

## Relationship between Financial Disclosure and Trading Value - A Case Study: Tehran Securities Exchange

Alireza Heidarzadeh Hanzaee<sup>1\*</sup>, Amir Azizi<sup>2</sup>, Leila Barati<sup>3</sup>

<sup>1</sup>Department of Financial Management, Tehran North Branch, Islamic Azad University, Tehran-Iran; <sup>2</sup>Department of Engineering, Science and Research, Islamic Azad University, Tehran-Iran;

<sup>3</sup>Department of Financial Management, Science and Research Branch, Islamic Azad University, Tehran-Iran

\*E-mail: a\_heidarzadeh@iau-tnb.ac.ir

### Abstract

The purpose of this study is to investigate the relationship between the quality of information disclosure and Trading value that have taken place in six statistical models. In this study, the quality of information disclosure is considered as the independent variable, turnover and Trading value as dependent variables and the size of the company, the earnings per share, the market value to book value and return on assets are considered as control variables. The population chosen for the present study according to the subject and its application is the listed companies in Tehran Stock Exchange. This study used data from companies listed on Tehran Securities Exchange at the beginning of 2010 until the end of 2014 on an annual basis and at the beginning of 2012 until the end of 2014 on a seasonal basis to collect the information and likewise, results of testing the two hypotheses is presented in two sections. In this study, multivariate regression analysis by mixed data with fixed effects was used to test the hypothesis. Results of the study (2012-2014) shows that there is no significant relationship between the quality of information disclosure and turnover, the Trading value, the trading value of selling, the trading value of satins , the trading value of buying and the trading value of buying. while there is a significant relationship between the size of company and the turnover and also between the size of company, the return on assets and the market value to book value with the trading value, the trading value of selling, buying and buying. Also there is a significant between the size of company and the return on assets with the trading value of selling. Meanwhile, results of research in both methods of data collection, seasonal and annual, have been the same.

**Keywords:** Financial Disclosure, Information Disclosure, Turnover, Trading Value

### Introduction

The major core of agency theory (Jensen & Meckling, 2013) assumes that managers as agents of stakeholders may do actions or make decisions that are not aligned with stakeholder's wealth maximization. According to the theory, monitoring the control tools for protection from the stakeholder's interest conflict should be created. The transparency of statements and quality of information disclosure in them is considered as a practical approach.

It is often argued that the quality and transparent flow of information lead to reduction of information asymmetric. The information asymmetric is a condition in which the manager's awareness about the company tasks is higher than stakeholders and potential investors. Such information asymmetric (Wallace & Naser, 2014) causes some problems like ethical violations and incorrect selection. Therefore in order to keep the stakeholders and other shareholders interests, the public and high quality disclosure of information is essential. Existence of transparent and comparable financial information is considered as a responding pillar of aware economic making decision and as the requirements of economic development (the committee for compilation of

accounting standards) and as a pillar for achievement to a market of efficient capitals. Increasing the information disclosure for users who are not capable to determine the future perspectives of the company is useful. This usefulness by reduction of incorrect allocation capital probability can be possible. Likewise one of the principal conditions for attraction of confidence of investors and creditors is efficient information for making decision about the purchasing, maintaining or selling the shares and evaluation of managers and companies performance.

### ***Discussion and Examination***

This research is derived from the lee (2008) model, the disclosure level in the listed companies in Tehran exchange has been measured and its influence on the transaction's value and the volume of the investors' transactions has been assessed. In his model the information disclosure quality is considered as the independent variable, volume of transactions, transactions value (purchase transaction value and sell and purchase transactions value) as dependent variable and company size variables, financial leverage, the market value to booking value, asset return and price to profit for each share as control variable.

Due to theory framework of financial accounting standard panel, the financial reporting should offer information that is useful for creditors, investors and other users. Such reports should offer useful information for someone who have a rational perception from the trade and economic tasks and who want to study about the information rationally and thoughtfully. The disclosure should be done by lawful reports like fundamental financial statement that contain important information and should be relevant and timely and such information should be provided clear and perfect so that make possible the aware making decision for users. Likewise the financial statement should contribute to investor's perception about the financial position, positions changes and the results of company operations.

### ***Disclosure Transparency***

The disclosure is the indicator of management capability for offering essential information correctly and clear and timely and accessible, especially the accounted information that is distributed and disclosure both in public reports and mass media. Therefore we can conclude that disclosure and transparency are 2 dependent factors to each other. Users of financial information always seek to high quality information because disclosure of such information reduce the information asymmetric between managers and investors.

