

The Effect of Ownership Structure on Audit Quality: Evidence from Jordan

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Abstract

Audit quality is getting very important due to the role of an audit in enhancing the quality and reliability of financial statements. The studying of audit quality and the factors that are affecting it has captured the attention and imagination of researchers, especially those in developed countries. This study aims at investigating the effect of ownership structure among Jordanian listed firms based on their audit quality. The sample study consists of one hundred ninety eight (198) companies out of the two hundred sixty two (262) listed companies on the Amman Stock Exchange (ASE). The analysis of logistic regression was used to investigate the relationship between the audit quality measured based on the audit firms size as a dependent variable, and ownership structure as independent variables. The results show a significant positive relationship between the audit quality and that of companies both with foreign and institutional ownership. Whereas ownership concentration was shown to have a negative relationship with quality, that relationship was not significant. These results indicate that foreign and institutional investors tend to hire high quality auditors.

Key Words: Audit Quality, Public Accounting Firm, Corporate Governance.

1. Introduction

Accounting scandals that have been experienced in the last few years such as Enron, Arthur Anderson and World Com have affected the regulators trust of financial statements'. The total demise of Arthur Anderson in 2002, one of the Big 5 of U.S public accounting firms, sent shock waves all over the world and is often viewed as having generated considerable stress on the principles of accountancy (Gendron, et. al., 2006). This scandal and its subsequent results were a main reason for drawing attention towards the quality of financial statements. Moreover, the financial crisis which has affected most of the world in the recent years has pushed up the demand for high quality audits. Fargher and Jiang (2008) found that auditors were more likely to issue going concern opinions for financially stressed companies immediately after the crisis. This result may signal that auditors are being more watchful after such crisis and that they now tend to perform their work in a highly ethical and ensure the quality of their work. Davidson and New (1993) mentioned that audit quality is viewed as one of the main factors that affect the credibility of financial information and the higher the audit quality is, results in the information being more accurate. This can be a motive for deep research and insight in audit quality and the factors that may affect it.

This study extends recent researches that analyzed the factors affecting audit quality by focusing on the influence of ownership structure for the public listed firms in Amman Stock Exchange (ASE) located in Jordan based on their audit quality. The significance of this study arises from the lack of similar study of the audit quality area in Jordan, most of the studies conducted in Jordan on this area focused on procedural and regulatory aspects of the audit profession, to the author's knowledge only Hmedat, (2002) and Al-Nawaiseh (2006) have studied the level of audit quality in Jordan. So, this study further came to cover this area and add practical details by exploring the effect of ownership structure on the audit quality in Jordan specially when observing that the only two studies previously conducted in Jordan were focused on factors related to audit firms or factors that related to the financial characteristics of clients' firms.

Factors affecting audit quality have captured the attention of previous researches like Carcello, et. al. (1992); Lennox (1999); Li and Lin (2005); Knechel & Vanstraelen (2007); Atoeijeri & Annafaabi (2008); Chi et al. (2009) and many others, where the institutional factors for the audited firms that might have an influence on the audit quality were less examined. Gearemynck, et. al. (2008) tested various characteristics of an audit firms' client portfolio: characteristics like size, visibility, and financial health as drivers that could affect audit quality. Chen, et. al. (2007) examined empirically the influence of family-controlled clients on the audit quality. Abdullah (2008) studied the effective component of corporate governance, board composition, ownership by directors, ownership by financial institutions and CEO/chairman, and its relationship with the audit quality.

Unlike Abdullah's (2008) and other studies, this study focuses on the ownership structure only by testing the effect of ownership concentration, foreign ownership, and institutional ownership on the level of audit quality. Abdullah (2008) argued that there is little empirical research that examines the audit quality in emerging markets where equity markets are less developed and therefore the auditing environment is quite different. Most of the previous studies related to the level of corporate governance mechanism and audit quality as well as financial reporting quality concentrated in developed countries. Dong and Zhang (2008) indicated that ownership structure is one of the most important corporate governance characteristics of listed companies, ownership structure directly influences the board of directors, so it will be very important to investigate the effect of the ownership structure, as a corporate governance characteristic, on the audit quality in an emerging market like Jordan.

