relationship between changes of Return on Equity with reward of board's directors. Moreover, there is a direct relationship between changes of operational cash flow with reward of board's directors. There is also a direct relation between changes of Return on Equity with reward of board's directors, a direct relationship between Return on Equity with reward of board's directors, a direct relation between operational cash flow with reward of board's directors and a direct relation between changes of Return on Equity with reward of board's directors but the relation was reverse for 2008 and 2010. Finally, there is a direct relation between changes of Q-Tobin ratio with reward of board's directors but the relationship was reverse for 2008 and 2010. There is also a direct relation between Assets Flow ratios with reward of board's directors. Table 5 demonstrates the summary of Fisher test for different years. Based on Fisher tests results for linear-regression estimations, all of significance are less than five percent. Therefore, at 95 percent of confidence level, zero hypotheses for all of relations variables are rejected. There is a weak linear relation between performances variables with reward of director's board.

Table 5

The summary of Fisher test

| Year | 2007 | 2008 | 2009 | 2010 | 2011 |
|-------------|--------|--------|--------|--------|--------|
| F-Statistic | 75.315 | 98.854 | 87.124 | 114.23 | 215.21 |
| Sig. level | 0.002 | 0.004 | 0.001 | 0.000 | 0.000 |

6. Conclusion

We have presented an empirical investigation to study the relationship between the reward of board of directors and some financial factors on selected firms on Tehran Stock Exchange. The study has applied stepwise linear regression test and concluded that rewarding board of directors had mostly positive and meaningful relationship with firm size, ROE, ROA, cash flow, Tubin-Q, etc.

References

- Anderson, M. C., Banker, R. D., & Ravindran, S. (1999). Interrelations between components of executives' compensation and market and accounting based performance measures.
- Arora, A. (1996). *Executive compensation contracts and earnings response coefficients* (Doctoral dissertation).
- Anderson, M. C., Banker, R. D., & Ravindran, S. (2000). Executive compensation in the information technology industry. *Management Science*, 46(4), 530547.
- Amihud, Y., & Mendelson, H. (1991). Liquidity, asset prices and financial policy. *Financial Analysts Journal*, 5666.
- Agarwal, P. (2007). Institutional ownership and stock liquidity. *Available at SSRN 1029395*.
- Ascioglu, A., Hegde, S. P., Krishnan, G. V., & McDermott, J. B. (2012). Earnings management and market liquidity. *Review of Quantitative Finance and Accounting*, 38(2), 257274.
- Baqeri Mehmandusti, B. (2007). Evaluation of the relation between shares liquid and relevant decisions to capital structure of accepted companies in Tehran exchange market, *Master's thesis: management and accounting department of Shahid Beheshti University*.
- Bolton, P., & Thadden, V. (1998). Blocks, liquidity, and corporate control. *The Journal of Finance*, 53(1), 125.
- Bharath, S. T., Pasquariello, P., & Wu, G. (2009). Does asymmetric information drive capital structure decisions?. *Review of Financial Studies*, 22(8), 32113243.
- Bebchuk, L. A., Cremers, K. J., & Peyer, U. C. (2011). The CEO pay slice. *Journal of Financial Economics*, 102(1), 199221.
- Bergstresser, D., & Philippon, T. (2006). CEO incentives and earnings management. *Journal of Financial Economics*, 80(3), 511529.
- Coffee, J. C. (1991). Liquidity versus control: The institutional investor as corporate monitor. *Columbia Law Review*, 12771368.
- Chung, R., Firth, M., & Kim, J. B. (2005). Earnings management, surplus free cash flow, and external monitoring. *Journal of Business Research*, 58(6), 766776.
- Chung, K. H., Elder, J., & Kim, J. C. (2010). Corporate governance and liquidity.

