Relationship between the Institutional Ownership and non-Executive Directors in Iran

M. Salehi, B. Abedini, A. Shahabipour

Mahdi Salehi
Ferdowsi University of Mashhad, Mashhad, Iran
Bizhan Abedini
Hormozgan University, Iran
Abozar Shahabipour
Gheshm Branch, Islamic Azad University, Gheshm, Iran

Abstract
In every financial market, one of the most significant topics in investment is the liquidity rate of assets. The role of liquidity in asset prices, the distribution of financial risk and the reduction of transaction costs are important factors. The current study aims to investigate the role of non-executive directors and institutional ownership in assuring liquidity. Thus, the sample of the study includes 69 listed companies on the Tehran Stock Exchange during 2008-2011. The results reveal that there is a negative relationship between the balance of institutional ownership and liquidity.
Keywords: liquidity, non-executive directors, institutional ownership, corporate governance, Tehran Stock Exchange

Introduction
For years, economists have assumed that all groups of companies operate for a common purpose. However, in the last 30 years many cases of interests conflicts between groups and how companies' exposure with such conflicts have been raised by economists. These issues are discussed under the agency theory in management accounting.

With the separation of ownership from management, managers run the company as a representative of the owners. That way, conflict occurs between managers and shareholders. It means that managers use to have an opportunistic behavior, adopting decisions which sometimes are contrary to the interests of the shareholders. Berl and Means (1932) stated the lack of corporate governance mechanisms. This enables administrators to replace their personal interests instead of the interests of shareholders. One of the ways that has effective external control is growing the institutional shareholders. In addition, the board members have a duty as internal controls, which can have a decisive role in corporate governance (Mehrani et al, 2010).

Separation of ownership from management leads to a well-known organizational problem, called agency problem. Researchers have addressed this issue from different angles. An agency problem shows the necessity of management control by the shareholder of the companies (Hassas Yegane, 2005).

In addition, according to Gillan and Starks (2003), shareholders have major role in the corporate governance systems. There is a group of shareholders owning a significant part of the stock, enjoying a considerable influence in these companies. Institutional owners and the owners make up the largest group, their role in supervising the procedures adopted by management being important. Nevertheless, non-executive directors are professionals. The research literature suggests that a non-executive director protects the interests of their shareholders and representatives (Setayesh and Kazemnejad, 2010).

Therefore, in the current study liquidity is very important. Liquidity is known for years as one of the most important areas of financial innovations. Therefore, one of the effective factors in buying a share can be the power of its liquidity. The transaction costs and other signs of liquidity can be dropped in the pricing of financial assets. Because of that, investors use to keep the assets with higher costs, for longer periods. Recent studies points that these hypothesis does not occur in practice. In other words, recent texts have proved empirically that liquidity changes over time and these changes may cause increased risk (Nobahar, 2009).

The importance of the study
One of the main functions of financial markets is to facilitate and accelerate the process of converting assets to cash, and vice versa.

This feature which referred to the liquidity of financial markets is a vital artery. Therefore, operators attempt to increase the attractiveness of financial markets through improved mechanisms and laws, risk reduction, disclosure of information and transparency. Liquidity is the main characteristic of shares, which play an important role in the investors' decision, to buy or sell their stock. Certain level of liquidity is needed when buying and selling stocks. Willingness to investigate this issue derived from the fact that liquidity is one of the main investor in stock market (Nobahar, 2009).

Research methodology

According to the objectives of the study, one main hypothesis and two sub-hypotheses are postulated in the study.

The main hypothesis: There is a significant relationship between institutional investors, the member of non-executive directors and stock market liquidity.

The sub- hypotheses are:

1. There is a significant relationship between the percentage of ownership institutional shareholders and stock liquidity.

2. There is a significant relationship between the percentage of the non-executive directors, the total members of the board and stock liquidity.

