

Research Article

THE IMPACT OF FINANCIAL REPORTING TRANSPARENCY ON THE DEBT COST OF COMPANIES THAT HAVE BEEN LISTED IN THE TEHRAN STOCK EXCHANGE

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ABSTRACT

In this study, the impact of financial reporting transparency on the debt cost of companies that have been listed in the Tehran Stock exchange has been investigated. The population of the present study is companies that have been listed in Tehran Stock Exchange during the years 2007 to 2012. Sample size base on screening method is 120 companies. In this study the components of financial reporting transparency include financial information transparency, management information transparency, transparency of ownership structure information and equity of companies owner are consider as independent variables in order to investigate the debt cost of companies. The results of multivariable regression data analysis at %95 significant level shows that the components of financial reporting transparency play an adverse role on the debt cost of companies. On the other hand, financial information transparency has highest adverse impact on the debt cost and in addition transparency of ownership structure information and equity of company's owners has lowest adverse impact on the company's debt cost.

Keywords: *Financial Reporting, Debt Cost, Transparency, Tehran Stock Exchange*

INTRODUCTION

Financial crises in the world market especially in the black September of 1997 and Enron's scandal and some financial problems of US and Europe companies in 2000 cause the issue of information transparency in the financial reporting process come to center of professional association's attention.

On the one hand, the transparency give shareholders the assurance that information about the financial condition of the company's value are in time and reliable and major shareholders and managers are not trying to violate their rights, on the other hand, instead of short-term interest mangers try to increase company's value which can significantly decrease financial scandal (HasasYegane and NadiQomi, 2011). Selection or appropriate combination of long-term financial resources is one of the ways that is used for increasing company's value and shareholders wealth, in a manner in which financial resources with the low capital cost has more returns rate and thus company's capital cost has close relation with capital structure theory.

The optimized capital structure of the company is capital structure which increases the value of company or minimized capital overall cost.

According to the ambiguity of trading world, company's management board has important role for achieving capital with minimum cost because it was difficult to select an appropriate level of financial leverage and management should adjust financing in the way that maximized company's value (Mathkeila *et al.*, 2008).

Companies for financing their needed resources have two inside and outside strategies (Safari, 2008) so companies can finance all of their resources by issuing common stock, thus in order to achieve an optimal capital structure and to minimize the capital cost, companies should use the combination of different financial resources such securities, stock issuing, fund and internal resources such as retained earnings. Therefore, factors such as company's transparency and its impact on return demanded of financers (shareholder and creditors) should be considered.

Base on mentioned discussion the purpose of this study is investigation the impact of financial reporting transparency on the debt cost of companies that have been listed in the Tehran Stock exchange.

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Background of Research

Lee *et al.*, (2013) in their study investigated the impact of the financial reporting quality on company's capital cost, in their research they used three profit quality standards, profit fluctuation, profit consistency and disclosure quality and found that the companies with higher financial reporting quality have less capital cost.

Park *et al.*, in their study inquired the impact of profit predictability on capital cost. Their samples consisted of 8022 loan contract of American companies. They found that companies with more profit predictability have better loan situation such as lower interest rate, longer loan maturity, less limiting condition and less mortgages. Result show that the relation between profit predictability and loan cost depend on the measure of borrower's private information, the completion between banks, securities and the size of company.

Castlo and Vitenberg (2011) in the study with title " the impact of financial reporting quality on capital cost: the evidences of reporting the internal control weakness" they investigated the impact of financial reporting quality on capital cost. The results showed that when company's internal control system has weakness, creditors reduce the condition of using financial ratios and they use options such as mortgages, interest and performance evaluation base on ranking of customer credit.

Minis (2011) in his survey inquired how the approval of financial statements affects the rate of debt interest. He investigated American private companies that has no obligation for auditing the financial statements, he concluded that companies which their financial statements have been audited significantly have less debt cost; because creditors for assessment of interest rate pay more attention to the audited financial statements

Saei *et al.*, (2013) in their research investigated the impact of revising financial statement on company's capital cost. The financial information of 229 companies that have been listed in the Tehran stock exchange in 2001 to 2011 that revising of financial statements has adverse significant relation with company's capital cost.

