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Full Length Research Paper

Audit firm size and quality: Does audit firm size influence audit quality in the Libyan oil industry?

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This study examines the relation between size of audit firm and audit quality, and the choice of accrual measures for a large sample of firms. In relation to the impact of different sizes of audit firms on audit quality, a clear majority of oil companies and audit firms agreed that Big Four firms are superior to their non-Big Four counterparts in all of the reputation issues presented to them, and that the size of the audit firm is positively associated with audit quality. Such superiority is seen in terms of resources and audit technology, and the consequent motivation to perform as professionally as possible. A questionnaire was used to collect data. To confirm and support the questionnaire findings, semi-structured interviews were conducted. The data used for this study were collected from two sources: the demand side (Libyan oil companies) and the supply side (audit firms working in Libya). The data for the Libyan oil companies were gathered from three different types of respondents: internal auditors, financial managers and accounts managers. For the audit firms, data were gathered from employees at all levels in the firm: managing partners, audit supervisors and auditors.

Key words: Libya, audit quality, audit firm size, oil company, audit firms.

INTRODUCTION

The literature indicates that satisfactory levels of audit quality are usually more evident in large audit firms than in small ones, one reason being that the larger the firm, the higher the number of clients, and the greater the probability that the range of services provided is bigger. This minimises dependency on particular clients (Makarem, 2011). And despite the high-profile lawsuits that some big auditing firms have faced in recent years, it is argued by Francis (2004) that these firms do, nonetheless, provide audits of a higher quality than their smaller counterparts. Additionally, large firms have more resources and are able to take steps to publicise their services and develop a reputation. As a result of this, they are usually considered as providing a high quality service, and the size of the audit firm has, therefore, been used as a surrogate for audit quality (DeAngelo, 1981a; Dehkordi and Makarem, 2011; Francis, 2004; Jeong and Rho, 2004; Krishnan, 2005). Large audit firms (the Big Four for example) can devote much investment to the provision of training courses and other resources necessary to ensure their staff are competent, able to audit to a high standard, and are less likely to be compromised by actions of clients (Francis and Yu, 2009; Dopuch, 1984; Gul, 1991; Behn et al. 2008; Wilson and Grimlund, 1990; Rusmin, 2010; Lawrence et al, 2011).

LITERATURE REVIEW

Although there are short studies recently dealing with the relationship between sizes of firms and audit quality in Libya, the topic still raises interest and calls for further and more in-depth research. The following provides an overview of the key literature in order to gain a deeper understanding of the topic under consideration.

A number of reasons exist to explain the importance of

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the relationship between firm size and audit quality. One of these is the fact that audit firm size is immediately observable and can, therefore, be readily used as an indicator of audit quality; and another justification is that if a positive relationship can indeed be demonstrated between size of audit firm and audit quality, then a rationale is provided for the demand for continuing professional education in all audit firms, irrespective of their size. Thirdly, if audit quality and size are shown to be related, the structure of liability insurance premiums could also be affected (Colbert and Murray, 1998). Nevertheless, despite these arguments for the importance of audit firm size in producing a quality outcome, it is nonetheless suggested that audit quality is independent of firm size (Arnett and Danos, 1979; Francis, 2004; Jeong and Rho, 2004; Krishnan, 2005; Chandler, 1991; Lee et al., 2007; Ferguson and Stokes, 2003; Francis and Yu, 2009).

However, audit firms do provide differing quality audits, increasing with the size of firms, in response to varying demands for quality amongst clients because different companies have different levels of agency costs (Arrunada, 1999). The extent of the debate on this particular issue suggests a difficulty in reaching a policy decision on it, and it is argued (Arnett and Danos, 1979; Behn et al, 2008) that it is unfair to distinguish between large and small audit firms if professional standards and qualifications are maintained throughout the sector. In this respect, Arnett and Danos (1979) comment: “If we assume that the quality of the auditing is the same regardless of the size of the firm performing it, the banker would be supplied with the same information on which to base his decision; in this way the size of the firm should not necessarily be a consideration’’.

Within the auditing literature, it is firm size that has attracted the greatest attention, with the assertion being that bigger firms deliver a higher quality audit than their smaller counterparts. And many studies have found evidence to support the notion that firm size has an impact on audit quality, with quality improving as the size of the firm increases (DeAngelo, 1981b; Rusmin, 2010; Lawrence et al, 2011; Davidson and Neu, 1993; Becker et al., 1998; Abu Bakar et al., 2005; Ferguson and Stokes 2003; Francis and Yu 2009; Choi et al, 2010).

