



## **Determinants of Corporate Financial Factors on Tax Reporting Strategy**

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### **ABSTRACT**

The primary objective of present study is to analyze the effects of financial factors on financial and tax reporting decisions. The statistical population of present study includes all companies listed in Tehran Stock Exchange out of which 438 companies are included in the statistical sample of present study. The results suggests that there is a significant positive association between debt ratio and aggressive financial reporting. In addition, there is a significant negative association between debt ratio and aggressive tax reporting.

**Keywords:** Debt Ratio, Long-term Debt Ratio, Aggressive Financial Reporting, Aggressive Tax Reporting

**JEL Classifications:** M4, H25, H2

### **1. INTRODUCTION**

Financing activities are recognized as a source of temporary differences in weighing of financial reporting and tax costs (Lee, 2015). Financing is one of the significant activities and supports consistent operations and strategic investments of a company because capital is essential to decide to invest in working capital and equipment. Weakness in capital financing exposes companies to liquidity risk and limits the ability of such companies in continuing their operations. In this regard, financing is one of the critical activities that generally affect decision-making process of managers of top companies. In addition, financial factors are closely associated with financial reporting and tax costs of companies (Lee, 2015).

Here, two points should be noted. First, debt ratio of a company is associated with financial reporting costs because financing through debt increases risk of accounting-based debt covenant violation. Numerous studies conducted in the past suggest that companies with higher debt ratio have the urge to increasingly adopt book earnings management to decrease financial reporting costs (Watts and Zimmerman, 1986; Duke and Hunt, 1990; DeFond and Jiambalvo, 1994). Second, debt ratio is associated

with tax expenses because debt financing permits companies to enjoy reductive effects of taxes due to interest expenses. Consequently, one could state that as debt ratio of a company increases, its tax expenses reduce (Mackie-Mason, 1990; Collins and Shackelford, 1992; Dhaliwal et al., 1992). In Iran, tax laws have vivid differences from those of other countries. In addition, debt financing of Iranian companies is radically different from that of other countries of the world. In some cases, financial reporting of Iranian companies is different from foreign companies. More importantly, culture of Iranian managers is different from culture of foreign managers. Therefore, considering above issues, one could state that problem of present study would be stated in the following manner: "Do financial factors affect managers' financial and tax reporting decisions in Iran and specifically in Tehran Stock Exchange?"

Numerous studies conducted in the past suggested that one of the most fundamental sources of financing for companies is debt financing. Today, this issue is evident in Iran more than ever. On the other hand, one of the key duties of companies in the field of offering information to market is financial and tax reporting. However, few studies have been conducted on the role of financial factors in companies' reporting strategies. Considering the fact that

financial reporting and tax reporting are not distinct notions but they have been analyzed separately in most of previous studies, it seems essential to adopt a method that deals with both of these notions simultaneously. Therefore, the present study is significant in the sense that it adopts a method for concurrent study of financial and tax reporting to add new evidence to existing literature. Consequently, managers, investors and authorities of Stock Exchange could base many of their decisions on such evidence. In regard to innovation in the present study, one should note that this is the first study that deals with the subject experimentally in Iran and specifically in Tehran Stock Exchange. The present study aims to reveal the effects of financial factors on companies' selection of reporting strategy. In other words, the present study intends to tackle the question whether companies with different debt ratios adopt different aggressive financial or tax reporting or not?" In addition, the role of long-term debts within capital structure of companies in their use of aggressive tax reporting has been addressed.

## 2. THEORETICAL PRINCIPLES AND REVIEW OF LITERATURE

Capital market is a significant driving force behind information economy. Proper flow of information in this market leads to making logical and proper decisions by participants. In this case, economic development and improvement of social well-being result. Financial reporting is a primary means of communication between a company and its different beneficiary groups (e.g., shareholders, creditors and employees, etc.) (Scott, 2003). On the other hand, accounting is the process of identification, measurement, classification, and reporting of financial data to enable informed judgment and making logical decisions by users of financial data (Scott, 2003). Therefore, accounting is a system of data processing designed for identification, measurement, and classification of financial events affecting different organizations and business units and reporting influence of this type of events to decision makers.