### **Literature Review**

The first research on the relationship between shares price and transaction volume is related to Sborn study (1959). Sborn tried to design a model for changing price as a process from the numbers of transaction times and he concluded that there is a positive correlation between the transaction volume and the Absolute for price change. The case is explored by other researchers.

Rosi, Guant and Tachen (1992) indicated that the exploration of shares price and transactions volume about the shares market behavior can be studied synchronically.

There are several studied that support from the positive correlation between price and transaction volume and like Kroch (1970), Aps (1976), Carpoff (1987), Asogbavio and Colleagues (1995) and Chen and Colleagues (2001). In spite some research's provide some models which on based the transaction value is considered as an effective factor on the shares price changes like the Schultz(1972), Cross and Stole (1972) Hess and Frost(1962).

The experimental exploration is conducted from the relationship between volume and price by granger (1963) using analysis of week data from 1939 to 1961. They failed to find evidence about the relationship between the combinational indicator of price and volume in the New York exchange. The data of 2 unique shares indicate no relationship. In the next article the Godfery and

Granger and Morgenstern (1964) extend their exploration about the price and volume. They provide the new evidence from several series including transaction data and few unique shares but they could not find any relationship between the transaction volume and the price or the absolute value price difference.

The failure of Godfery and Colleques for making the price and volume relationship clear cause that the Ying (1996) and crotch (1970) do some other experimental tests.

Ying express that the price reduction is sought with more reduction of price and price raise is sought with more price increase. The findings are interesting since the previous studies that believed the shares price follow from the random step model. The random step claim that the previous values of the price or the changing the price has no influence on the future values of the price or their changes. While if we accept the Ying point of view we should reject the random step model in its unmodified shape.

Aps (1975) designed a model that by a little monitoring of the changes behavior predict the papers price changings and transaction volume. Aps divided the investors in to categories: active and passive. The major difference of both group is that the active ones are more optimists about the asset value at the end of transaction period and they are influenced by positive information about the asset value. The passive ones and cynic investors are influenced by negative information. The transactional demand curve in the market includes only the active investor's demand prices and the supply curve include the supply prices of passive investors. Aps shows that the relative optimism of active investors who are combined with suitable assumptions about the usefulness function implies in sharper slope of demand curve from the supply curve slope. The volume to price positive change appropriation is higher (when the demand of passive investors are increased)

Then absolute value of volume to price change (when the demand of passive investors are reduced).aps concluded that the volume in changing the rising price toward the declining price is higher.

Morgan (1976) explained that the volume is depended on the systematic risk and which through is depended to shares return. The aps and colleagues findings imply on positive relationship between volume and price change .from the discussions which evaluate the relationship between transaction volume and price change and shares return, the U shape discussion of volume and return during a day is transactional. The issue is provided by Brilsford (1994) so that in Hariss (1986) Mcinich and Wood (1990, 1985) indicate that the return pattern in day transaction is in U shape. Jinojo (1988) mc Innish and Avord (1985) indicated that the transaction volume meaning the number of transacted shares during the day transactions is U shaped. Thus due the similar pattern that is observed for the transaction volume and shares return we can define a positive relationship between volume and price change. In addition of conducted studies that Calf, Lio and Fam(2000) studied consider the output Fluctuations and public information entry among the transaction day using the number of entry news to market, return Absolute value, and transaction volume during a transactional day that are divided to 12 half hour periods.

### **Research Methodology**

The research from the aim is applicable and based on the method is descriptive and regression. Likewise the research is from the post event type by focus on the historical data because data are based on the past.

### **Population and Sample**

The statistical population of his research is the listed companies in the Tehran exchange and its time scope is from the early of 2009 until the end of 2014 in one year period and from the early of 2011 until the end of 2014 quarterly.

The statistical sample is in random method and by considering the time and place scope has been selected and for this reason the statistical sample of the research is the listed companies in the Tehran exchange that contains following items:

1. The year ending to month of March
2. The company did not change the financial year
3. The annually score of company disclosure quality and financial information from 2009 to 2014 to be accessible yearly
4. The quarterly score of company disclosure quality and financial information to be accessible quarterly
5. Research is performed for non-financial companies. Thus the banks and all of investing companies, leasing and financial instituted are eliminated from the sample. At first for 2009 to 2014, 200 companies are selected and after exertion of sampling limitations the sample are lowered to 167 companies and for 2011 to 2014, 210 companies are selected and after exertion of sampling limitations, the sample is lowered to 177 companies that information about the financial and market statement are incorporated in the models that are related to hypothesis test.

