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An analysis of determinants of going concern audit opinion: Evidence from Tehran Stock Exchange

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A B S T R A C T

This paper presents an empirical investigation to find out important factors influencing exchange authorities for keeping firms on Tehran Stock Exchange. The proposed study uses logistic regression technique to study the effects of five factors including liquidity, solvability, profitability, cash flow and size of auditing firm. The results of the study show that only solvability is the most important factor according to auditing officials for extending listed firms on this exchange while the effects of other factors, liquidity, capability of meeting commitments, profitability, cash flow and size of auditing firm, are not statistically significance.

1. Introduction

One of the primary concerns for firms listed on stock exchange is to meet exchange rules and regulations so that the shares of the companies can be traded on exchange. When the share of a firm does not meet minimum exchange requirements, it is delisted from exchange and retail investors will consequently get hurt, severely. Therefore, it is always important to find out important factors influencing exchanges' decision on this issue (McEnroe & Sullivan, 2006). According to Bradshaw et al. (2001) firms with high accruals are more likely to experience future earnings problems. Geiger et al. (2006) stated that the Big 4 audit firms were of higher quality than were non-Big 4 firms. Nevertheless, existing investigations for the relationship between audit firm size and reporting accuracy were indirect and sometimes provided mixed results. They extended this line of research by investigating whether the Big 4 audit firms could exhibit higher quality reporting by having fewer "audit-reporting errors" in the context of issuing going-concern modified reports. Their analyses

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studied both types of going-concern reporting errors over an 11-year period. They also studied reporting error rate differences between the national second-tier firms and regional/local third-tier firms. They reported that both type I and type II error rates for Big 4 audit firms were significantly lower compared with non-Big 4 firms. However, they found no significant differences between the national second-tier and regional/local third-tier audit firms with in terms of either type of reporting error. The results provided some evidence about a Big 4 audit quality difference in reporting on client's going-concern problems. Macey and O'Hara (2002) investigated the once and future effect of listing fees by considering the theory of listing fees and why such a pricing structure initially evolved. They demonstrated how capital market developments had changed the desirability, and even viability, of this pricing structure. They also analyzed the economics of listing fees by using providing revenue to the exchange, listing fees impose large (opportunity) costs. They also discussed what kinds of listing requirements could make economic sense for exchanges to impose on companies. Finally, they considered whether listing fees could continue to survive.

Adhikari and Tondkar (1995) examined the success of the EC initiative in coordinating stock exchange disclosure requirements by studying the degree of harmony in the requirements of EC stock exchanges. They reported that EC stock exchange disclosure requirements for nine of the 11 EC stock exchanges tested were largely coordinated in terms of the minimum conditions specified in EC directives. The results, however, recommended that the successful implementation of EC directives did not necessarily remove all of the variation in the disclosure requirements between the various EC stock exchanges, only that it sets a lower bound below which the level of disclosure required by the relevant national standards could not fall. Disclosure requirements of EC stock exchanges were permitted to vary as long as they meet the minimum requirements.

According to Cheung and Lee (1995), the advantages of listing a company's stock on a foreign exchange to reach better global market integration have been examined, extensively. They explained the effect of firms in their selection of foreign stock markets for listing by implementing a signaling technique. They also investigated the current dispute between the NYSE and the Securities and Exchange Commission (SEC) for the desire of the NYSE to relax its registration necessities in order to obtain more listings by foreign companies. Huddart et al. (1999) implemented a rational expectations framework to study how public disclosure requirements influence listing decisions by rent-seeking corporate insiders, and allocation decisions by liquidity traders looking to minimize trading costs. They reported that exchanges competing for trading volume engage in a ‘race for the top’ whereunder disclosure requirements could increase and trading expenditure fall. This result was robust to diversification incentives of risk-averse liquidity traders, institutional impediments, which restrict the flow of liquidity, and listing costs.

Vithessonthi and Tongurai (2013) studied whether the imposition of the unremunerated reserve requirement on capital inflows impacts exchange rate volatility and stock prices. Their survey indicated that exchange rate volatility of the Thai baht against four major currencies—the US dollar, the British pound, the euro, and the Japanese yen—appears to be larger for the period of the imposition of the unremunerated reserve requirement in 2006–2007. They reported that the cost of firms to exchange rate volatility seemed to change during the unremunerated reserve requirement period relative to the pre- and post-unremunerated reserve requirement period. They also detected that the impact of exchange rate volatility during the unremunerated reserve requirement period on stock returns was stronger for some firms than others. They also recommended that the unremunerated reserve requirement could influence asset prices, through larger exchange rate volatility and through changes in exposure of firms to exchange rate volatility.

Nandi and Ghosh (2013) investigated the association between firm characteristics, corporate governance attributes and the level of corporate disclosure of listed firms in India. The research paper has been based on a sample of 60 companies listed in the Bombay Stock Exchange (BSE) / National

Stock Exchange (NSE) during the study period from 2000-01 to 2009-10. The study implemented the Standard & Poor (2008) model for measuring the level of corporate disclosure. To study the association between explanatory variables and the level of corporate disclosure, multiple regression model were applied. They reported a positive relationship between board size, ratio of audit committee members to total board members, family control, CEO duality, firm size, profitability, liquidity and the extent of corporate disclosure. However, the degree of corporate disclosure was negatively associated with board composition, leverage and age of the firm.

2. The proposed study

The proposed study of this paper considers the following five hypotheses,

1. Liquidity influences auditing decisions for continuing requirements for firms on Tehran Stock Exchange.
2. Profitability influences auditing decisions for continuing requirements for firms on Tehran Stock Exchange.
3. Solvability influences auditing decisions for continuing requirements for firms on Tehran Stock Exchange.
4. Cash flow influences auditing decisions for continuing requirements for firms on Tehran Stock Exchange.
5. Size of audit firm influences auditing decisions for continuing requirements for firms on Tehran Stock Exchange.