Financial accounting data is final product of accounting systems and extra-organizational reporting of companies, which is made available to the public after measurement (Bushman and Smith, 2001). Financial accounting systems could directly offer input data regarding control mechanisms. In addition, it is used indirectly as a control mechanism that companies adopt to control prices of shares beforehand. Therefore, one could imply that profit management is management of users' expectations and impressions of financial statements so that managers could attain their distinctive objectives the majority of which contribute to personal benefits of management. Depending on the situation, generating distinct expectations and impressions in users could be realized by increasing or reducing profit. In fact, management uses its authorities regarding selection of accounting procedures (within the framework of accepted accounting principles) (Watts and Zimmerman, 1990; Davidson et al., 1987) and modification of real activities of business units (Healy and Palepu, 1999) to its own advantage. Lee, (2015) analyzed the effect of different financial factors on selection of financial and tax reporting strategies. The results suggested

that depending on its level, debt ratio affects financial and tax reporting decisions non-uniformly. In addition, the results suggest that companies that use long-term debts in their financing structure more frequently are more likely to involve in aggressive financial reporting activities.

## 3. RESEARCH HYPOTHESES

The hypotheses raised in present study are:

1. Debt ratio has a significant effect on aggressive financial reporting
2. Debt ratio has a significant effect on aggressive tax reporting
3. Long-term debt ratio has a significant effect on aggressive tax reporting
4. Long-term debt ratio has a significant effect on aggressive financial reporting.

## 4. METHODOLOGY

In the present study, statistical sampling is not used. However, following conditions were perused for selection of the sample:

Financial year of the company should be end of March of each year.

The financial information required for extraction of intended data should be available and shares of the company should be actively trade in stock exchange (no more than 3 months of delay).

Listed in Tehran Stock Exchange before end of 2006.

Not among financial banks and institutes (i.e., investment companies, financial brokerages, holding and leasing companies) because disclose of financial information and strategic structure of these companies is done differently.

Based on conducted analyses, there are 438 companies having above conditions in a period from 2007 to 2014. Consequently, they were included in the statistical sample.

### 4.1. Research Models and its Variables

Considering the fact that in the present study, the main variable is dependent and continuous (i.e., it takes the value of zero or one), test of research hypotheses was done through multivariate logistic regression model. The most significant characteristics of logistic regression model is its lack of need for presumption of normality hypotheses and consistency of covariance matrices. In the model of logistic regression, total significance of regression model is verified through Chi-square statistic. Goodness of fit for logistic regression model is analyzed through Hosmer-Lemeshow test. If significance level of Hosmer-Lemeshow statistic is more than 5%, the model has proper fitness with real-world observation (goodness of fit for the model). In addition, regarding significance test of each logistic regression coefficient, Wald statistics used which is a Chi-square distribution. Finally, in logistic regression the analysis of variation in dependent variable due to variation of independent variables certain measures such as Nagelkerke and Cox-Snail were used (Peng et al., 2002).

For testing first and second hypotheses, the following regression model is used:

$$FR = \alpha_0 + \alpha_1(Lev_{it}) + \alpha_2(Size_{it}) + \alpha_3(ROA_{it}) + \alpha_4(BigAudit_{it}) + \varepsilon_{it} \quad (1)$$

In addition, the following regression model is used for testing third and fourth hypotheses:

$$TR = \alpha_0 + \alpha_1(Debt_{it}) + \alpha_2(Size_{it}) + \alpha_3(ROA_{it}) + \alpha_4(BigAudit_{it}) + \varepsilon_{it} \quad (2)$$

Here, FR represents aggressive financial reporting strategy, Debt refers to long-term debt ratio, Lev it represents debt ratio of company, Size it refers to size of companies, ROA it refers to the return on total assets and Big Audit it represents size of accounting institute.

## 5. RESEARCH FINDINGS

The findings of present study were organized into two descriptive and inferential parts. The descriptive results of present study are analyzed in Table 1 and inferential results (i.e., test of hypotheses) are suggested in Tables 2-5.

### Results of Testing Research Hypotheses

First hypothesis: In Table 2, statistical results of testing first hypothesis are offered. Considering the obtained significance level, one could conclude that all coefficients are statistically significant.

The value of Chi-square statistic and its level of significance point to significance of the whole model. Significance level of Hosmer and Leme show statistic suggests that there is proper match between model and real-world observations (goodness of fit for the model). The values of measures of Cox-Snail (R2) and

**Table 1: Descriptive statistics of research variables**

Research variable	Minimum	Maximum	Mean±SD
Aggressive financial reporting	0	1	0.253±0.436
Aggressive tax reporting	0	1	0.741±0.438
Debt ratio	0.0085	2.7293	0.6828±0.2238
Long-term debt ratio	0.0011	0.2925	0.1370±0.0356
Size of company	3.865	8.241	5.897±0.631
Size of accounting institute	0	1	0.138±0.345
Total return on assets	-0.325	0.628	0.108±0.114

