AUDITING QUALITY AND DISCLOSURE QUALITY

Corresponding Author: Sara Harandi
Department of Accounting, Yazd Branch, Islamic Azad University, Yazd, Iran
Safaieeh, Shoahadegomnam Road, Zip code: 89195/155, Yazd, Iran

Jamal Barzegari Khanagha
Department of Accounting, Faculty of Economic, Management and Accounting, Yazd University, Yazd, Iran
Safaieeh, daneshgah Road, pajohesh street, Yazd, Iran

Abstract
Auditing will eliminate the need for users of financial reports to assess the quality of information if investigations of acceptable quality be conducted by independent auditors. In this regard, the current study sought to assess the impact of auditing quality on the quality of disclosure and reporting of financial data. In this study, the two variables of auditor reputation and his expertise in a particular industry was used to measure audit quality based on the quality of disclosure of reports provided by Securities and Exchange Organization on the quality of disclosure of companies listed on stock exchange. Hypotheses testing method of multiple variable regression in the annual cross-sectional data was used in this study. Results obtained from a study of 86 companies listed in Tehran Stock Exchange from 2007 to 2011 indicated that the quality of disclosure will be improved simultaneously with the use of expert auditors in the industry. Moreover, results of this study indicated that the quality of the auditor's reputation had a significant influence on employer disclosure quality.

Key words: auditing quality, disclosure quality, auditor reputation, auditor expert in industry.

1. Introduction
Leaving behind an underdeveloped economy requires facilitating of investment and optimal allocation of surplus resources. The duty is accomplished by capital markets in economic systems based on private sector or systems that are working to increase private sector participation in economic activities. This is usually done by capital markets in an appropriate manner. However, some firms (managers) are forced to proved defective and misleading information due to the expansion of economic activities, the separation of ownership from management, capital markets, increased competition in the capital market of private, absolute profit-seeking, and existence of abuse conditions. Auditing is considered as a necessary monitoring activity and one of the mechanisms of corporate governance to attract (and maintain) investors trust in asymmetric information, market fairness and fairness of available information. Auditing will eliminate the need for users of financial reports to assess the quality of information prior to their use in decision making process in condition of having a good quality. It also provide suitable condition for optimal economic decisions (American Accounting Association, 1973). In fact, society in the broadest sense always is asking for receiving services with the quality of auditing. Auditor's ignorance and failure in offering high quality auditing services, as expected, has been always associated with punitive response of the society. Auditors are summoned to court, sentenced to pay a heavy fine, lost their dignity and social status. A kind of social punishment for them even if they are not called to court , for example they are charged to have professional pickpockets (Wolk, 2006.). Therefore, auditors are responsibility of auditors about auditing quality at any point of time can be explained in terms of public expectations.

Generally, auditors as a behavioral theory of auditing accept this fact that they are responsible for and should be accountable to quality of their works as a professional experts. Scholars, researchers, and formal organizations of providing accounting and auditing standards as well as professional behavior principles made great efforts to define and categorize the factors that can affect the quality of the auditing. Many of them adopted a normative approach. They emphasized normative issues to justify auditing and increase the quality of auditing based on factors such as independence, professional competence, and professional uncertainty, planning and proper controlling of auditing. Other researchers had a descriptive view and emphasized factors such as auditor reputation, his membership in professional societies and organizations, audit firm size, auditor expert in a specific industry (Watts & Zimmerman, 1985), audit fees (Copley, 1991 and Palmrose, 1986), and results of other researchers on this topic (Colbert & Murry, 1998). They considered them as factors affecting audit quality. Needless to say that in the past more attention was paid to the normative approach than descriptive approach.
However, gradually descriptive views and researches on auditing quality became important. This study is also a descriptive study to review the literature related to auditing quality and test the relationship between available measurements of auditing quality and disclosure quality. In this study, two variables of audit firm's reputation and auditor expertise in industry were used to measure and evaluate auditing quality according to the related literature. Next, to test the research hypotheses, data from 102 companies listed in Tehran Stock Exchange was collected and evaluated. The data analysis indicates that there is no adequate evidence to confirm study hypothesis about existence of a direct significant relationship between auditor reputation and disclosure quality. But there is convincing evidence to confirm the hypothesis of significant direct relationship between auditor expertise in the industry and disclosure quality.