### **Research Hypothesis**

As we see from the research title the major aim of the research is to explore the relationship between the disclosure quality and the transaction value of companies. The hypotheses of the present research are as follows:

*First Hypothesis:* There is a significant relationship between the information disclosure and transaction volume.

*Second Hypothesis:* There is a not significant relationship between the information disclosure and transaction value.

2-1) there is a significant relationship between the information disclosure quality and the real selling transaction value.

2-2) there is not a significant relationship between the information disclosure quality and the legal selling transaction value.

2-3) there is a significant relationship between the information disclosure quality and the real purchase transaction value.

2-4) there is not a significant relationship between the information disclosure quality and legal purchase transaction value.

### **Research model**

For exploration and testing the hypothesis for 2011 to 2014, six models are used that are as followed

No	Dependent Variables	Regression Equations
1	Transaction Volume	$Vol_{i,t} = \alpha + \beta_1 Disc_{i,t} + \beta_2 PE_{i,t} + \beta_3 Leverage_{i,t} + \beta_4 Size_{i,t} + \varepsilon_{i,t}$
2	Transaction Volume	$Val_{i,t} = \alpha + \beta_1 Disc_{i,t} + \beta_2 PE_{i,t} + \beta_3 Leverage_{i,t} + \beta_4 Size_{i,t} + \varepsilon_{i,t}$
2-1	Legal Selling Transaction Value	$Salins_{i,t} = \alpha + \beta_1 Disc_{i,t} + \beta_2 PE_{i,t} + \beta_3 Leverage_{i,t} + \beta_4 Size_{i,t} + \varepsilon_{i,t}$
2-2	Real Selling Transaction Value	$Salind_{i,t} = \alpha + \beta_1 Disc_{i,t} + \beta_2 PE_{i,t} + \beta_3 Leverage_{i,t} + \beta_4 Size_{i,t} + \varepsilon_{i,t}$
2-3	Real Purchase Transaction Value	$Buyind_{i,t} = \alpha + \beta_1 Disc_{i,t} + \beta_2 PE_{i,t} + \beta_3 Leverage_{i,t} + \beta_4 Size_{i,t} + \varepsilon_{i,t}$
2-4	Real Purchase Transaction Value	$Buyins_{i,t} = \alpha + \beta_1 Disc_{i,t} + \beta_2 PE_{i,t} + \beta_3 Leverage_{i,t} + \beta_4 Size_{i,t} + \varepsilon_{i,t}$

**Research Variables****Table 1: Independent and Dependent Variables According to the Research Theme and Title**

Variable Type	Variable Name	Variable Notion	Calculation Method
Control Variables	Company Size	Size	$Size_{i,t} = Ln(TA_{i,t})$ Where Size <sub>i,t</sub> : The company size i in period t TA <sub>i,t</sub> : all of assets of company i in period t
	Financial Leverage	Leverage	$Leverage_{i,t} = \frac{TD_{i,t}}{TA_{i,t}}$ Where: Leverage <sub>i,t</sub> : the financial leverage of company i in period t TD <sub>i,t</sub> : All liability of company i in period t TA <sub>i,t</sub> : All assets of company i in period t
	Price To Dividend	P/E	$\frac{P}{E_{i,t}} = \frac{price_{i,t}}{Earning_{i,t}}$ Where P/E is the price to dividend Price <sub>i,t</sub> : price of each company share i in period t Earn <sub>i,t</sub> : dividend of company i in period t
	Return on Asset	ROA	$ROA_{i,t} = \frac{EBIT_{i,t}}{TotalAsset_{i,t}}$ Where ROA <sub>i,t</sub> : Return on asset of company i in period t EBIT <sub>i,t</sub> : operational earning
	Market value to book value	MB	MB: the market value of each share to book value of each share
Independent Variable	Disclosure score	disclosure	The disclosure score by exchange for each company
Dependent Variables	Selling volume	vol	The natural logarithm of average for the number of transacted shared for each company yearly
	Transaction volume	val	The normal logarithm of average for the transaction value of each company yearly

**Analysis of Research Hypotheses Test /Findings**

In the research using from the excel software the data has been collected and then for analysis the EVIEWS has been employed. The statistical method of the research is the multiple regression method of mixed data. The Jarque–Bera statistic is used for examination of data normality and Durbin-Watson statistic is used for exploration of error terms non-correlation.