- Cueto, C. (2009). Market Liquidity and Ownership Structure with weak protection for minority shareholders: evidence from Brazil and Chile. *J. Banking & Finan*, 31, 1771-1794.
- Darrrough, M. N., Pourjalali, H., & Saudagaran, S. (1998). Earnings management in Japanese companies. *The International Journal of Accounting*, 33(3), 313-334.
- Datar, V. T., Y Naik, N., & Radcliffe, R. (1998). Liquidity and stock returns: An alternative test. *Journal of Financial Markets*, 1(2), 203-219.
- Dennis, P. J., & Weston, J. P. (2001). Who's informed? An analysis of stock ownership and informed trading. *McIntire School (Virginia) working paper*.
- Elayan, F. A., Lau, J. S., & Meyer, T. O. (2003). Executive incentive compensation schemes and their impact on corporate performance: evidence from new zealand since compensation disclosure requirements became effective. *Studies in Economics and Finance*, 21(1), 5-492.
- Ely, K. M. (1991). Interindustry differences in the relation between compensation and firm performance variables. *Journal of Accounting Research*, 3758.
- Fang, V. W., Noe, T. H., & Tice, S. (2009). Stock market liquidity and firm value. *Journal of financial Economics*, 94(1), 150-169.
- Gregg, P., Jewell, S., & Tonks, I. (2005). Executive Pay and Performance in the UK: 1994-2002.
- Hartzell, J. C., & Starks, L. T. (2003). Institutional investors and executive compensation. *The Journal of Finance*, 58(6), 2351-2374.
- Heflin, F., & Shaw, K. W. (2000). Blockholder ownership and market liquidity. *Journal of Financial and Quantitative Analysis*, 35(04), 621-633.
- Hosseini, S.A., et al. (2010). Evaluating the relation of companies operation and exchange market liquid ability. *Quarterly of Exchange Market*, 11.
- Izadinia, M., & Rasaian, M. (2010). Ownership dispersion and shares liquid ability. *Auditing and Accounting Examinations*.
- JavadBalenga, S. (2012). Effects of ownership structure on the relation of managers' rewards and operation. *Master Thesis, Mazandaran University, Iran*.
- Jensen, M. C., & Meckling, W. H. (1979). Theory of the firm: *Managerial behavior, agency costs, and ownership structure* (pp. 163-231). Springer Netherlands.
- Jensen, M. C., & Murphy, K. J. (1990). Performance pay and topmanagement incentives. *Journal of political economy*, 225-264.
- Jones, S., & Sharma, R. (2001). The impact of free cash flow, financial leverage and accounting regulation on earnings management in Australia's "old" and "new" economies. *Managerial Finance*, 27(12), 1839.
- Karami, G.R., Nazari, M., & Shafiepoor, S.M. (2010). Economist value added and exchange market liquid. *Financials Researches*, 12(30), 117 – 132.
- Kato, T., & Kubo, K. (2006). CEO compensation and firm performance in Japan: Evidence from new panel data on individual CEO pay. *Journal of the Japanese and International Economies*, 20(1), 119.
- Khani, M. (2003). Profit management and managers' rewards as study on clarifying financial information. *PhD thesis in accounting Allameh Tabatabaieo University*.
- Khoshtinat, M. et al. (2003). Profit management and managers' rewards: a study on clarifying financial information. *Clark Terry L accounting standings*, 3, 127 – 153.
- Lambert, R. A. (1983). Longterm contracts and moral hazard. *The Bell Journal of Economics*, 441-452.
- Lesmond, D. A., O'Connor, P., & Senbet, L. (2008). Capital structure and equity liquidity. *Unpublished Work*. URL: <http://papers.ssrn.com/sol3/papers.cfm>.
- Lipson, M., & Mortal, S. (2004). Capital structure decisions and equity market liquidity. *Unpublished working paper. University of Georgia*.
- Lang, M., Lins, K. V., & Maffett, M. (2012). Transparency, liquidity, and valuation: International evidence on when transparency matters most. *Journal of Accounting Research*, 50(3), 729-774.
- Mehrani, S., & Baqeri, B. (2009). Evaluating effects of free cash flows and institutional shareholders and profits management within accepted companies in Tehran exchange markets. *Accounting Researches*, 2, 50-71.
- Murphy, K. J. (1985). Corporate performance and managerial remuneration: An empirical analysis. *Journal of accounting and economics*, 7(1), 114-2.
- Maug, E. (1998). Large Shareholders as Monitors: Is There a Trade-Off between Liquidity and Control?. *The Journal of Finance*, 53(1), 659-8.
- Mehran, H. (1995). Executive compensation structure, ownership, and firm performance. *Journal of financial economics*, 38(2), 163-184.