2. Background and Hypothesis Development

2.1. Audit Quality

Audit quality adds a significant value to investors in capital markets because they often use audited financial statements by auditors as the main basis for investment decisions (Sudsomboon and Vssahawanitchakit, 2009). The use of audited financial statements by investors has been proved by many researches (Loudder, et. al., 1992; Chen, et. al., 2000; Zureigat, 2010; Kathleen, et. al., 2007) who found a market reaction to the different types of audit reports. Because the purpose of an audit is to provide an assurance as regards to the financial statements, this role can be successful only; if an audit opinion reflects the true findings of the audit engagement (Al-Ajmi, 2009).

DeAngelo (1981) argued that audit quality depends on the joint probability of an auditor discovering and disclosing a problem in an accounting system. Bradshaw et. al. (2001) defined audit quality as the willingness to report any material manipulation or misstatements that will increase the material uncertainties and/or going concern problems; Baotham and Ussahawanitchakit (2009) addressed another definition as the probability that an auditor will not issue an unqualified report for statements containing material errors. Palmrose (1988) asserted that high audit quality is associated with the absence of material omissions or misstatements in the financial statements. Audit quality and the measurement of audit quality have been studied widely, Kilgore (2007) indicated that no single generally accepted definition of audit quality has emerged, nor has any single generally accepted measure been introduced. Reisch (2000) attributed the absence of a single measure of audit quality to the fact that it is a multidimensional latent construct and is therefore, somewhat difficult to measure. This was a reason that many researchers study this area and have used different proxies for measuring the level of audit quality. Manry, et. al. (2008) used estimated discretionary accruals to measure audit quality, Knechel & Vanstraelan (2007) used the likelihood of an auditor issuing a going concern opinion as an indicator of audit quality, Li and Lin (2005) examined audit quality using non-audit fees, Chen et. al. (2010) used the propensity to issue modified audit opinion as a proxy for audit quality.

Kilgore (2007) indicated that the most commonly used surrogate for audit quality is the size of the audit firm, Chang et. al. (2008) agreed because of the wide range of theoretical and empirical evidence that large audit firms may provide higher quality audits. DeAngelo (1981) proposed that the larger audit firms receive fee premiums because they have a greater reputation at stake and that reputation, together with their more substantial clients base, provides them with the incentive to be more independent, leading to a higher level of audit quality. Gearemynck, et. al. (2008) indicated that audit quality is affected by expected future losses of audit firms, which trigger increased audit quality as they get larger. Furthermore, many studies found an evidence that clients audited by larger audit firms disclose more information voluntarily (Depoers, 2000; Chau and Gray, 2002). Simunic and Stein (1987) asserted that larger audit firms are better than smaller audit firms at detecting errors because they have greater resources at their disposal and can attract employees with superior skills and experience.

Despite the findings of some studies that have not supported the audit firm and audit quality association (see, simmunic, 1980; Wyer, et.al., 1988), the weight of evidence supports the association between audit quality and audit firm size is now generally accepted as norm when reviewing the audit quality literature (DeAngelo, 1981; Krishnan and Schauer, 2000; Kim, et. al., 2003; Kane and Velury, 2004; Niemi, 2004; Lensberg, et. al., 2006; Li, et.al., 2008; Change, 2008; Francis and Yu, 2009). Therefore, this research will base its empirical analysis on the primes that the auditor size is a surrogate for audit quality and define the larger audit firms as quality auditors. Factors affecting the level of audit quality vary, many researches who have studied these factors have done so in order to support audit quality literature. A wide range of these studies were focused on variables related to the audit profession, auditors and audit firms.