Ahmadpur and Qharamani Saqir examined the quality characteristics of reliability principal as standard for evaluation of profit quality of companies that have been listed in the Tehran Stock Exchange. In this study, for investigation the market's performance to the quality characteristics of reliability principal, three assumptions were tested and quality standards of accruals items, conservatism principal and accruals items of unusual working capital for operating the quality characteristics of reliability principal were used. In the first assumption, earning reaction coefficient(ERC), in the second assumption, earning explanation strength (R2), were formed base on quality characteristic of reliability principal in two portfolios and in the third assumption, the relation between capital costs with the quality characteristic of reliability principal was investigated. The results show that the portfolio of companies with high reliability is more than the portfolio of companies with low reliability and as well as the lack of correlation between the capital costs with the quality characteristic of reliability principal was confirmed.

MATERIALS AND METHODS

Research Method

Present study based on its objective and classification is practical research. The aim of practical research is the development of practical knowledge in a particular field. Also this study according to its method and nature is correlation research. The purpose of this is to determine the relationship between variables. Present research has been made base on inductive-deductive reasoning method, this means that inductive reasoning method was used for research theoretical base, research background and the data has been collected from libraries, websites and articles and deductive reasoning method was used for accepting or denying the assumption. The population of present study is all of companies that have been listed in the Tehran Stock exchange. Screening sampling method applied with the following conditions:

Time interval of this study is from the beginning of 2007 until the end of the 2012, so the population of present study is all of companies that have been listed in the Tehran Stock exchange. FA systematic sampling method was used with following conditions:

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1- The needed information for calculating the research's operational variables should be available for them.

2-The companies should be listed in Stock exchange at least from end of 2007 to end of research time and during this time they should be active.

3- The end financial year is 19 March (solar calendar).

4- The companies should not be broker, investor, banking, insurer and leasing company.

At the end, final sample size base on screening method and mentioned standards are 120 companies.

In this study the multivariate regression analysis was applied by using data combination. For data and assumptions analysis of research, descriptive and inferential statistical methods were used. First descriptive statistics was used for explanation of demographic data then regression classic hypothesis was investigated for estimating research's parameters and testing research's assumption. The EViews6 and SPSS19 software was use for analyzing descriptive data, testing assumptions and achieving regression model. In this research there is significant relation between debt cost and transparency of financial reporting. Sub- hypotheses are as follows:

First assumption: there is significant relation between company's financial information with transparency the debt cost.

Second assumption: there is significant relation between company's management information with transparency the debt cost.

Third assumption: there is significant relation between company's ownership structure information and equity of company's owner with transparency the debt cost.

In this research for testing assumptions, three regression models respectively as following were use.

Model 1 to test the first assumption:

$$\text{Debt}_{j,t} \text{ cost} = \beta_0 + \beta_1 \text{TDS}_{j,t} + \beta_4 \text{SIZE}_{j,t} + \beta_5 \text{ROS}_{j,t} + \beta_6 \text{MB}_{j,t} + \beta_7 \text{CAP}_{j,t} + \beta_8 \text{NETWORTH}_{j,t} + \beta_9 \text{LIQUIDITY}_{j,t} + \varepsilon$$

Model 2 to test the second assumption:

$$\text{Debt}_{j,t} \text{ cost} = \beta_0 + \beta_2 \text{TDS}_{j,t} + \beta_4 \text{SIZE}_{j,t} + \beta_5 \text{ROS}_{j,t} + \beta_6 \text{MB}_{j,t} + \beta_7 \text{CAP}_{j,t} + \beta_8 \text{NETWORTH}_{j,t} + \beta_9 \text{LIQUIDITY}_{j,t} + \varepsilon$$

Model 3 to test the third hypothesis:

$$\text{Debt}_{j,t} \text{ cost} = \beta_0 + \beta_3 \text{TDS}_{j,t} + \beta_4 \text{SIZE}_{j,t} + \beta_5 \text{ROS}_{j,t} + \beta_6 \text{MB}_{j,t} + \beta_7 \text{CAP}_{j,t} + \beta_8 \text{NETWORTH}_{j,t} + \beta_9 \text{LIQUIDITY}_{j,t} + \varepsilon$$

In this study variables are dependent variable, independent variable and control variable that each of them will be presented and explained at the below.

Debt cost is dependent variable that has been acquired from below relation.

Debt cost: The rate of debt cost is equal with interest expense offacilities after tax deduction in book value of company's financial facilities.

$$\text{Cost of debt} = \frac{\text{interest expense of facilities after tax deduction}}{\text{Book value of financial facilities.}}$$

Independent variable is transparency in financial reporting that base on the literature of transparency evaluation standards, several measures are used which "Andpores Standard" is one of most important measures that its three reporting standards are as follow:

The ownership structure and owners equity (28 standards)

Financial transparency and information disclosure (35 standards)

The Board of Directors and management (35 standards)

Some of the first category standards are: Disclosure of the company's shareholders based on their legal and factual entity nature and so on, the number of shares and their nominal value, 5 and 10 major shareholder, date meetings of shareholders, the agenda and the way of introducing managers.