- Mohseni Maleki, B., Askgari Rezazadeh, M., & Khajvand Salehi, A. (2012). Effects of board of directors' rewards on companies functions, some evidences of Tehran exchange market.
- MoradzadeFard, M. Rezapoor, N., & Frzani, H. (2010). Evaluating the role of commitment items management in shares liquid of accepted companies in Tehran exchange market. *Journal of Financial Accounting Researches*, 2, 101 – 116.
- Namazi, M., & Moradi, M. (2004). Practical evaluation of effective components in determining board of directors' rewards. *Quarterly Journal of Accounting Researches*, 10.
- Namazi, M., & Sirani, M. (2004). Practical evaluation of main components in determining mining contracts, indexes, and parameters for managing directors' rewards of the companies in Iran. *Accounting and Auditing Evaluations*, 36, 65 – 94.
- Osma, B. G., & Noguera, B. G. D. A. (2007). The effect of the board composition and its monitoring committees on earnings management: Evidence from Spain. *Corporate Governance: An International Review*, 15(6), 1413-1428.
- Poor Haidari, O., & Hemati, D. (2004). Evaluation of the payables contracts effects, political costs, ownership and rewards schemes on profit management in accepted companies in Tehran exchange market. *Auditing and Accounting Examinations*, 34, 47.
- Pope, P., Peasnell, K., & Young, S. (1998). Outside directors, board effectiveness, and earnings management.
- Park, Y. W., & Shin, H. H. (2004). Board composition and earnings management in Canada. *Journal of corporate Finance*, 10(3), 43-57.
- Palmiter, A. R. (2001). Mutual fund voting of portfolio shares: Why not disclose. *Cardozo L. Rev.*, 23, 1419.
- Pereira, J. P., & Zhang, H. H. (2010). Stock returns and the volatility of liquidity.
- Rahmani, A., Hosseini, S. A., & Rezapoor, N. (2010). Institutional ownership relation with shares liquidating in Iran. *Quarterly magazine of accounting and auditing examinations*, 17(61), 39 – 54.
- Roodgar, Z. (2011). Evaluation and comparison of shares liquidating ability in Tehran exchange market. master thesis, *Tehran Azad University, researches and sciences department*.
- Rubin, A. (2007). Ownership level, ownership concentration and liquidity. *Journal of financial Markets*, 10(3), 219-248.
- Sajadi, S.H., & Zareazadeh Mehrizi, M.S. (2010). Evaluating the relation between managers' rewards and economy standards for function assessment. *Financial Accounting Researches*, 1(4), 41 – 54.
- Sarin, A., Shastri, K. A., & Shastri, K. (2000). Ownership structure and stock market liquidity. *Intl. J. Accoun*, 38, 465-491.
- Shah, S. Z. A., Zafar, N., & Durrani, T. K. (2009). Board Composition and Earnings Management an Empirical Evidence Form Pakistani Listed Companies. *Middle Eastern Finance and Economics*, 3(29), 3044.
- Tariq, U. (2010). CEO Compensation: Relationship with Performance and Influence of Board of Directors.
- Tehrani, R., and Aabi, S. (2009). Evaluating the relation between portfolio efficiency (output) and function of investing companies and liquidating rank, their profitability ratios and divisional profit in Tehran exchange markets. *Quarterly Journal of Exchange Markets 11thperiod, No. 27*, pp23-42.
- Udomsirikul, P., Jumreornvong, S., & Jiraporn, P. (2011). Liquidity and capital structure: The case of Thailand. *Journal of Multinational Financial Management*, 21(2), 106-117.
- Wang, Y. J. (2002). Liquidity management, operating performance, and corporate value: evidence from Japan and Taiwan. *Journal of Multinational Financial Management*, 12(2), 159-169.
- YaqubNejad, A., Rahnamaye Rudposhti, F., & Zabihi, A. (2011). Evaluating the effects of corporative leadership system unethically taking shares all accepted companies in Tehran exchange market. *Quarterly Journal of exchange markets*, 15, fourth year.
- ZareStahriji, M. (2002). Evaluation of effective factors on shares liquid capability in exchange market. Master thesis, *Tehran: Imam Sadegh University*
- ZareaStahriji, M. (2007). Evaluating effective factors on shares liquidating ability in Tehran exchange market. Master thesis in the field of management and Islamic knowledge, Imam Sadegh (peace be upon him) university.