Research's variables
Independent variables

Institutional investors are natural and legal persons who have noticeable shares of the company's stock (Setayesh and Kazemnejad, 2010). According to the Tehran Stock Exchange Act (2004), the institutional investors are:

1) Banks and insurances sectors

2) Holding companies, investment companies, pension funds and stock funds, which have registered.

3) Every natural or juridical person who has more than 5% or more than 5 billion IRR purchased shares of par value.

4) Organizations, institutions and governmental companies.

5) The members of the board.

Non-executive directors are members of the board that have no formal executive responsibility in the company and usually work on behalf of the shareholders. This criterion is used to evaluate the strong or weak corporate governance (Setayesh and Kazemnejad, 2010).

A) The criteria of institutional investors or owners are used to measure institutional ownership.

B) The percentages of non-executive directors are used as a criterion to measure this variable.

Dependent variables

The liquidity issue was introduced as one of the important topics in financial management in the middle of 1980. Liquidity can be a mean to quickly convert assets into cash. The lack of liquidity can affect negative the stock value.

Stock liquidity is a common criterion of liquidity, which in Cueto's (2009) research, Agarwal (2008), Rubin (2007), Gerald et al., (2006), Wyss (2004), Izadi Nia and Rasaeian (2010) have been used including: the number of transactions calculated annually, the transaction value, the stock turnover (the number of circulating shares), the illiquidity criteria .

Further, we calculated the daily and annual average values (Badavar Nahandy and Maleki Nazhad, 2010).

The research study described above founds a high liquidity.

NST = number of stock traded;

NSO = number of stock issued;

TURNOVER = turnover number of stock.

$$TURNOVER = \frac{NST}{NSO} \times 100$$

Illiquidity criteria of relative stock price gap are a detail which is not available in the Tehran Stock Exchange. Therefore, in this study is used bid price in a day (for example, Badavar Nahandy and Maleki Nazhad; Rahmani et al.; Ezadi Nia and Rasaeian, 2010). First, according to the following formula, the criteria are calculated on a daily basis, and so the annual average is obtained.

$SPREAD_i$ = total percentage price gap relative to firm i in period t

AP (ask price) = the best ask price in period t

BP (bid price) = the best bid price in period t

To calculate the power of liquidity, a measure introduced by the use of daily data on returns and trading volume may assess. This is the larger scale that represents the lowest liquidity of the shares (Amihud, 2002):

$$ILLIQ_t^i = \frac{1}{Days_t^i} \sum_{d=1}^{Days} \frac{|R_{td}^i|}{V_{td}^i}$$

R = the daily return and is calculated with the formula:
$$R = (P_t - P_{t-1}) / P_{t-1}$$
P = the daily stock price;
V_{td} = The trading volume in month t of day t;
"Days" = the number of trading days in month t
AMIVEST = value transactions / returns contribution
        The ratio (Fratio): The waiting time divided by the number of trading days gives the trading stock (Rahmani et al., 2010).

Control variables
        In order to identify other factors that affect the dependent variables, the following variables are taking into consideration: share price, return volatility (an indicator of risk control), the stock price in t day, size of the company, the volume of stocks, the trading days (%) and the number of shareholders.

Data collection
        Required data in the current study is collected from the Tehran Securities Exchange Organization, Tadbir Pardaz software and information systems company of Tehran Stock Exchange.

Developing models and methods of data analysis
        For testing, the hypotheses regression model is employed in the current study.
Model 1 - number of transactions (TRANS)
Model 2 - transaction value (VALUE)
Model 3 - trading turnover (TURN)
Model 4 - price gap (SPREAD)
Model 5 - illiquidity (AMIHUD)
Model 6 - AMIVEST
Model 7 - flow rate (FRATIO), is considered as a dependent variable.
LIQUIDITY MEASURESi, $t = \alpha + \beta_1 OPER_{i,t} + \beta_2 OUTDIR_{i,t} + \beta_3 NINST_{i,t} + \beta_4 SIZE_{i,t} + \beta_5 PRICE_{i,t} + \beta_6 DAY_{i,t} + \beta_7 VOLATIL_{i,t} + \beta_8 VOL_{i,t} + \varepsilon_{i,t}$
Where:
LIQUIDITY MEASURES$_{i,t}$:Various liquidity criteria (seven criteria) for company i in period t.
Where:

OPERi,t: the percentage of shares owned by institutional owners of the company i in period t (independent variable).