Some of the second standards are: Strategic plans and company's industry and trading process, production details, detail of sales and profitability, market share, profitability anticipation of company's products and sectors, preparing profit and loss statement, balance sheet, preparing the cash flows statement, transactions with related parties, audit reports.

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Some third standards are: Information about board members including their past experiences, their experience in the company, board decisions, audit committee, staff promotion committee, the manager selection committee, the shares of board members and senior executives,, the salary of senior executives and board members and management training programs.

Any company that has mentioned information in its reports will receive grade 1 and any company that hasn't mentioned information in its report will receive zero. Final score of company, s transparency will be acquired with following equation (Kashani *et al.*, 2009).

$$TDS = \sum \sum S_{jk} / TOTS$$

Where:

TDS: final ranking of transparency and disclosure,

J: transparency evaluation area,

K: standard number

TOTS: The maximum allocated points.

S_{jk}: Allocated score for each standard.

Control variables include financial leverage, company size, operational profitability, growth prospects, capital expenditure, SD in equity of shareholder, SD in liquidity that all of them have been explained below.

Financial leverage (LEV) = is obtained from the ratio of debts book value in assets book value.

$$\text{Financial leverage} = \frac{\text{Debts book value}}{\text{Assets book value}}$$

Company size (SIZE) = is obtained from the total average of assets for i company in 5-years period.

Operational profitability (ROS) = is obtained from the return average of sales for i company in 5-years period.

$$\text{ROS} = \frac{\text{Operational profit}}{\text{Net sale}}$$

Outlook

Growth (MB) = is obtained from growth outlook average in the average of market value for company i in 5-years period.

$$\text{MB} = \frac{\text{Debts book value at end of financial period} + \text{share market value at end financial fo period}}{\text{Assets book value at end of financial period}}$$

Capital expenditure (CAP) = the average of capital expenditure of i company in the 5-years period.

SD ni equity of shareholders (NETWORTH) = SD ni equity of shareholders for i company in the 5-years period is scaled through the mean of shareholders equity.

SD in liquidity (LIQUIDITY) = SD of working capital for i company in the 5-years period is scaled through the mean of working capital.

Multivariable's regression

In some of the research issues particularly those that aimed to provide predicting model, the determination of correlation between dependant variable (which we want to predict it) and predictor variables is important. The method, by which the predictor variables are combined, is called "multivariable regression". In this method, a multivariable regression equation is calculated that summarized prediction measured values in a formula. Coefficients for each variable are calculated based on its importance in predicting criterion variable. The degree of correlation between the predictor variables in the multivariable regression and the dependent variable are shown by the coefficients (Sarmad, 2005).

Multivariable regression model:

$$Y_i = \alpha + \beta_1 X_{1,i} + \beta_2 X_{2,i} + \dots + \beta_n X_{n,i} + \epsilon_{n,i}$$

Which:

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Y_i = i – observation of dependent variable

α = intercept (fixed value)

X_n , i = i - observation of independent variable X_n ($n = 1, 2, \dots, n$)

β = coefficient of independent variable

ε = disturbing component

In this model the following basic assumptions are considered:

1. There is no linear relationship between the independent variables;
- 2-Expected errors are zero and their variances are fix (distribution of errors should be normal).
3. There is no correlation between the errors of the model; and the dependent variable has normal distribution (Momeni, 2007).

Descriptive Statistics of the Research Variables

Table 1 shows the descriptive statistics of the research variables that have been investigated during period. Descriptive statistics of the research variables were measured during period (years of 2007 to 2012) by the data from the companies that have been listed in Tehran Stock Exchange. Measuring tool include mean, median, standard deviation, minimum and maximum.

Table 1: Descriptive statistics of the research variables

Description of variables	Mean	median	Standard deviation	Minimum	Maximum
Cost of debt	0.3902	0.3981	0.1457	0.1348	0.9331
Transparency in Financial Reporting (TDS)	56.781	53	1276.678	39.564	88.932
Company Size (SIZE)	2.1016	2.0779	3.1226	-2.3127	3.8137
Operational profitability Measure (ROS)	13.4299	13.2279	1.3127	10.7849	18.4376
The measure of growth outlook measure (MB)	0.6682	0.6615	0.2056	0.1803	1.9378
The average capital expenditure (CAP)	0.3807	0.0355	2.7123	-0.93	0.7544
SD in equity of shareholders (NETWORTH)	0.3902	0.4983	2.1457	0.2156	0.6845
SD in liquidity (LIQUIDITY)	0.7831	0	1.8976	0	1

The Results of the fit in Regression Model

The results of the fit of in the regression equation are presented in table 2. Statistic amount of F (14.765) indicated that the model is significant. As shown in mottob part of table 2, the determination coefficient and adjusted determination coefficient of above models respectively are 72/8 and 64/1. Thus, we can conclude that in the mentioned regression equation, only about 64/1percent of dependent variables changes can be explained through control and independent variables. In this table positive (negative) numbers in the variable coefficient column, are sign of each variable direct impact (reverse) on company's debt cost.