Schroeder et. al. (1986) found that the audit teams factors are more important than the audit firms factors in influencing the level of audit quality, Carcello et. al. (1992) indicated that the most important factors in determining audit quality were audit team and firm experience with the client, industry expertise, responsiveness to client needs, and compliance with the generally accepted auditing standards. (Lennox, 1999) investigated the effect of non-audit services in audit quality, the results suggested that when non-audit fees are disclosed, the provision of non-audit services does not reduce audit quality. Jaffar et. al. (2005) studied the possible factors that affect audit quality, and found that the most important factor was the auditor's knowledge in accounting and auditing. The auditor's ability to inform the clients about accounting changes, the auditor's commitment with the code of ethics, and the auditor's knowledge of the industry. Atoijer & Annafaabi (2008) investigated auditors' perspectives on the factors that may have an effect on audit quality in Saudi Arabia; there results show that the strongest factors affecting audit quality are auditors' experience, auditors' objectivity, and auditors' academic qualifications, Manry et. al. (2008) addressed that audit quality appears to increase with increased audit partner tenure.

The results of Sudsomboon and Ussahawanitchakit's (2009) study show that professional audit competencies have a positive influence on audit quality and reputation. Baotham & Ussahawanitchakit (2009) indicated that audit independence has a positive relationship with audit quality, and audit quality has a positive association with audit credibility. Casterella et. al. (2009) found that peer review findings are indeed useful in predicting audit failure and argued that self-regulated peer review as mandated by the AICPA does provide effective signals regarding the level of an audit firms quality. In Jordan, Hmedat (2002) aimed to investigate the relation between audit quality and some factors related to the audit firm and other factors related to the clients' firms like client size, client financial position, sales growth, and department ratio. The findings showed that audit quality is related to the audit firms size, clients size, and clients financial position, while the other factors did not have a significant relation to audit quality. Unlike Hmedat (2002) who focused on financial factors related to the clients' firm, the main aim of this study is to investigate the effect of the ownership structure for audited firms, as a corporate governance characteristic, rather than to study financial indicators.

Al-Nawaiseh (2006) studied audit quality, the aim of his study was to analyze factors affecting audit quality from the perspective of Jordanian auditors using two questionnaires circulated to a sample of auditors, the findings indicated an agreement regarding the important role of audit quality, the most effective variables were the factors associated with the audit work team, while the lowest effect was for variables concerning the organization of the audit company. However, some of the studies that addressed the factors that affect audit quality were mainly about variables related to the auditors clients firm and their institutional characteristics. Some of these studies indicated that there is no negative impact of client importance on audit quality (Chang and Kallapur, 2003; Kinney, et. al., 2004), while Chen et. al. (2010) found that the propensity to issue modified audit opinions, as indicator for audit quality, is negatively correlated with client importance in China from 1995 to 2000. Gaeremynck et. al. (2008) found that not so much the size of an audit firms portfolio but other portfolios and client characteristics drive audit quality, like client visibility characteristics and solvency characteristics.

Considering the negotiations between auditors and clients and its impending effect on the auditing process, clients have the power that may push auditors to have a greater tendency to compromise their independence which in turn leads to a deterioration in the audit quality, many researchers tended to study factors that may affect auditor-client relationship, (see, Beasley and Petroni, 2001; Salleh, et. al., 2006; Hay and Knechel, 2004; Lennox, 2005; Piot, 2001; Martinez and Fuentes, 2007; Pedro, et. al., 2005; Dong and Zhang, 2008). Taking into account that the Jordanian Companies Law grants the process of selecting and hiring the external auditor to the shareholders board, the process of choosing quality auditors depends on the ownership structure. This structure can be classified into concentrated ownership – shareholders who own more 5% of the total shares, institutional ownership-investments by certain institutions, and foreign ownership- investments by non-Jordanian investors. This classification is adopted by the Jordan Security Commission (JSC). (JSC) is a public institution with financial and administrative autonomy which develops, regulates and monitors Jordan's capital market. Therefore, the objectives of this study is to investigate the effect of the ownership structure, concentrated, foreign and institutional, on the level of audit quality measured by the audit firms size in Jordan.