There is reason to believe that one explanation for this phenomenon is that bigger firms have more and better resources than smaller firms, that they have greater research facilities, that they can undertake the strongest tests, and that their technological capacity is such that they can generally do much more than their smaller counterparts (Reisch, 2000). More recently, analyst forecast accuracy has been included as a proxy for audit quality, by Behn et al (2008), who assert that in the case where one category of auditor increases the reporting reliability of earnings in comparison to the other type, analysts of the superior type clients should be able to make more accurate forecasts of future earnings than those analysts of the non-superior type clients. Accepting this line of argument, it was found by Behn et al. (2008) that analysts of Big 4 clients have higher forecast accuracy than analysts of non-Big 4 clients.

Moreover, as noted by DeAngelo (1981b), the larger audit firms are not concerned in the same way as are smaller firms, with the loss of a client, and hence they produce higher audit quality because they are not afraid to be objective. Additionally, it is confirmed by Krishnan and Schauer (2000), that the degree of compliance observed is directly correlated to audit firm size, this increasing on a continuum moving from the small non-Big Six to the large non-Big Six to the Big Six.

However, there are many critics of this view and it has been argued that high quality corporate reporting is, in fact, an outcome of the audit firm’s status (Naser and Al-Khatib (2000). The large international firms have a reputation for disclosing information of a high quality, so any audit firm with an affiliation to one of the international firms, is automatically elevated in the reputation stakes. Clearly, once a reputation has been earned, it must be protected, and in the case of audit firms, this is done by delivering credible audits on a consistent basis. In a recent study by Michael (2007), it was confirmed that the clients of large audit firms tend to have lower abnormal accruals, and to satisfy the benchmark earnings objectives of small profits and small earnings increases, than do clients of small audit firms; moreover, large firms were found to be more likely to issue going-concern reports.

Such behaviour on the part of large firms testifies to their independence, which has been reported in the literature, it being noted that Big Four auditors are less likely than smaller auditors to provide a personalized services approach (McLennan and Park, 2004). The fact that larger audit firms have several clients and are not reliant upon the revenue from simply one or two leads to increased auditor independence, which is a recognized principal component of audit quality (Arrunada, 1999; Niemi, 2004; Alleyne et al., 2006). Francis and Yu (2009) document a systematic association between Big 4 office size and audit outcomes consistent with larger offices producing higher quality audits.

Indeed, in their research into forecasted and reported earnings, Davidson and Neu (1993) found that firms with a reputation for delivering higher audit quality reported more forecast errors than audit firms without such prestige. Becker et al. (1998) found non-Big Six auditors had more discretionary accruals for increasing income than Big-Six auditors. Francis et al. (1999) also found that aggressive earnings management was much more likely to be contained by Big Six auditors than non-Big Six firms; and in confirmation of this phenomenon, Davidson et al. (2006) reported that the receipt of modified audit reports from Big Six auditors often induces companies to appoint non-Big Six auditors, and that thereafter, they report increased levels of earnings management.

This suggests overwhelmingly, that Big Six auditors are much stricter, and provide audits that are much more accurate, much more conservative and less optimistic than non-Big Six auditors (Lennox, 1999; Gaeremynck and Willekens, 2003; Lee and Taylor, 2001). And for investors, companies that are audited by the Big Six audit firms would seem to be more attractive since there are likely to be less unwelcome surprises. Indeed, Hussainey (2009) found that the ability of investors to forecast future earnings is improved in such a circumstance since any going concerns are readily identified.

Mutchler et al. (1997) confirm that Big Six auditors are more likely than their non-Big Six counterparts to issue going-concern opinions, suggesting that larger firms are prepared to take an aggressive stance in issuing an appropriate opinion, that they have better technical ability to detect the going-concern issue, or have more clients with such issues. Additionally, auditors are less likely to issue going-concern modifications to larger companies which later go bankrupt, possibly because they are more confident that larger companies can sit out their financial difficulties, or maybe because they fear that issuing the going-concern modification will itself precipitate failure. Similarly, Morris and Strawser (1999) assert that banks receiving modified audit reports from Big Six audit firms were more likely to continue, and not face closure by the regulators than those receiving modified audit reports from non-Big Six audit firms. In contrast, banks with non-modified audit reports from non-Big Six audit firms were more likely to be closed than those receiving non-modified audit reports from Big Six audit firms. Hence, banks audited by the Big Six are more likely to be allowed to continue, consistent with regulators' perceptions that economic reporting incentives may result in Big Six audit firms being more likely to modify their opinions to reflect going-concern uncertainties.