The study has been accomplished among firms whose shares were traded on Tehran Stock Exchange over the period of 2008-2009. We only considered the information of the firms whose information were available over the period of study and their shares were traded over the period of study. There are five independent variables including liquidity, profitability, solvability, cash flow and size of audit firm. In our study, we have considered a number between zero and one for ten most important audit firms. The study uses Kolmogorov – Smirnov test to verify the normality of data. In addition, we use logistic regression to analyze the data. The null and alternative hypotheses of the survey are as follows,

$$\begin{cases} H_0: & \beta_1 = \beta_2 = \cdots = \beta_k = 0 \\ H_1: & \beta_1 \neq \beta_2 \neq \cdots \neq \beta_k \neq 0 \end{cases} \tag{1}$$

which is verified through the following logistic regression function,

$$Pr(y_i = 1 \left| x_i, \beta \right) = \frac{e^{\alpha+\beta_1 x_1+\cdots+\beta_k x_k}}{1+e^{\alpha+\beta_1 x_1+\cdots+\beta_k x_k}}. \tag{2}$$

In our study, the firms were audited either by small or big auditing corporations. In fact, our survey indicates that big auditing firms audited 53.6% of the firms and small auditing firms audited the remaining 46.4% of the firms. Table 1 shows details of some basic statistics on four financial figures.

Table 1
Basic statistics on some financial figures

Variable	Sample	Min	Max	Mean	Deviation
Liquidity	478	0.17	7.43	1.2795	0.70645
Profitability	478	-3.28	3.54	0.1877	0.40588
Solvability	478	-0.46	0.62	0.0287	0.06421
Cash flow	478	-0.63	4.35	0.2777	0.43033

In addition, Table 2 demonstrates the normality test on independent variables as follows,

Table 2
The results of Kolmogorov – Smirnov normality test

	CRD[1]	Liquidity	Solvability	Profitability	Cash flow	SoAF[2]
Variable	478	478	478	478	478	478
Mean	0.029	1.2795	0.1877	2.8735	0.2777	0.4644
Variance	0.14327	0.70645	0.40588	6.41208	0.43033	0.49926
Absolute	0.537	0.140	0.198	0.301	0.208	0.359
Positive dev.	0.537	0.140	0.132	0.242	0.208	0.359
Negative dev.	-0.323	-0.170	-0.301	-0.198	-0.081	-0.442
Z	11.745	3.076	4.339	6.575	4.540	7.859
Sig.	0.000	0.000	0.000	0.000	0.000	0.000

1. Continuing requirements decision
2. Size of auditing firm

3. The results

In this section, we present the results of the implementation of logistic regression function. Table 3 summarizes our results.

Table 3
The summary of logistic regression analysis

	2008		2009	
	Chi-Square	P-value	Chi-Square	P-value
Goodness of fit	99.06	0.025	103.03	0.001
Hosmer-Lemeshow Statistic	10.972	0.203	3.708	0.882
Nagelkerke	0.438		0.392	

The results of Table 3 confirm that logistic regression analysis can be used when the level of significance is five percent. Therefore, we can present the results of regression analysis in Table 4 as follows,

Table 4
The results of regression analysis

	2008			2009		
Variable	Coefficient	Standard	P-Value	Coefficient	Standard	P-Value
Liquidity	0.258	0.143	0.705	-0.279	0.059	0.808
Profitability	0.123	0.008	0.930	-0.908	1.714	0.190
Solvability	12.220	4.884	0.027	-12.065	4.044	0.044
Cash flow	-2.270	0.084	0.771	0.662	0.147	0.702
Audit firm size	1.765	2.238	0.135	0.535	0.191	0.662

According to the results of Table 4, we cannot confirm the effects of liquidity, profitability, cash flow and audit firm size on auditing decisions for continuing requirements for firms on Tehran Stock Exchange. However, the effect of Solvability on auditing decisions for continuing requirements for firms on Tehran Stock Exchange has been confirmed when the level of significance is five percent.

4. Discussion and conclusion

In this paper, we have performed an empirical investigation on measuring the effects of four financial figures as well as audit firm size on the auditing decisions. The study has tried to find out whether these components have any meaningful impact for continuing requirements for firms on Tehran Stock Exchange. The study gathered the necessary information over two consecutive financial years of 2008 and 2009 from Tehran Stock Exchange. We have implemented logistic regression to study the effects of these variables. The results of our investigation have indicated that solvability is the only important variable, which helps us understand whether a particular firm can be listed on this exchange or not. This variable is associated with firm's capability to meet long-term liabilities. In other words, it is more likely to see that the shares of a firm is delisted from stock exchange when it faces extreme difficulties on handling long-term liabilities through regular operations. In such circumstances, most firms may file bankruptcy protection and may attempt to close its operations. Table 5 summarizes the results of our findings.

Table 5
The summary of testing five hypotheses

	P-value		Hypothesis	
Hypothesis	2008	2009	2008	2009
Liquidity influences auditing decisions for continuing requirements for firms on Tehran Stock Exchange.	0.705	0.808	×	×
Profitability influences auditing decisions for continuing requirements for firms on Tehran Stock Exchange.	0.930	0.190	×	×
Solvability influences auditing decisions for continuing requirements for firms on Tehran Stock Exchange.	0.027	0.044	√	√
Cash flow influences auditing decisions for continuing requirements for firms on Tehran Stock Exchange.	0.771	0.702	×	×
Size of audit firm influences auditing decisions for continuing requirements for firms on Tehran Stock Exchange.	0.135	0.662	×	×

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