Then for estimation of multiple regressions the mixed data analysis method is used. The Chow Test statistic (F Stat.) is used for exploration of suitability of mixed pattern or compiled pattern of regression model and the chi 2 statistic is used for exploration of fixed or random effects method. Likewise for determination of regression model significance the fisher statistic and for exploration of independent variable coefficient significance in each model the t student statistic is

used. The results of the research are offered in 2 major parts. In execution of the primary model using from the chow and Hausman Test the regression fitness suitable model type is determined and using from the regression classic assumptions including the normality of variable distribution the error distribution independence, error distribution normality and variances heterogeneously and independence of independent variables is examined. Finally in finally execution of model due to model total significance and significance of each coefficient, the final model is derived.

**Table 2: The part one of results (from 2010 to the end of 2012 quarterly)**

Variable Description		Beta	T Statistic	P-Value	Result
C	Fixed Coefficient	13127	10685	0	Significant
Dis	Information Disclosure Quality	-0.0016	-0.362	0.717	Rejected
P/E	Profit/Price	0.0041	0.982	0.326	Rejected
leverage	Financial Leverage	0.009	0.275	0.783	Rejected
Ln(size)	Company Size	0.159	1,862	0.0628	Rejected
First time Autocorrelation	AR(1)	0.424	11,332	0.000	Significant
F value		23,567	P value	0.00	Significant
Determination Coefficient		0.731			
Finding Adjusted Determination Coefficient		0.7			

The hypothesis 1: the f statistic imply on significance of regression model. Due to confidence level of 95 percent it is rejected that there is a significant relationship between information disclosure quality and transaction volume. The results from the panel regression indicate that among the controlling variable no variables did not influence on the volume of transaction volume significantly in 95 percent confidence level. Due to adjusted determination coefficient we can say that the information disclosure quality variable and the controlling variable both explain the 70 percent of transaction variations.

Variable Description		Beta	T Statistic	P-Value	Result
C	Fixed Coefficient	21,149	15,709	0	Significant
Dis	Information Disclosure Quality	-0.444	-0.002	0.656	Rejected
P/E	Profit/Price	0.0045	0.963	0.335	Rejected
leverage	Financial Leverage	0.003	0.963	0.335	Rejected
Ln(size)	Company Size	0.184	1,971	0.0489	Confirmed
First time Autocorrelation	AR(1)	0.487	13828	0.000	Significant
F value		20909	P value	0.00	Significant
Determination Coefficient		0.707			
Finding Adjusted Determination Coefficient		0.673			

Hypothesis2: the f statistic value imply on significance of regression model. Due to significance level for information disclosure quality variable, with 95 percent it is rejected that there is a significant relationship between the information disclosure quality and transaction value. The results from the panel regression indicate that the company size influence on the value of transaction value significantly and positively in 95 percent confidence level. Rest of controlling variables in confidence level of 95percent don't influence on transaction value significantly. Due to adjusted determination coefficient value we can say that the information disclosure quality variable and controlling variables explain the 67.3 percent of transaction value variations.



Variable Description		Beta	T Statistic	P-Value	Result
C	Fixed Coefficient	17905	10083	0	Significant
Dis	Information Disclosure Quality	-0.0035	-0.622	0.534	Rejected
P/E	Profit/Price	0.0186	3,378	0.001	Confirmed
leverage	Financial Leverage	-.006	-0.597	0.550	Rejected
Ln(size)	Company Size	0.343	2,816	0,0049	Confirmed
First time Autocorrelation	AR(1)	0.218	5,819	0.000	Significant
F value		10704	P value	0.00	Significant
Determination Coefficient		0,613			
Finding Adjusted Determination Coefficient		0.555			

Hypothesis 1-2: the f statistic value imply on significance of regression model. Due to significant level for information disclosure quality variable with 95 percent confidence level it is rejected that there is significant relationship between information disclosure quality and real selling. The results from the panel regression indicate that from the controlling variables of company size and price to dividend in 95 percent confidence level there is no influence on real selling positively and significantly. Rest of controlling variables in confidence level of 95 percent has no influence on the real selling. Due to adjusted determination coefficient we can say that the information disclosure quality variable and controlling variable explain the 55.5 percent of real selling variations.

Variable Description		Beta	T Statistic	P-Value	Result
C	Fixed Coefficient	21729	17790	0	Significant
Dis	Information Disclosure Quality	0.002	0.430	0.667	Rejected
P/E	Profit/Price	0.003	0.605	0.544	Rejected
leverage	Financial Leverage	0.002	0.689	0.490	Rejected
Ln(size)	Company Size	0.108	1.307	1,191	Rejected
First time Autocorrelation	AR(1)	0.590	18,212	0.000	Significant
F value		24,062	P value	0.00	Significant
Determination Coefficient		0.734			
Finding Adjusted Determination Coefficient		0.704			

Hypothesis 2-2: the statistic f value imply on significance of regression model. Due to significance level for variable of information disclosure quality, it is rejected that there is a significant relationship between legal selling and information disclosure quality with 95 percent confidence level. The findings from the panel regression show that among the controlling variable, no one influence on legal selling in 95 percent confidence level.