2. Literature Review
2.1 Auditing quality
Although it is accepted that auditors are responsible for auditing quality as one of the auditing behavioral assumptions, no comprehensive definition of auditing quality has been provided so far. This situation can be explained by considering explainable responsibility of the auditors at any point of time in terms of public expectations, and considering auditing quality as a conceptual idea which cannot be observed directly (Lin and Liu, 2009). Therefore, most experts address factors that indirectly indicate or influence the auditing quality. In this regard, most researchers have often used a normative approach and considered factors such dependency, professional care; professional competence, appropriate supervision and professional uncertainty as factors which create audit quality. Normative approach is also used in development of accounting standards. Deangelo (1981) for the first time considered the concept of auditing quality in terms of descriptive aspects. He believed that auditing quality can be analyzed in two dimensions: auditor capabilities explore the importance of errors and distortions and the auditor capability to report errors and discovered distortions. Other conceptual definitions of quality auditing are provided. For example, Zhou (2007) considered auditing quality equal to quality of accounting standards, accounting, accounting requirements and their disclosure. However, review of the existing related literature suggests that public acceptance of these comments have not been considered as much as Deangelo views. Other researchers such as Watts and Zimmerman (1985) and Lee et al. (2003) also emphasized the definitions provided by Deangelo. They considered the mentioned conceptual definition more than any other definition in auditing literature. Although researchers accepted Deangelo view and did not attempt to redefine the concept, they expanded the definition and provided operational definitions in accordance with this concept that will be discussed in the following views.

2.2 Auditing quality measures
Watts and Zimmerman (1985) suggested that the key factors provided by Deangelo not only affect auditing quality but also influence the broader concept of auditing demand. They emphasized reputation of auditor, auditing firm size, auditor membership in professional associations and organizations, and auditor's expertise in a particular industry for operationalization of the concept. Measures introduced by Watts and Zimmerman are also used by many other researchers. For example, Lee et al (2003) and Chuntao et al. (2007) examined the audit firm's reputation (among 8, 6, 5 or 4 large companies) to assess the quality of the audit. Balsam et al. (2003) defined and used the concept of audit quality in a operationalized method through auditor expertise in a specific industry. Palmore (1988) and Copley (1991) used the amount of paid audit fees to the auditor and provided an operationalized definition of auditing quality. Palmrose (1988) used the frequency of lawsuits against auditors (by the Securities and Exchange Commission or shareholders) to measure audit quality. Colbert & Murry (1998) used the results (scores) obtained from colleagues study in order to measure the quality of the auditing.

Earnings Forecast Errors and Auditor tenure (Lam and Chang, 1994) were among the other metrics are used to measure audit quality. Each of the measures used by researchers to measure and model the concept of audit quality has its particular theoretical principles. Since two criteria of auditor reputation and expertise in a particular industry are used in this, next part is dedicated only to theoretical principles that make these two criteria related to the quality of disclosure and reporting.

2.3 Auditor reputation
According to Beatty (1989) the more reputation of auditors causes more motivation to maintain the reputation. Since efforts to increase the quality of disclosure and financial reporting are among one of methods by which employers can help to maintain the reputation of auditors, it is expected that the quality of disclosure considered by more well known companies is more than other companies. Ratio of savings to scale and consequently carrying out high quality auditing in known audit institutions (Watts and Zimmerman, 1985), access to appropriate human and technical resources and involvement of massive human and financial capital to carry out audit works (Watts and Zimmerman, 1985 Deangelo, 1981), high risk of lawsuits in known institutions makes possible existence of a portfolio with various employers with reasonable yields of auditing at the same time with reduced financial dependency to one particular employer (Deangelo, 1981 Colbert and Murray, 1998).
Monitoring and control systems based on high performance standards in the auditing environment and high auditor's provide conditions for the institution and auditing team to make more effort and spend more cost and time (Al-Ajmi, 2009). These are among other reasons that why experts explain a significant relationship between auditor reputation and the quality of disclosure and financial reporting of employers.