O'Keefe and Westort (1992) considered the reasons why a positive relationship has been found to exist between large firm size and the probability of error detection. They identified these as being: firstly, personnel in large firms become more specialized, and secondly, CPAs in larger firms are involved in significantly more continuing professional education than CPAs in small firms. Hence, audit teams in big firms are expected to have greater technological knowledge than those in small firms, and to be more skilled in the detection and correction of errors. Indeed, it has been argued for some time (see Deis and Giroux, 1992) that larger firms have less deficient paperwork than smaller firms.

That said, there has been a line of argument against the idea that accounting quality is a product of audit firm size, with Imhoff (1988) asserting that no such difference occurs, and Chandler (1991) arguing that quality is produced by individual auditors rather than the firms for which they work. And Lee et al. (2007) go so far as to say that there is no quality advantage in big audit firms because they face less of a litigation risk than smaller firms, and because they are involved in the provision of non-audit services as well, which often creates very special relationships with particular clients.

Offering a different viewpoint on the relationship between firm size and audit quality, Dopuch and Simunic (1980) argue that product-differentiation theory can explain many of the apparent monopolistic characteristics of the industry. They suggest that different auditing firms are perceived by investors to offer auditing services that are qualitatively different, and specifically the former Big Eight are considered to be more credible than other auditing companies. Dopuch and Simunic (1980) consider audit quality to result from the number and extent of audit procedures performed by the auditor, and this in turn relates to the resources available to audit firms, since these may allow for more powerful tests to be performed. In order to test this hypothesis, Nichols and Smith (1983), using a market model methodology on event studies, examined whether positive abnormal returns accrue to organizations that move from being audited by non-Big Eight to Big Eight auditors, and also whether negative abnormal returns accrue to firms which move in the opposite direction. They found an apparent positive, but not statistically significant, reaction from the market, and consequently did not offer strong support for the Dopuch and Simunic (1980)'s argument. In fact, it has not been determined whether this disagreement comes from a weakness in the model, or its application by Nichols and Smith (1983).

Choi et al (2010) show that office size has significantly positive relations with both audit quality and fees, after analyzing national-level audit firm size and office-level industry expertise. These positive relations support the view that large local offices provide higher-quality audits compared to small local offices, and that such quality differences are priced in the market for audit services.

In contrast, Knapp (1991), investigating the effect of key audit variables on the assessments of audit quality of a sample of audit committee members, found no significant effect of audit size on the discovery assessments, although there was more probability of disclosure among the Big Eight.

Research by Krishnan and Schauer (2000) found a relationship between a firm's participation in a peer-review process, and financial disclosures, which were more likely to be made when such a review was in place. The reason is that large audit firms are often in partnership with others and each partner is liable for the firm's debt, so peer-review monitoring is required to protect all parties' reputations and financial standing (Watts and Zimmerma,, 1986), and according to Beattie et al. (2001), to stand as an additional guarantee of auditor independence. Some large audit firms also establish their own internal quality review. In the UK, independent units, such as the Joint Monitoring Unit (JMU) and the ACCA monitoring unit are responsible for reviewing the audit quality of audit professionals.

Colbert and Murray (1998) contribute to the literature, which concentrates mainly on the larger audit firms, by conducting research with a nationwide sample of 422 small firms selected from the Private Companies Practice Section (PCPS), the Peer Review Programme (PRP), and the American Institute of Certified Public Accountants (AICPA 1992, 2002), which provides comprehensive measures of audit firm quality. They found a positive association between firm size and audit quality in firms that perform audits, reviews, and compilations (but not in firms that perform reviews and compilations, without audits). Hence, audit firm size is only a useful quality surrogate for firms that conduct audits.