Variable Description		Beta	T Statistic	P-Value	Result
C	Fixed Coefficient	21,082	16447	0	Significant
Dis	Information Disclosure Quality	-0.0003	-0.0608	0.951	Rejected
P/E	Profit/Price	-0.004	0.826	0.408	Rejected
leverage	Financial Leverage	0.001	0.413	0.967	Rejected
Ln(size)	Company Size	0.163	1,852	0.0642	Rejected
First time Autocorrelation	AR(1)	0,592	19148	0.000	Significant
F value		22487	P value	0.00	Significant
Determination Coefficient		0,721			
Finding Adjusted Determination Coefficient		0.689			

Due to adjusted determination coefficient value we can say that the information disclosure quality variable and controlling variables both explain the 70.4 percent of legal selling variations.

Hypothesis 3-2. The f value statistic imply on significance of regression model. Due to significance level for variable of disclosure quality, with 95 percent confidence level it is rejected that there is a significant relationship between information disclosure quality and real purchase. The findings indicate that from the controlling variable no one influence on real purchase in 95 percent confidence level. Due to adjusted determination coefficient value we can say that the information disclosure quality variable and controlling variable both explain the 68.9 percent of real purchase variations.

Variable Description		Beta	T Statistic	P-Value	Result
C	Fixed Coefficient	17,281	10,053	0	Significant
Dis	Information Disclosure Quality	0,0107	1,840	0.066	Rejected
P/E	Profit/Price	0.009	1,216	0,224	Rejected
leverage	Financial Leverage	0.004	0,567	0.570	Rejected
Ln(size)	Company Size	0.314	2,701	0,007	Confirmed
First time Autocorrelation	AR(1)	0,255	6,684	0.000	Significant
F value		12,304	P value	0.00	Significant
Determination Coefficient		0,640			
Finding Adjusted Determination Coefficient		0,588			

Hypothesis 4-2: the F statistic value imply on significance of regression model. Due to significance level for variable of information disclosure quality, it is rejected that there is a significant relationship between information disclosure quality and legal purchase with 95 percent confidence level.

**Table 3: Hypotheses and Result of Hypothesis Test**

Hypothesis	Rejection or Confirmation in 95% Confidence Level	Effective Controlling Variables
There is a significant relationship between the information disclosure and transaction volume	Rejection	
There is a significant relationship between the information disclosure and transaction value	Rejection	Company size
2-1there is a significant relationship between the information disclosure and legal selling transaction value	Rejection	
1-1 there is a significant relationship between the information disclosure quality and the legal selling transaction value	Rejection	Company size and appropriation of shared price
2-3 there is significant relationship between the information disclosure and transaction value of legal purchase	Rejection	
2-4 there is a significant relationship between the information disclosure and transaction value of legal purchase		

Of course of we reduce the confidence level to 90 percent we can say that in 90 percent the hypothesis is confirmed. Likewise among the controlling variable the variable of company size in



confidence level of 95percent influence on legal purchase positively and significantly and rest don't influence on legal purchase significantly. Due to the adjusted determination coefficient value we can say that the information disclosure quality and controlling variables both explain the 58.8 percent of legal purchase variations.

### **Conclusion and Suggestions**

Due to following results for enhancement of information disclosure quality level it is proposed that

- Due to the fact that there are institutes in the industrial countries that score the disclosure items based on the importance level for investors, the Tehran exchange help them by scoring the disclosure items from the investors point of view
- Due to importance of controlling variable of company size in the most of assumptions it is suggested that the investors in Tehran exchange notice the company size before investment
- Likewise due to market value controlling variables on the booking and asset return on transaction value variable it is suggested that investors in Tehran exchange notice tooth variable in order to perceive the legal and real selling and purchase transaction value correctly
- It is suggested one of the subsidiary of Tehran exchange at the end of first or second six month or end of each year, to collect research about the organization and industry inside the country and rand them based on the multi criteria making decision
- Due to the importance of financial information and high quality accounting it is suggested that investors in Tehran exchange invest in companies that publish the correct information that both enhance the investment security and encourage the publishers to disclosure more correct information

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