OUTDIRi,t: the percentage of non-executive directors in the number of the members of the board of directors (independent variable).

NINSTi,t: the number of shares of the company i in period t (control variable).

SIZEi,t: the size of company i in period t (control variable).

PRICEi,t: the stock price of company i in period t (control variable).

DAYi,t: the percentage of the trading days of the company i in period t (control variable).

VOLATILi,t: return volatility of the company i in period t (control variable).

VOLi,t: the volume of shares traded by the company i in period t (control variable).

˘i,t: the error for company i in period t.

α: a constant.

βi: the coefficients of variables in the regression model.

The statistical types and methods used in this study are: Descriptive Statistics, Regression, correlation, Kolmogorov–Smirnov test (K-S. test), Fisher F- test, (T- test), Durbin-Watson test, collinearity test. The application and use of them is described below.

The results of the study

Normality test of the variables

The results of table no. 1 show that the data of the study do not have normal distribution.

Table no. 1. Testing the normality of variables

Variables		The statistic Z	Significant level	Result
Dependent variables: liquidity criteria	TRANS	2.46	0.000
	VALUE	2.13	0.000
	TURN	1.81	0.003
	SPREAD	0.702	0.708
	AMIHUD	2.42	0.000
	AMIVEST	2.64	0.000
	FRATIO	2.32	0.000
Independent variables	OPER	1.25	0.088
	OUTDIR	0.76	0.600
Control variables	PRICE	1.51	0.020

	VOLITIL	1.37	0.450
	SIZE	0.59	0.870
	VOL	1.01	0.250
	DAY	0.97	0.290
	NINST	2.53	0.000

It is observed that some variables are not normal. So, the abnormality of the data should be solved. Therefore, the natural logarithm of the calculated values of the variables is used.

It is clear that the data distribution shows a strong relationship, with the cumulative distribution of log –normal. The results are presented in table no. 2.

Table no. 2. Normal distribution of the logarithm

Variables	The statistic Z	Sig.	Result
Dependent variables: liquidity criteria	TRANS	1.13	0.15
	VALUE	0.89	0.40
	TURN	1.04	0.22
	AMIHUD	1.10	0.17
	AMIVEST	0.72	0.68
	FRATIO	0.78	0.56
Control variables	PRICE	0.81	0.51
	NINST	0.67	0.75

Table no. 3. Results of significant regression models

LIQUIDITY MEASURES=$\alpha+\beta_1 OPER_{i,t}+\beta_2 OUTDIR_{i,t} + \beta_3 NINST_{i,t} + \beta_4, SIZE_{i,t} + \beta_5 PRICE_{i,t} + \beta_6 DAY_{i,t}+\beta_7 VOLATIL_{i,t} + \beta_8 VOL_{i,t} + \varepsilon_{i,t}$								
Regression models	Model Number	Model1	Model2	Model3	Model4	Model5	Model6	Model7
Analysis Variance	F statistics Significant	267.64 (0.00)	86.22 (0.00)	5.71 (0.00)	13.02 (0.003)	33.08 (0.00)	59.65 (0.00)	85.25 (0.00)
Model pro.	R^2 (adj R^2)	0.951 (0.915)	0.87 (0.86)	0.31 (0.25)	0.44 (0.41)	0.67 (0.65)	0.78 (0.77)	0.89 (0.88)

R^2 values in table no. 3 indicate a control power over the independent variables, while explaining the variability of the dependent variable. In model 1, R^2 has a value of 0.95, in model 2, 0.87, in model 6, 0.78 and in model 7 are 0.89.