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Table 2: The results of the fit in regression equation

Variable name	Variable coefficient	Coefficient amount	Statistics t	Significant level.
fixed number	β_0	1.522	2.873	0.004
Transparency of financial information	β_1	-1.121	-2.323	0.043
Transparency of management information	β_2	-0.732	-2.921	0.016
transparency of ownership structure information	β_3	-0.968	-2.231	0.046
Company's Size	β_4	-1.156	-3.111	0.028
Operational profitability measure	β_5	-0.843	-2.909	0.031
The growth outlook measure	β_6	-0.743	-2.921	0.016
The average of capital expenditure	β_7	-.911	-2.129	0.041
SD in equity of shareholders	β_8	1.121	3.273	0.0027
The determination coefficient	0.728	F Statistics		14.765
Adjusted determination coefficient	0.641	P-Value Significant		0.000
		Dorbin Watson statistic		2.018

The First Sub-Assumption Test

The purpose of testing first assumption is this question whether "there is relation between debt cost and transparency of company's financial information" or not? Statistical assumptions are expressed as follows:
 H0: There is no significant relation between debt cost and transparency of company's financial information.

H1: There is significant relation between debt cost and transparency of company's financial information.

Test Result

According to the table 2, the significant level of transparency (sig) variable in the financial information (0.043) is considered less than significant level of study (0.05); also absolute value of t-statistic variable (2.323) is larger than t-statistic from table with same degree of freedom. So H0 assumption at 0.95 significant levels was rejected and H1 assumption was confirmed.

The second sub-assumption test

The purpose of second assumption is to investigate this question whether "there is significant relation between debt cost and transparency of company's management information" or not? Statistical assumptions are expressed as follows:

H0: There is no significant relation between debt cost and transparency of company's management information.

H1: There is significant relation between debt cost and transparency of company's management information.

Test Result

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The Third Sub-assumption Test

The purpose of third assumption is to investigate this question whether "there is significant relation between debt cost and transparency of ownership structure information and equity of company's owner" or not? Statistical assumptions are expressed as follows:

H0: There is no significant relation between debt cost and transparency of ownership structure information and equity of company's owner.

H1: There is significant relation between debt cost and transparency of ownership structure information and equity of company's owner.

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Test Result

According to the table 2, the significant level of transparency variable in the ownership structure information and equity of company's owner (0.046) is considered less than significant level of study (0.05); also absolute value of t-statistic variables (2.231) are larger than t-statistic from table with same degree of freedom. So H0 assumption at 0.95 significant levels was rejected and H1 assumption was confirmed.

The Results

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H1: There is significant relation between debt cost and transparency of company's financial information.

Results and Comments

According to the table 2, the significant level of transparency variable in the financial information (0.043) is considered less than significant level of study (0.05); also absolute value of t-statistic variables (2.323) are larger than t-statistic from table with same degree of freedom. So H0 assumption at 0.95 significant levels was rejected and H1 assumption was confirmed. On the other hand, base on the sign and transparent coefficient value of financial information (-1.121), each unit increasing of transparency in the financial information decrease 1.121 unit debt cost of companies. These results are consistent with the results of Lee *et al.*, (2013), Castlo and Vitenberg (2011)

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H1: H0: There is significant relation between debt cost and transparency of company's management information.

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The Third Sub-assumption Test

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H0: There is no significant relation between debt cost and transparency of ownership structure information and equity of company's owner

H1: H0: There is significant relation between debt cost and transparency of ownership structure information and equity of company's owner

Results and Comments

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degree of freedom. So H0 assumption at 0.95 significant levels was rejected and H1 assumption was confirmed. On the other hand, base on the sign and transparent coefficient value of ownership structure information and equity of company's owner (-0.968), each unit increasing of transparency in ownership structure information and equity of company's owner decrease 0.968 unit debt cost of companies. These results are consistent with the results of Lee *et al.*, (2013), Castlo and Vitenberg (2011)

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