SD: Standard deviation

**Table 2: Summary of results of testing first hypothesis**

Dependent variable: Aggressive financial reporting					
Variables	Coefficient		Wald statistic	Level of significance	Odds ratio
Lev <sub>it</sub>	1.407		8.963	0.003	4.084
Size <sub>it</sub>	-0.687		13.733	0.000	0.503
ROA <sub>it</sub>	2.942		11.309	0.001	18.946
BigAudit <sub>it</sub>	-0.296		0.961	0.327	0.744
Fixed value	1.652		2.167	0.141	5.216
Chi-square	Level of significance	Hosmer and Lemeshow statistic	Level of significance	Cox-Snail (R <sup>2</sup> )	Nagelkerke (R <sup>2</sup> )
39.471	0.000	8.285	0.406	0.066	0.097

Nagelkerke (R2) are respectively equal with 6.6 and 9.7%, which suggests proper prediction power of the model.

In addition, considering the value of Wald statistic and its level of significance (Tables 4 and 5), it is observed that there is a significant positive association between debt ratio and financial reporting. In addition, results concerning control variables suggested that there is a significant negative association between size of companies and aggressive financial reporting. The association between total return on assets and aggressive financial reporting is significant and positive while the association between size of auditing institute and aggressive financial reporting is insignificant.

Second hypothesis: In Table 3, statistical results of testing second hypothesis are offered. Considering the obtained significance level, one could conclude that all coefficients are statistically significant.

The value of Chi-square statistic and its level of significance point to significance of the whole model. Significance level of Hosmer and Leme show statistic suggests that there is proper match between model and real-world observations (goodness of fit for the model). The values of measures of Cox-Snail (R2) and Nagelkerke (R2) are respectively equal with 8 and 12.3%, which suggests proper prediction power of the model. In addition, considering the value of Wald statistic and its level of significance (Tables 4-6), it is observed that there is a significant negative association between debt ratio and aggressive tax reporting. In addition, results concerning control variables suggested that there is significant positive association between size of companies and aggressive tax reporting. The association between total return on assets and aggressive tax reporting is significant and negative while the association between size of accounting institute and aggressive tax reporting is significant.

Third hypothesis: In Table 4, statistical results of testing third hypothesis are offered.

The value of Chi-square statistic and its level of significance point to significance of the whole model. Significance level of Hosmer and Lemeshow statistic suggests that there is a proper match between model and real-world observations (goodness of fit for the model). The values of measures of Cox-Snail (R2) and nagelkerke (R2) are respectively equal with 5.5 and 8.1%, which suggests proper prediction power of the model.

Fourth hypothesis: In Table 5, statistical results of testing second hypothesis are offered.

**Table 3: Summary of results of testing second hypothesis**

Dependent variable: Aggressive tax reporting					
Variables	Coefficient	Wald statistic	Level of significance	Odds ratio	
Lev <sub>it</sub>	2.146	16.882	0.000	8.548	
Size <sub>it</sub>	-0.795	26.363	0.000	0.451	
ROA <sub>it</sub>	2.356	6.974	0.008	10.545	
BigAudit <sub>it</sub>	-0.116	0.168	0.682	0.890	
Fixed value	4.176	19.108	0.000	65.075	
Chi-square	Level of significance	Hosmer and Lemeshow statistic	Level of significance	Cox-Snail (R <sup>2</sup> )	Nagelkerke (R <sup>2</sup> )
50.472	0.000	5.002	0.757	0.083	0.123

**Table 4: Summary of results of testing second hypothesis**

Dependent variable: Aggressive tax reporting					
Variables	Coefficient	Wald statistic	Level of significance	Odds ratio	
Debt <sub>it</sub>	-1.644	0.357	0.550	0.193	
Size <sub>it</sub>	-0.736	24.162	0.000	0.479	
ROA <sub>it</sub>	2.057	5.416	0.020	7.825	
BigAudit <sub>it</sub>	-0.120	0.189	0.664	0.887	
Fixed value	5.492	30.857	0.000	242.841	
Chi-square	Level of significance	Hosmer and Lemeshow statistic	Level of significance	Cox-Snail (R <sup>2</sup> )	Nagelkerke (R <sup>2</sup> )
32.775	0.000	15.869	0.054	0.055	0.081