The coefficients of these variables are not significant in this model and are not enter into the model. Significant levels of control variables, stock price (PRICE), trading volume (VOL) and the number of shareholders (NINST) are less than 5%. The coefficients of these variables are significant in the model and enter in the model. Therefore, other variables had not the parameters to enter into the model and are not given in the column of model 1. Durbin - Watson statistic is equal to 2.05 in this model and is located at a distance of 1.5 to 2.5, which indicates the error terms of observations. After the adjustment for other variables in the main model and an effective elimination, model 1 has been rewritten with acceptable coefficients, which can be seen at the end of table no. 4.

The results of model 2:

It shows that between the non-executive directors and the share liquidity, there is no significant relationship. After doing adjustment in the main model and the elimination of ineffective variables, model 2 has been rewritten with significant coefficients, which can be seen in table no. 4.

Table no. 4. The results of model 2

The dependent variable		Liquidity criteria		Its correlation	
Variables Independent and control		TRANS Model (1)	VALUE Model (2)	Negligible amounts of the models	Results
Intercept	quantity Fixed	-7.47	-2.69	0.92	The first hypothesis is rejected in model 1 and is confirmed in model 2
OPER	Coefficient	0.0002	-0.007		
	T -statistics	0.12	-2.2		
	Significant	0.89	0.031		
OUTDIR	Coefficient	0.168	0.48	0.86	The second hypothesis is rejected in model 1 and model 2
	T -statistics	0.93	1.38		
	Significant	0.35	0.17		

PRICE	Coefficient	0.236	0.616	0.57	
	T -statistics	5.32	6.1		
	Significant	0.00	0.00		
VOLITIL	Coefficient			0.86	
	T -statistics	---	---		
	Significant				
SIZE	Coefficient		0.43	0.43	
	T -statistics	---	6.22		
	Significant		0.00		
VOL	Coefficient	0.799	0.62	0.34	
	T -statistics	24.28	9.1		
	Significant	0.00	0.00		
DAY	Coefficient			0.60	
	T -statistics	---	---		
	Significant				
NINST	Coefficient	0.069		0.51	
	T -statistics	1.92	---		
	Significant	0.051			
Durbin-Watson statistic model 1 = 2.05				Durbin-Watson statistic model 1 = 2.05	

The results of model 3

In this model, the variable of circulating levels of turnover (TURN), as a measure of liquidity, is considered a dependent variable. According to table no. 5 for independent variables OUTDIR OPER, the significant level is more than 5%. There is an absence of a relation between the percentage of institutional property owners and non-required number of the board members. Therefore, the coefficients of these variables are not significant and cannot enter into the model. Significant levels of control variables, stock price (PRICE), firm size (SIZE) and trading volume (VOL) are less than 5%. Durbin-Watson statistic is equal to 2.13 and is located at a distance of 1.5 to 2.5. This indicates error terms of independence or autonomy.

The results of model 4

In this model, the price gap variable (SPREAD), as one of the liquidity criteria, is the dependent variable. Independent variable is less than 5% significance level for OPER, so it is not zero. The price gap criterion is a measure of liquidity. There is another way to express the analyzed relationship: between the percentage of institutional property

owners and liquidity, there is a negative relation. In addition, the coefficient of this variable is significant and enters into the model.

Significant levels of control variables, the trading volume (VOL) and the percentage of trading days (DAY) are less than 5%. Therefore, the coefficients of these variables are significant. We have no other variables entered into the model, given in column 4, which are not related to the model. Durbin-Watson statistic model is equal to 1.87 and is located at a distance of 1.5 to 2.5, which indicates the error terms of independence or the independence of observations.

The results of model 5

AMIHUD variable in the model as one of the liquidity criterion is given in tables' no. 4 and 5 for independent variables OPER. Significant levels of control variables, stock return volatility (VOLITILE) and trading volume (VOL) are less than 5%. The coefficients of these variables are significant and enter into the model. No other variables entered into the model. The model is shown in column 5. Durbin - Watson statistics in this model is equal to 1.78 and is located at a distance of 1.5 to 2.5, which indicates the error terms of independence or the independence of observations. After the adjustment of variables, model 4 is rewritten in table no. 5.