2.2. Ownership Concentration

Helfin and Shaw (2000) argued that monitoring by large shareholders may give them access to private and value relevant information. In companies with concentrated ownership, the large shareholders can affect management, especially when they become board members, and they have a lot beyond the board. Gul et. al. (2010) investigated the effect of the largest-shareholder ownership concentration on the amount of firm-specific information incorporated into share prices, as measured by stock price synchronization.

They found that synchronization is a concave function of ownership by the largest shareholders. Hu & Izumida (2008) indicated that ownership concentration has a significant effect on the contemporary and subsequent corporate performance. Chen et. al. (2007) pointed out that the audit service demand by firms with controlling shareholders could be different from that demanded by firms without controlling shareholders; they found that audit quality is indeed deteriorated and compromised when an auditor faces a business of family-controlled clients. The results of the study by Dong and Zhang (2008) show that, for listed firms in China, external auditors' propensity to qualify is lower with the lower proportion of public shares or with higher concentration of shares at a marginal significant level.

Lukas (2009) found that ownership concentration has a negative impact on board independence; Abdullah's (2008) results indicated that there is a significant positive relationship between board independence and audit quality. Based on these results, the author proposes a negative relationship between ownership concentration and audit quality and the first null hypothesis for this study will be:

Hypothesis 1: there is no significant relationship between audit quality and ownership concentration.

2.3. Foreign Ownership

Wei, et. al. (2005) found that foreign ownership is significantly and positively related to a firm's value measured by Tobin's Q. Bagaeva, et. al. (2008) didn't find support for the hypothesis that non-listed Russian firms owned by foreign investors report earning of better quality than do exclusively Russian-owned non-listed firms, but they found that non-listed Russian firms with foreign ownership report earning with more timely recognition of economic gains than others. Other studies showed that foreign ownership is associated with higher corporate transparency and lower information asymmetries (Jaing and Kim, 2004). In Jordan, the government has issued and amended a number of important laws and regulations, such as Banks Law and Privatization Instructions, in order to encourage the investment by non-Jordanians. The Jordan Securities Commission, also addressed a special strategy for encouraging foreign investments in the capital markets, one of these strategies objective is to prompt efficiency, transparency and fairness in the market. Considering the above mentioned discussion and the role of audit quality on the firms' value and financial reporting quality, the author suggests a positive relationship between foreign ownership and audit quality and the second null hypothesis for this study will be:

Hypothesis 2: There is no significant relationship between foreign ownership and audit quality.

2.4. Institutional Ownership

Institutional Ownership is an investment from a certain institution, and is usually higher than the investments of individuals, (Abdullah, 2008) argue that it is assumed that institutional investors have more influence than other individual investors, Warfield et. al. (1995) indicated that the higher the holding of institutional and Blockholders is, the smaller the discretionary accruals and the greater the informativeness of earnings. Sharma (2004) found that as the percentage of independent institutional ownership increases, the likelihood of fraud decreases. These findings suggest that institutional ownership can play an active role in monitoring and disciplining managerial discretion and in controlling the reporting process.

Kane and Velury (2004) investigated the relation between audit firm size and the level of institutional ownership and found that the greater the level of institutional ownership is, the more likely that a firm will provide audits that are conducted by a large audit firm, Chan et. al. (2007) found that an increase in institutional shares leads to a general increase in the demand for higher-quality audits in China, (Mitra, et. al., 2007) found that institutional ownership was significantly and positively related to audit fees-as a proxy for audit quality, Abdullah (2008) found that institutional ownership is an important factor that could assist companies to perform effectively, he also found the companies tend to be audited by the Big 4 if the level of institutional ownership increases. Based on these discussions, the author suggests a positive relationship between institutional ownership and audit quality and the third null hypothesis will be:

Hypotheses 3: There is no significant relationship between institutional ownership and audit quality.