However, other researchers' findings especially in emerging markets suggest that there is no significant difference between the quality of disclosure for employers of known auditors and employers of other auditors. For example, Jeong & Rho (2004) indicated that there was no difference between discretionary accruals (Disclosure quality of information) of companies considered by six known auditing institutions and other companies. Results of Khurana & Raman (2004) study on investigation of the disclosure of information related to quality of auditing earnings in the countries of South East Asia also indicated that there was no significant difference between the quality of information disclosure by employers of known auditors and other companies. Kim et al. (2002) showed that the efficiency of known auditors and quality of financial reports considered by them are not absolutely better than efficiency and quality of financial reports by other auditors.

Employers ignorance about the quality of disclosure and financial reporting, inappropriate controlling of the capital market supervisory bodies on auditors work quality, and the lack of consideration of appropriate fines for improper working of auditors and improper supervision of known auditing institutions by representatives and auditing branches are among other reasons that by which researchers justify lack of a significant relationship between disclosure quality and auditor reputation (Jeong & Rho, 2004, Khurana & Raman, 2004).

As mentioned before, review of existing literature and previous researches indicate that there are two approaches for the effect of auditor reputation on the quality of disclosure. One approach with more proponents suggests the impact of auditor reputation on disclosure quality. However, there is evidence that indicates reputation of auditor is ineffective for the quality of disclosure especially in emerging markets. Generally, it seems that the prevailing climate of economic activity in Iran seems to be closer to the situation in countries with emerging markets. Therefore, it can be predicted that auditor's reputation has no significant an important impact on the quality of disclosure.

2.4 Auditor expertise in an industry

Auditors seek to become expert in dealing with companies in an industry because in this way they can distinguish between themselves and other auditors. This distinction provides a situation for auditors to use option of lower prices and quality service simultaneously (better disclosure quality) rather than having only an attractive option (cost less for audit) to attract public shareholders (Kimberly & Mayhew, 2004).

In practice, employer companies try to employ professional auditors for several reasons. One of the reasons is to reduce costs. Cost savings resulting from the application of expert audits is more than savings resulting from using other auditors. In most cases, an auditor who audits a high proportion of companies in an industry (expert auditor in that industry) for some reason, such as earlier experiences than other auditors causes more savings of economies of scale. Therefore, normally he calls for lower fee than other auditors. Another reason is that these auditors are expected to provide better advice and guidance on how to prepare and disclose information while they perform better modification in order to resolve problems and discrepancies in auditing process and financial reporting. Moreover, the use of an expert auditor means that the company plans to use a better quality reporting and disclosure compared with past (and even better than other companies) (Kimberly & Mayhew, 2004). Expert auditors audit a high proportion of companies in an industry because they have more experiences of other auditors. Thus, their ability to detect significant distortions and errors in information disclosed by the employer is more than other auditors. In addition, at least they try to report all distortions and do not neglect any error in order to maintain their reputation and market share. Therefore, being expert in a specific industry, whether as a result of auditor demand or employer companies, in practice can lead to improved disclosure and financial reporting by employers. The results and findings of empirical research conducted so far are also consistent with this prediction. For example, Kimberly & Mayhew (2004) showed significant effect of auditor expertise in an industry on employer disclosure quality which is calculated by the auditor's share of the audit market in the industry. Balsam, et al. (2003) findings also indicated a significant relationship between auditor expertise, reporting and disclosure quality particularly about the profit. Mansi et al. (2004) research findings also showed that with increased expertise of an auditor in an industry, the audit institution can perform the audit with better quality in order to detect and report errors and distortions of the information disclosed by the employer. Therefore, it can be predicted that auditor expert in a specific industry can lead to improved employer disclosure quality.