**Table 5: Summary of results of testing fourth hypothesis**

Dependent variable: Aggressive financial reporting					
Variables	Coefficient	Wald statistic	Level of significance	Odds ratio	
Debt <sub>it</sub>	1.886	0.497	0.481	6.591	
Size <sub>it</sub>	-0.662	13.104	0.000	0.516	
ROA <sub>it</sub>	2.028	5.682	0.017	7.598	
BigAudit <sub>it</sub>	-0.028	5.682	0.017	7.598	
Fixed value	2.329	4.221	0.040	10.263	
Chi-square	Level of significance	Hosmer and Lemeshow statistic	Level of significance	Cox-Snail (R <sup>2</sup> )	Nagelkerke (R <sup>2</sup> )
23.443	0.000	11.633	0.084	0.040	0.058

The value of Chi-square statistic and its level of significance point to significance of the whole model. Significance level of Hosmer and Leme show statistic suggests that there is a proper match between model and real-world observations (goodness of fit for the model). The values of measures of Cox-Snail (R<sup>2</sup>) and Nagelkerke (R<sup>2</sup>) are respectively equal with 4 and 5.8%, which suggests proper prediction power of the model. In addition, considering the value of Wald statistic and its level of significance (Tables 4 and 5), it is observed that there is an insignificant association between long-term debt ratio and aggressive financial reporting. In addition, results concerning control variables suggested that there is a significant negative association between size of companies and aggressive financial reporting. The association between total return on assets and aggressive financial reporting is significant and positive while the association between size of accounting institute and aggressive financial reporting is insignificant.

## 6. DISCUSSION AND CONCLUSION

Development of current form of companies and their increasing growth led to raising the issue of conflict of interests between

management of these companies and their owners. The reason behind such conflict of interest is separation of management of company from its ownership. Either of these two groups try to maintain its own interest. Meanwhile, one of the factors that plays a significant role in the association between management, owners and other beneficiaries is financial reporting and information. Information plays a significant role in administration and exploitation of financial markets. Watts and Zimmerman (1978) suggested in competitive endeavor for redistribution of resources among themselves, third persons use accounting information of expenses of companies. Considering the conflict of interests and inconsistent objectives of shareholders and managers, some managers might smooth income of the company. In addition, companies try to pay less tax because paying less tax benefits management of companies and their shareholders. Therefore, management of those companies that intends to exploit legal loopholes and pay less tax usually inhibit from offering precise information. However, selection of aggressive tax reporting or aggressive financial reporting strategy by companies and role of debt in their capital structure would be discussed further.

As mentioned before, the present survey aimed to experimentally study the effects of debt ratio and financial leverage on

aggressive financial and tax reporting by companies listed on Tehran Stock Exchange. To do this, data of the present study used for testing four hypotheses. Then, the collected results are analyzed and compared with findings of other relevant studies. This is followed by mentioning the limitations of the present study, implications of findings and suggestions for future studies. To conduct the present study, four hypotheses were tested. The primary objective of present study, which is reflected in its hypotheses, is to analyze the effects of financial factors on decisions of managers in companies listed on Tehran Stock Exchange to adopt financial and tax reporting. Considering the fact that selection of financial reporting in such companies affects decisions of investors and others significantly, one should see if financial leverage and debt ratio affect selection of aggressive financial or tax reporting policy or not.

In order to test first research hypothesis, a regression model designed and tested. The results of testing regression model of first hypothesis suggested that debt ratio has significant positive association with aggressive financial reporting. More precisely, increased debt in capital structure of companies adds to the likelihood of enforcing aggressive financial reporting policy by such companies. In other words, higher debt makes companies manage their profit more stringently. However, they conduct less activity in regard to tax evasion. Therefore, one cannot deny first hypothesis of the present study with an acceptable level of confidence.

The second hypothesis was regarding the influence of debt ratio on aggressive financial reporting. The results suggested that there is a significant negative association between the two variables. Results of testing the previous hypothesis suggested that when debt ratio increases, companies are more likely to adopt aggressive reporting policy. Consequently, increased debt ratio reduces the probability of selection of aggressive tax reporting. Therefore, one cannot deny second hypothesis of the present study with an acceptable level of confidence. The results of testing this hypothesis agrees with theoretical principles of the present study completely. In third hypothesis, the association between long-term

debt ratio and aggressive tax reporting was analyzed and it was found that there is no significant association between long-term debt ratio and aggressive tax reporting. In other words, long-term debt of companies does not affect selection of tax reporting policy. Therefore, third hypothesis of the present study is denied. In regard to fourth hypothesis regarding effect of long-term debt ratio on aggressive tax reporting, the results suggested that long-term debt of companies does not affect selection of financial reporting policy.

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