On a similar theme, Krishnan and Schauer (2000) examined the relationship between firm size and audit quality in a sample of 164 Voluntary Health and Welfare Organizations (VHWOs), using their compliance with eight Generally Accepted Accounting Principles (GAAPs) disclosure requirements as the audit quality measure. Investments, valuation of fixed assets, form of audit report, cash donations and pledges, donated materials and services, presentation of statement of functional expenses, presentation of balance sheet and other statements were the principles. The auditors were considered as three groups: the Big Six, large non-Big Six, and small non-Big Six. It was found that the extent of compliance increased as organizations moved from small non-Big Six to large non-Big Six and from large non-Big Six to the Big Six. Furthermore, other influential factors in respect of audit quality were identified, these being client size and financial health, which had a positive relationship, and client wealth which had a negative impact on audit quality. Geiger et al. (2006b) observe that when compared with non-Big Four firms, Big Four firms significantly reduce their issuance of going-concern modifications to bankruptcy clients after the Private Securities Litigation Reform Act, suggesting lower quality reporting for Big Four firms.

In a more recent study, Chung and Kallapur (2003) found that incentives offered to auditors definitely compromised their independence. This issue was related to client importance and was based on the economic theory of auditor's independence. They used ratios of client fees and NAS fees divided by audit firms' US revenues as surrogates for audit practice, business revenues and measure of client importance, and examined the association with abnormal accruals in the Jones Model using a sample of 1,871 clients of Big Five audit firms. No statistical association was reported between client importance ratios and abnormal accruals in part of the sample based on size, and client opportunities, as proxies by business and geographical segment diversification. In another study in a similar context, Krishnan (2003) explored the relationship between audit quality and pricing of discretionary accruals, finding that Big Six clients report lower amounts of discretionary accruals than non-Big Six clients, and the relationship between stock returns and discretionary accruals is greater for firms audited by Big Six auditors than for those audited by non-Big Six auditors. Furthermore, the discretionary accruals of Big Six auditors' clients have a greater association with future profitability than those of non-Big Six auditors. And finally, the stock market acknowledges the superiority of Big Six auditors to non-Big Six auditors only for discretionary accruals. Overall, the outcomes of Krishnan's (2003) study are consistent with the idea that higher audit quality is associated with Big Six auditors, and this is reflected in the security returns of the clients of Big Six auditors.

In recent research, Choi et al. (2008) indicated that a fee premium is charged by large audit firms because they face higher legal liability costs, and hence, have more incentive to make a better effort than smaller firms. These researchers suggest that the fee premium decreases as the legal regime becomes stronger because small auditors have a higher audit failure rate than Big Four auditors, and increase audit fees significantly more to compensate for their increase in legal liability costs.

The literature on firm size has clearly highlighted that whilst different samples and methods have been used by different researchers, there is a positive relationship between firm size and audit quality. Specifically, large audit firms have more resources which they can direct to the recruitment and training process, thereby providing them with the human capability to detect and correct errors in financial statements. Moreover, as larger audit firms have reputations to preserve, they are careful to report deficiencies. That said, many of the differences between large and small firms should be eliminated by the maintenance of professional standards and qualifications, and a more efficient regulatory framework.

Nonetheless, the literature does show that some studies have not found a relationship between audit firm size and measures of quality. In 1988, Imhoff surveyed financial analysts, finding that they saw no difference in quality between Big Eight and other audit firms. Likewise, the American Institute of Certified Public Accountants (AICPA 1992, 2002) argued that audit quality is independent of firm size. Additionally, Chandler (1991) found audit quality to be a feature of particular auditors, and not firms. All Certified Public Accountants (CPAs) meet the same exacting standards for admission to the profession and participate in professional education annually (AICPA, 2002). Moreover, all AICPA members are subject to three-yearly external review of their auditing practice (AICPA. 1992). And, the collapse of Arthur Andersen and the opposition to peer review in large audit firms, as found by Fearnley et al. (2005), would seem to indicate that it is individuals who are responsible for providing audit quality rather than audit firms.

In addition, the Sarbanes-Oxley Act (2002) introduced the Public Company Accounting Oversight Board (PCAOB) as a monitor for auditor professionalism, and as a replacement for the peer review system because of anxieties concerning the potential for compromising quality control among peers. Krishnan (2005) has consistently argued that audit quality differs between and within audit firms. Hence, it is wrong to attribute audit quality to firms on the basis of their size, irrespective of the fact that larger firms have more resources. Given the stage in Libya's development, no consensus has yet been reached on this issue.