Table no. 5. The results of the models

The dependent variable		Liquidity criteria		Results
Variables Independent and control		TRANS Model (3)	SPREAD Model (4)	Confirm or reject the hypothesis
Intercept	quantity Fixed	-4.591	0.313	The first hypothesis is rejected in model 3 and is confirmed in model 4
OPER	Coefficient	-0.005	0.005	
	T -statistics	-0.92	4.28	
	Significant	0.36	0.028	
OUTDIR	Coefficient	0.773	-0.021	The second hypothesis is rejected in model 3 and model 4
	T -statistics	1.28	-0.17	
	Significant	0.20	0.86	
PRICE	Coefficient	0.682		
	T -statistics	3.93	---	
	Significant	0.00		
VOLITIL	Coefficient			
	T -statistics	---	---	
	Significant			

SIZE	Coefficient	-0.524		
	T -statistics	-4.41		
	Significant	0.00		
VOL	Coefficient	0.576	-0.059	
	T -statistics	4.94	-3.17	
	Significant	0.00	0.002	
DAY	Coefficient		-0.0591	
	T -statistics	---	-3.41	
	Significant		0.001	
NINST	Coefficient			
	T -statistics	---	---	
	Significant			

The results of model 6

Variables in model AMIVEST, as liquidity, is dependent. Durbin-Watson statistic is equal to 1.88. The main model was rewritten. The results are illustrated in table no. 6.

Table no. 6. The results of the models

The dependent variable		Liquidity criteria		Results
Variables Independent and control		AMIHUD Model (5)	AMIVEST Model (6)	Confirm or reject the hypothesis
Intercept	quantity Fixed	-2.56	-13.7	The first hypothesis is rejected in model 5 and model 6
OPER	Coefficient	0.002	-0.004	
	T -statistics	1.77	-0.67	
	Significant	0.047	0.50	
OUTDIR	Coefficient	0.582	0.521	The second hypothesis is rejected in model 5 and model 6
	T -statistics	0.29	0.85	
	Significant	0.77	0.39	
PRICE	Coefficient		0.277	
	T -statistics	---	2.18	
	Significant		0.033	
VOLITIL	Coefficient			
	T -statistics	---	---	
	Significant			
SIZE	Coefficient	0.131	1.203	
	T -statistics	5.36	14.001	
	Significant	0.00	0.00	
VOL	Coefficient	-1.11		
	T -statistics	-10.53	---	
	Significant	0.00		
DAY	Coefficient	---		
	T -statistics		---	

	Significant			
NINST	Coefficient			
	T -statistics	---	---	
	Significant			

The results of model 7

After the adjustments made in the original model and after the removal of ineffective variables, model 7 is rewritten with significant coefficients in table no. 7.

Table no. 7. The results of the model

The dependent variable		Liquidity criteria	Results
Variables Independent and control		FRATIO Model (7)	Confirm or reject the hypothesis
Intercept	quantity Fixed	1.676	The first hypothesis is confirmed in model 7
OPER	Coefficient	-0.007	
	T -statistics	-2.06	
	Significant	0.043	
OUTDIR	Coefficient	0.492	The second hypothesis is rejected in Model 7
	T -statistics	1.34	
	Significant	0.85	
PRICE	Coefficient	0.624	
	T -statistics	5.93	
	Significant	0.00	
VOLITIL	Coefficient		
	T -statistics	---	
	Significant		
SIZE	Coefficient	0.482	
	T -statistics	6.58	
	Significant	0.00	
VOL	Coefficient	0.625	
	T -statistics	8.28	
	Significant	0.00	
DAY	Coefficient	1.099	
	T -statistics	2.18	
	Significant	0.033	
NINST	Coefficient		
	T -statistics	---	
	Significant		
Durbin-Watson statistic model 7=1.85			

Conclusion

Non-executive directors should take into account the views of shareholders and other stakeholders, because these views may provide different perspectives on the company and its performance.