3. Methodology

3.1 Statistical population and research sample

To test the predictions of this study, the following criteria are used for stratified random sampling and collection of sample data from companies listed on the Tehran Stock Exchange:
1. The studied company’s fiscal year ending in March.
2. The studied company’s financial year or activity should not be changing from 2007 to 2011.
3. The studied company should not be among investment companies, holding company and financial mediators.
4. The company financial information should be available.

Finally, according to these criteria, 86 companies were selected and data required to test predictions collected.

3.2 Research experimental model

In this study, first the relation between disclosure quality and auditor reputation (the first sub-hypothesis) is examined using model 1:

\[
DQ_{i,t} = \alpha_0 + \alpha_1 \text{BIG}_{i,t} + \alpha_2 \text{LEV}_{i,t} + \alpha_3 \text{SIZE}_{i,t} + \alpha_4 \text{ROI}_{i,t} + \epsilon_{i,t}
\]

Significant coefficient of BIG variable in this model shows the relationship between auditor reputation and disclosure quality. This uses a significant coefficient is used to test the first hypothesis.

The relationship between auditor expertise in an industry and the quality of disclosure (second sub-hypothesis) is investigated using model 2:

\[
DQ_{i,t} = \alpha_0 + \alpha_1 \text{SP}_{i,t} + \alpha_2 \text{LEV}_{i,t} + \alpha_3 \text{SIZE}_{i,t} + \alpha_4 \text{ROI}_{i,t} + \epsilon_{i,t}
\]

where the coefficient of SP variable indicates a significant relationship between auditor expertise in industry and disclosure quality. Finally, following general model is processed to examine the impact of synchronization of two variables of auditor reputation and expertise in industry on the quality of disclosure:

\[
DQ_{i,t} = \alpha_0 + \alpha_1 \text{SP}_{i,t} + \alpha_2 \text{BIG}_{i,t} + \alpha_3 \text{SP}_{i,t} \times \text{BIG}_{i,t} + \alpha_4 \text{LEV}_{i,t} + \alpha_5 \text{SIZE}_{i,t} + \alpha_6 \text{ROI}_{i,t} + \epsilon_{i,t}
\]

In model 3, from the statistical viewpoint, the coefficient of SP × BIG variable indicates the impact of synchronicity of auditor reputation and his expertise industry on disclosure quality.

4. Variables

As mentioned in the previous sections, the present study is an attempt to examine the relation between auditing quality (auditor's reputation and expertise) and disclosure quality. To measure the quality of disclosure (DQ), the annual ratings by the Stock Exchange in relation to the disclosure quality of companies listed on the stock exchange is used. Usually these rates given to the companies by official institutions are used in disclosure quality researches. For example, we can refer to external studies (Kimberly & Mayhew, 2004). A dummy variable is used in this study to assess the auditor's reputation (BIG). Value of this dummy variable is 1 if the company’s auditor to be Auditing Organization otherwise it will be considered as zero. Auditor’s market share is used to measure auditor expertise in industry (SP). An audit firm’s market share is calculated as follows:

Total assets of employers in a particular industry of an Auditing Organization divided by total assets of all firms in the industry.

According to Palmrose (1986) model, in this research, audit institutions are considered as experts in the industry with a market share (obtained by above fraction) is more than 2/1 × (1÷n), where n is number of active firms in an industry. Value of dummy SP variable for employers of these auditors equals to zero while for employers of other auditors equals zero.

Control variables

In addition to what mentioned before, previous research also suggests that the quality of disclosure may be influenced by factors such as firm size, capital structure (leverage) and return on investment. In this regard, there are various opinions and findings. Verrechia (2001) findings suggest that there is a direct relationship between firm size and disclosure quality. From this point of view, savings in economic scale, diverse sources of information, information-rich environment of larger companies and social and political pressures are some factors that improve the quality of the disclosure in larger companies. However, some researchers, such as Leventis & Weetman (2004) noted that there is a negative correlation between firm size and disclosure quality that should be considered. These researchers believed that increased size firms causes their increased bargaining power against social control mechanisms such as independent auditors or supervisory bodies of capital markets. Therefore, the quality of the disclosure will be reduced.