3. Methodology

3.1. Sample and Data

This study attempts to investigate the effect of ownership structure for public listed firms on the Amman Stock Exchange (ASE) in Jordan on the level of audit quality. The total number of companies listed in (ASE) at the beginning of the 2009 was two hundred sixty two (262), this study excluded the banking sector, which consists of fourteen (14) listed banks because of the special regulations and instructions that govern them in Jordan, the remainder of listed companies was two hundred forty eight (248).

The study sample consists of one hundred ninety eight (198) companies that had the available data needed for the study which represents (79.83%) of the study population. Data about ownership structure and audit firms were collected from the annual reports for the listed companies, these reports are published by the Jordan Securities Commission (JSC). Table (1) presents the distribution of the sample by industry and audit firm.

Table (1): Sample distribution by industry and audit firm

Industry	Number of companies	Auditing by Big 4		Auditing by Non-Big 4	
		No.	%	No.	%
Services	85	51	60	34	40
Industrial products	89	47	52.8	42	47.19
Insurance	24	23	95.83	1	4.16
Total	198	121	61.11	77	38.89

3.2. Variables and Model:

In order to study the relationship between audit quality and ownership structure, this study used the following regression model:

$$AQ = \alpha + \beta_1 OC + \beta_2 FO + \beta_3 IO + \beta_4 SI + \beta_5 LE + e$$

Where:

AQ	:	Audit Quality
OC	:	Ownership
FO	:	Foreign Ownership
IO	:	Institutional Ownership
SI	:	Company Size
LE	:	Leverage

The dependent variable AQ, were measured, as mentioned earlier, by the audit firm size, so the audit quality is coded (1) when the company is audited by one of the big 4 audit firms, and zero otherwise (Kane and Velury, 2002; Abdullah, 2008). Variables related to the ownership structure were captured directly from the annual reports for the samples' companies. The ownership concentration was measured as the total percentage of shares owned by investors who owned more than (5%) of the total company shares, foreign ownership was measured as the percentage of the total shares owned by non-Jordanian investors in the company, institutional ownership was measured by the percentage of the total shares owned by institutions.

Moreover, the study model has two control variables, size and leverage. Testing these two variables is not one of the study goals, they were used to control the influence of firm specific financial factors, the choice of them is quite similar to empirical studies. (DeFond, 1992) addressed that client size is significantly related to auditor choice, Manry (2008) also found a significant relationship between audit quality and client size, the size of companies in this study were measured by the natural logarithm of total assets (Dong and Zhang, 2008). Broye and Weill (2009) demonstrated that the relationship between leverage and the choice of high quality auditors varies significantly across European countries, Dong and Zhang (2008) found an effect for leverage on the type of audit opinion. Leverage in this study was measured as total debt divided by total assets (Kane and Velury, 2002; Abdullah, 2008).

4. Analysis and Results

4.1. Descriptive Analysis

Table 2, presents descriptive statistics for the study variables, it shows that Big 4 audit firms are auditors for 61.1% of the sampled companies, while companies audited by the non-Big 4 audit firms were less than 39% of the sample. The mean for the ownership concentration variable is 55%, which indicates that there is a high concentration of shares owned by big investors, who own more than 5% of the companies shares, in the Jordanian listed firms, such a percentage will give big investors an extant power in management. On the other hand, foreign ownership mean is about 32% and the mean for institutional ownership is 39%, these means, which represent about one-third and more of the total number of shares, may give the foreign and the institutional investors some power in managing these companies.

Table 2: Descriptive Statistics

<i>Variable</i>	<i>Min</i>	<i>Max.</i>	<i>Mean</i>	<i>Std. Dev.</i>
Audit firm size	0	1	0.6111	0.4887
Ownership concentration	0.09	0.99	0.5531	0.2334
Foreign ownership	0	0.97	0.3227	0.2599
Institutional ownership	0	0.99	0.3892	0.2415

4.2. Analysis of logistic regression:

Before analyzing the logistic regression, the a test of Multicollinearity was done in order to test the high correlation between independent variables if they exist; the results show a low correlation coefficient indicating no Multicollinearity problems among independent variables. The results of ANOVA test show that the whole model is relevant, (F) value was (10.180) at zero significance level, R square and Adjusted R square were (0.21) and (0.189) respectively, which indicate that we can use this model to study the suggested relationship among dependent and independent variables.