It can be concluded that there is no significant relationship between the number of non-executive directors and liquidity.

Bibliography

Agarwal, P. (2009). Institutional ownership liquidity and liquidity risk, PhD thesis, Cornell University, available at: http://ecommons.library.cornell.edu/bitstream/1813/13840/1/Agar wal,%20Prasun.pdf

Ahmad, P. A., Rasaeian, A. (2006). The relationship between risk criteria and difference between the prices offered to buy or sell shares in the Tehran Stock Exchange, *The Iranian Accounting and Auditing Review,* no. 46. p. 159-163

Amihude, Y. (2002). Liquidity and stock returns: cross-section and time series effect, *Journal of financial markets,* p. 31-56

Bad, A., Nahndi, Y., Maleki N, A. (2010). The survey of liquidity at the time of publication of financial reports in Tehran Stock Exchange, *Journal of Accounting Knowledge,* no. 3, p. 99-115

Berl, A, A, jr., Means, G, C. (1932). The Modern Corporation and private property, Macmillan, New York

Cueto, D.C. (2009). Market liquidity and ownership structure with weak protection for minority shareholders: evidence from Brazil and Chile, working paper http://www.northernfinance.org/2009/program/papers/69.pdf

Gerald, J., Kiridaran, K., Dennis, W. (2006). Corporate governance quality and market liquidity around quarterly earnings announcements, www.afaanz.org

Gillan, S.G., Starks, L.T, (2003). A survey of shareholder activism: motivation and empirical. Available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=663523

Hassas, Y, Y. (2005). Theoretical foundations of corporate governance, Iranian Association of Certified Public Accountants - IACPA, no. 168

Izadi, N., Rasaeian, A. (2010). Dispersion of ownership and stock liquidity, *The Iranian Accounting and Auditing Review,* no. 60, p. 58-69.

Mehrani, S., Mehrani, K. (2003). The survey relationship between profitability ratios and return. *The Iranian Accounting and Auditing Review,* no. 33, p. 105-93

Mehrani, S., Moradi, M., Askandar, H. (2010). The relationship between institutional ownership and conservative accounting, *Journal of Financial Accounting Research,* no. 3, p. 62-47

Morad Zadah Fard, M., Nazemi Ardakani, M., Gholami Jamkarani, R., Farzane, H. (2009). The survey relationship between institutional ownership of shares and earnings management in companies listed in Tehran Stock Exchange, *The Iranian Accounting and Auditing Review,* no. 55, p. 85-95

Namazi, M., Halaj, M., Ebraheme, S, H. (2009). Relationship between institutional ownership with current and future performance of listed companies in Tehran Stock Exchange, no. 58, p. 63-75

Nobahar, N. (2009). The relationship between liquidity and returns in Tehran Stock Exchange , MS Thesis, Tehran University, School of Management

Rahmani, A., Hosseini, A., Rezapoor, N. (2010). The relationship between institutional ownership and liquidity in Iran, *The Iranian Accounting and Auditing Review,* no. 61, p. 54-39

Rubin, A. (2007). Ownership level, ownership concentration and liquidity, *Journal of Financial Markets,* vol. 10, no. 3, p. 219-248

Sarin, A., Shastrik, A., Shastri, K. (1999). Institutional ownership and stock liquidity, Available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1029395

Setayesh, M., Kazem Nezhad, M. (2010). The effect of ownership structure and board composition on dividend policy companies listed in Tehran Stock Exchange, *Journal of Accounting Knowledge,* no. 1, p. 29-51

Wyss, R. (2004). Measuring and predicting liquidity in the stock market, PhD Dissertation. Available at http://www1.unisg.ch/www/edis.nsf/SysLkpByIdentifier/2899/$FILE/dis2899.pdf