Since the possibility of the transfer of wealth from creditors to shareholders and other interested parties increases with the increased amount of debts in a company, the agency costs arises. This is because more effort on the part of creditors will be conducted to monitor the company, its directors and behaviors. On other hand, companies are trying to provide more and better disclosures to reduce uncertainty (and meet their information needs) and agency costs (Wallace, et al.,1994). From this perspective, it can be predicted that there is a direct relationship between leverage and the quality of corporate disclosure. The company's high leverage means lower borrowing capacity and the high risk of failure in repayment of principal money and interest of debts.
(bankruptcy risk). In this case, better disclosure due to revealing the company's deteriorating financial condition could have negative consequences for company. It is clear that company will prevent the improved quality of disclosure. From this point of view, it can be expected that there will a negative correlation between the leverage and the quality of disclosure that is consistent with the empirical findings of Patton & Zelenka (1997) study.

Although, according to above-mentioned issues, there are different opinions about the impact of firm size and leverage on disclosure quality, the literature review suggest that there is a complete consensus among researchers about direct relationship between return on investment and the quality of disclosure. Profitable Companies make an attempt to improve disclosure quality in order to make clear distinction between profitable firms and losing firms (or less profitable firms). Therefore, they will benefit from advantages such as provide lower capital costs and greater liquidity of the shares, (Leventis & Weetman, 2004; Wallace, et al, 2006). Therefore, it can be predicted that there is a direct relationship between return on investment and quality of disclosure.

Since according to the literature review the quality of disclosure may be affected by company's capital structure and return on investment level, the present study considers the mentioned control variables. In this regard, the natural logarithm of total assets, the ratio of total debt to asset and ratio of net income to total assets are used to measure control variables including size (SIZE), leverage (LEV) and return on investment (ROI).

5. Research Findings

5.1 Descriptive statistics

Descriptive statistics for variables related to the separation of employers with expert auditors in industry and employers without expert auditor in industry experts are provided in the first and second parts of figure 1. According to the study predictions, the mean and median disclosure quality variable in companies with auditors expert in industry (680/0 and 645/0) is more than the mean and median of the same variables for other companies (653/0 and 635/0). Moreover, these companies have more total assets, less debt ratio, and more average rate of return on investment compared with companies that did not used auditor's expert in the industry.

In addition, as shown in the third part of figure 1, there is a positive direct correlation between the auditor's expertise in the industry and disclosure quality. There correlation is an evidence to support the hypothesis of a direct significant correlation between auditor expertise in industry and the quality of disclosure.

Figure 2 offers descriptive statistics for the study variables classified based on two distinguish employers of known auditors and ordinary employers. Average disclosure quality of employers of known auditors (0/650) was lower than average disclosure quality of ordinary employers (0/694). On the other hand, standards deviation of disclosure quality of employers of known auditors (0/270) was lower than that of ordinary ones (0/310). Employers of known auditors were slightly larger than normal ones (13/47 vs. 13/21) and had a slightly lower leverage (0/541 vs 0/552), and higher levels of return on investment (0/175 vs 0/157). The correlation coefficient between disclosure quality and auditor reputation, as shown in third part of figures 2-4, was not statistically significant. They did not provide convincing evidence of a direct relationship between auditor reputation and the quality of disclosure.

5.2 Fitting of research models

5.2.1 First model fitting models

In this study, first the relation between disclosure quality and auditor reputation (the first sub-hypothesis) is investigated using model 1. Significant coefficient of BIG variable in this model shows the relationship between auditor reputation and quality of disclosure (Figure 3).

In Model 1, only the auditor's reputation used as a measure of audit quality and its relationship with disclosure quality examined. Obtained results of the regression model indicate that statistically the auditor's reputation cannot explain significant change in the quality of disclosure. In other words, since the estimated coefficient for auditor reputation variable in model 1 is not statistically significant (t=-2/327 and pvalue >=0/020). Therefore, it cannot be considered as a reliable criterion to accept direct relationship between auditor reputation and the quality of disclosure. So the first research hypothesis is rejected.