Table 3 presents the analysis of the logistic regression, the results show that two variables, out of the three main variables, have a significant relationship with audit quality-measured by audit firm size-, namely foreign ownership and institutional ownership, while ownership concentration has a negative relationship with the audit firm size, but that relationship was not significant at $P=0.438$, the estimated parameter was -0.777 , these results do not support the suggestion of hypothesis 1, so the researcher accepted the first null hypothesis, and concluded that there is no significant relationship between ownership concentration and audit quality. Taking the result of Lukas (2009); Abdullah (2008) together, the study results are consistent among them only on the direction of this relation. The results of logistic regression regarding hypotheses 2 and 3, show that there is a positive significant relationship between an audit firm size and both of foreign ownership and institutional ownership, the estimated parameters were 2.182 and 3.150 at $p= 0.03$ and 0.002 respectively, these findings support the arguments of hypotheses 2 and 3, these results indicate that both foreign and institutional ownership influence the level of audit quality, so, the researcher rejected the second and third null hypothesis, and concluded that there is a positive significant relationship between audit quality and that of both foreign ownership and institutional ownership. These findings are consistent with Abdullah's (2008) study.

Table 3: Descriptive Statistics

<i>Independent</i>	<i>Estimated Parameters</i>	<i>P Value</i>	<i>Direction of Relationship</i>
Constant	-3.145	0.002	Negative
Ownership Concentration	-0.777	0.438	Negative
Foreign Ownership	2.182	0.030	Positive
Institutional Ownership	3.150	0.002	Positive
Size	4.535	0.000	Positive
Leverage	-2.519	0.013	Negative

5. Conclusion

This study aims to investigate the relationship between ownership structure, as one of the important characteristics of corporate governance, and audit quality in Jordan. Focusing on ownership concentration, foreign ownership and institutional ownership as main components for ownership structure in Jordan, and audit firm size as a proxy for audit quality, three hypotheses were developed to suggest an effect of ownership structure on audit quality whether positively or negatively. The studies originality can be observed from the need for deep explanation of audit quality especially after the accounting scandals and financial crises that have affected most of the world economies. Moreover, the nature of the emerging market in Jordan, as a developing country, needs more work in the audit quality area to cover it with empirical evidences because of the limited number of studies that have examined the audit quality and the factors that influence it. This study also focuses on the ownership structure, as one of the corporate governance characteristic, in order to explore its effect on the audit quality. The analysis shows that ownership concentration has a negative relationship with audit quality, but this relation was not significant, this finding may be due to the nature of the concentrated ownership in the Jordanian listed companies, because a lot of them are family owned companies, the family companies may depend on factors related to personal relations in selecting an auditor, the negative direction of that relation is consistent with Chen, et.al. (2007).

The findings show that both foreign ownership and institutional ownership are important factors for Jordanian listed companies in selecting auditors, the results give evidence that companies tend to hire high quality auditors (Big4) when the percentage of foreign and institutional ownership increased, such results can be explained through tending foreign and institutional investors to use one of the Big-4 audit companies as high quality auditors in order to keep them having high quality financial statements which they can use to support their decisions.

Based on the study and findings, the researcher recommends that the Jordan Securities Commission keep its ongoing strategy in supporting and encouraging foreign investments in Jordanian listed companies, and to adopt new instructions that encourage the institutional investments in order to maintain the level of audit quality that will be further reflected in high quality financial statements. Moreover, it will be much better to assign the process of selecting and hiring the auditors to the audit committee which must ensure that it has people of good knowledge in the accounting and auditing processes.

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