5.2.2 The second fitting

The relationship between auditor industry expertise and the quality of disclosure (second sub-hypothesis) is investigated using model2. Coefficient of SP variable in this model shows the relationship between auditor expertise in industry and quality of disclosure.

Results of fitting in equation (2) is shown in figure 4. Model 2 is investigated in order to examine the relationship between auditor expertise in industry (as a measure of audit quality) and disclosure quality. For example, as shown in previous researches, Kimberly & Mayhew, (2004) suggested a significant positive relationship between auditor expertise in industry and the quality of disclosure (0/165). These results suggest
that using expert auditors in industry led to improvements in the quality of disclosure in Companies listed in the Tehran Stock Exchange. Considering significant coefficients of fitting in model 2 at the appropriate level (t=7/423), generally it can be said that there is a convincing evidence to support the hypothesis of a direct relation between auditor expertise industry and quality of disclosure. Thus according to fitting results of the model, the second hypothesis is confirmed.

5.2.3 Fitting of model 3

Finally, the general model 3 is fitted to evaluate the synchronization effect of two variables of auditor reputation and his expertise in industry on quality of disclosure. In Model 3, the coefficient of the variable SP × BIG indicates a significant statistical difference in the impact of synchronization effect of auditor reputation and expertise in industry on quality of disclosure.

Model 3 is fitted in order to evaluate the synchronization effect of two variables of auditor reputation and his expertise in industry on quality of disclosure. Models 1 and 2 just investigate the effect of the auditor's expertise and reputation on quality of disclosure, respectively. However, model 3 is an attempt to test the synchronization effect of two variables on quality of disclosure using all variables fitted in equations 1 and 2. The results of the fitting of this model (figure 5) are consistent with the results of the fitting of models 1 and 2. These results show that the auditor's expertise in the industry has a direct significant relationship with disclosure quality (α1=0/202, t=8/448 and pvalue = 0/000) while there is no significant relationship between auditor reputation and quality of disclosure (α2=-0/134, t=-1/561 and pvalue >>0/10) Is. Moreover, these results indicate that the two variables together have little impact on the quality of disclosure. As shown in table 3, coefficient of model 3 fitting based on equation (1), i.e. α3, which is used to measure the synchronization effect of two variables of auditor reputation and his expertise in industry on quality of disclosure, is small in size (-0/006) and statistically it is not significant (t=-0/100 and pvalue >> 0/10). All these findings indicate that the use of expert and well-known auditors may not necessarily improve the quality of financial reporting and disclosure for employers. This obtained result is consistent with findings of Jeong & Rho (2004) and Khurana & Raman (2004) showing that in emerging markets the auditors reputation has no effect on audit quality, disclosure quality and financial reporting of employer.

Conclusions

In normative approach, auditing quality is defined in a form of dependency, professional competence, appropriate supervision and professional uncertainty and the like. However, in descriptive approach, scholars emphasized factors such as auditor reputation, his membership in professional societies and organizations, audit firm size, auditor expert in a specific industry, audit fees, and results of other researchers on this topic as factors describing the quality of disclosure. This study is also a descriptive study to review the literature related to auditing quality and test the relationship between available measurements of auditing quality and disclosure quality.

In this study, nearly one hundred companies listed in Tehran stock exchange were examined. Multiple regression analysis indicates that there is no adequate evidence to confirm study hypothesis about existence of a direct significant relationship between auditor reputation and disclosure quality. But there is convincing evidence to confirm the hypothesis of significant direct relationship between auditor expertise in the industry and disclosure quality.

According to the research findings presented in chapter 4, the results of the study hypotheses suggest that the second hypothesis is fully accepted, but the acceptance or rejection of the first hypothesis cannot clearly confirmed. In other words it can be said that according to the results of this study, audit quality and use of expert auditors in an industry may cause improvements in the quality disclosure of companies listed in Tehran Stock Exchange.

The results of this study indicate that there is a significant positive association between auditor expertise in industry and disclosure quality of employer. This result can be used as a general policy for disclosure of companies listed in Tehran Stock Exchange.

Practical suggestions

According to these findings, companies that intend to improve their capital market view and its controlling organization (Securities and Exchange Organization) may use auditors with expertise in an industry as one of the strategies of improving disclosures.

According to findings of this study, it is expected that using auditors with expertise in an industry may improve disclosure quality and the company status for shareholders, investors and the capital market supervisory bodies.
Suggestions for future research

1 - According to ranking of disclosure in each season, this study can be used for interim data to obtain more accurate results.

2 - With regard to the other measures of audit quality and disclosure quality, other variables can be used to improve the results and findings of this study.
References
Figure 1 - Descriptive statistics based on auditors expertise in industry

| Part I – Employers of auditors with expertise in industry ( SP = 1 ) |
| SIZE | LEV | ROI | DQ |
| 14/31 | 0/567 | 0/174 | 0/680 | Average |
| 14/04 | 0/600 | 0/140 | 0/645 | Median |
| 1/36  | 0/169 | 0/128 | 0/247 | Standard deviation |

| Part II - Other Companies ( SP = 0 ) |
| 13/02 | 0/577 | 0/134 | 0/653 | Average |
| 12/93 | 0/590 | 0/120 | 0/635 | Median |
| 1/03  | 0/153 | 0/348 | 0/278 | Standard deviation |

Section III - Correlation coefficients

| SIZE | LEV | ROI | SP | DQ |
| 1    | 1   | 0/307 | SP |
| 1    | 0/152 | 0/138 | ROI |
| 1    | 0/677 | -0/055 | -0/137 | LEV |
| 1    | 0/040 | 0/074 | 0/293 | -0/191 | SIZE |

* Indicates a statistically significant correlation at the 1% level of error.

Figure 2 - Descriptive statistics based on auditor reputation

PART I – Employers of known auditors ( BIG = 1 )

| SIZE | LEV | ROI | DQ |
| 13/47 | 1/541 | 0/175 | 0/650 | Average |
| 13/27 | 0/510 | 0/149 | 0/690 | Median |
| 1/135 | 0/149 | 0/125 | 0/270 | Standard deviation |

| Part II - Other Companies ( BIG = 0 ) |
| 13/21 | 0/552 | 0/157 | 0/694 | Average |
| 13/23 | 0/557 | 0/120 | 0/850 | Median |
| 1/461 | 0/168 | 0/117 | 0/310 | Standard deviation |

Part III - Correlation coefficients

| SIZE | LEV | ROI | SP | DQ |
| 1    | 1   | -0/091 | BIG |
| 1    | 0/119 | 0/138 | ROI |
| 1    | -0/677 | -0/005 | -0/137 | LEV |
| 1    | 0/040 | -0/074 | 0/036 | -0/191 | SIZE |

* Indicates a statistically significant correlation at the 1% level of error.

Figure 3 - model 1.

| Intercept | 1/140 | 9/372 | <0/001 |
| BIG       | -0/064 | -2/327 | 0/020 |
| ROI       | 0/308 | 2/239 | 0/026 |
| LEV       | 0/042 | -0/452 | 0/652 |
| SIZE      | -0/035 | -4/252 | <0/001 |
| F sig      | Adj.R^2 | DW |
| 8/201      | 0/000 | 6/4% | 1/510 |

Figure 4 - model 2.

| Intercept | 1/317 | 11/206 | <0/001 |
| SP        | 0/165 | 7/423 | <0/001 |
| ROI       | 0/137 | 1/062 | 0/289 |
| LEV       | -0/066 | -0/766 | 0/444 |
| SIZE      | -0/050 | -6/259 | <0/001 |
| F sig      | Adj.R^2 | DW |
| 21/429     | 0/000 | 16/3% | 1/631 |
Figure 5 - Model 3.

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\[ F \text{ sig} \quad \text{Adj.R}^2 \quad \text{DW} \]

19/551   0/000   20/9%    1/659