METHODS AND THE SAMPLING UNIT

A mixed methods approach was utilised in this study to gather a range of views from all the professional groups involved in Libyan auditing. Questionnaires were used to collect data concerning the perceptions of two sources: the demand side (Libyan oil companies) and the supply side (audit firms working in Libya). The data for the Libyan oil companies were gathered from three different types of respondents: internal auditors, financial managers and accounts managers. The reason for choosing these three groups of respondents, rather than other employees in the company, was the fact that the literature of auditing indicates that the external auditor usually has more contact with these groups than any others. For the audit firms, data were gathered from employees at all levels in the audit firm: managing partners, audit supervisors and auditors.

The rationale for choosing oil companies was because of their high level of organisation and the fact that most of these companies employ personnel who hold degrees from the United States or Britain – these two facts enabled the researcher to access the right people and obtain the appropriate data.

The magnitude of the activities of the oil companies, and hence the scale of the accounting systems, represent an attraction for large numbers of qualified accountants, who hold qualifications and different accounting backgrounds, a fact that allowed the researcher to have access to a large community of accountants, with diverse careers and work experience.

In order to refute and support the questionnaire findings, semi-structured interviews were conducted. The sample for the interviews was broadly similar to the sample for the questionnaire, which involved representatives from Libyan oil companies, namely, internal auditors, financial managers, accounts managers, and representatives from audit firms working in Libya, namely, managing partners, auditors and audit supervisors. Regulators working in the LAAA were also included in the interviewee sample, partly due to the fact that, after analysing the questionnaire survey, the researcher found it necessary to interview regulators to clarify some grey areas found in the analysis, and more importantly, to triangulate the sample of the study and to obtain different opinions from different dimensions. The total number of interviews conducted with the oil companies was ten (three with internal auditors, four with financial managers, and three with accounts managers), and the total number of interviews conducted with the audit firms working in Libya was thirteen (four with managing partners, six with audit supervisors, and three with auditors). Lastly, two interviews were conducted with regulators working for the LAAA. This process aimed to enhance and supplement the questionnaire findings providing an in-depth clarification and understanding of the effects that the selected factors have on evidence obtained by Libyan auditors. Content analysis was used to analyse the data collected in the interviews.

The first part of the questionnaire was designed to obtain the views of external, internal, state and taxation auditors relating to the effects of the professional and academic qualifications of the auditor on quality of evidence. The second section aimed to gather the participant's opinions regarding the effects of the consistency of evidence on audit evidence. The final section asked the participants about the effects of the amount of evidence on quality of evidence.

A 5-point Likert-scale ranging from *strongly undermines evidence* to *strongly enhances evidence* was utilised to measure perceptions regarding quality of audit evidence (Saunders et al., 2007).

For the purpose of this study, 147 questionnaires were distributed to the oil companies. Of these, 52 went to internal auditors, 50 to financial managers, and 45 to accounts managers. Additionally, 300 questionnaires were sent to the audit firms working in Libya, 100 to managing partners, 100 to audit supervisors, and 100 to auditors. The samples from the demand side (internal auditors, financial managers and accounts managers) represent the agent of the principal, and conduct business on behalf of the principal. Hence, a monitoring mechanism is needed to assess their performance (Jensen and Meckling, 1976). The samples from the supply side (managing partners, audit supervisors and auditors) represent the main subjects of the issue of interest that provide certification and/or information credibility assessment to the stakeholders (Humphrey, 1997). Hasan (2000) points out that audit firms and their clients evaluate audit quality in different ways, and it was, therefore important to receive responses from both sections of the research population.

Considerable effort was made in order to avoid problems of non-response and to ensure the completeness of the questionnaire that was designed using mainly closed questions which are easy for respondents to answer. The questionnaire sample consisted of all listed oil companies in the NOC and 100 audit firms working in Libya. The wording of the questionnaire was clear and straightforward, the instrument was of a reasonable length, and there were no complaints about layout. Most of the questionnaires were personally administered (Managing Partner - 52 questionnaires; Audit Supervisor - 52 questionnaires; Auditor - 56 questionnaires; Internal Auditor - 45 questionnaires; Financial Manager - 47 questionnaires; and Accounts Manager - 35 questionnaires), and some questionnaires were delivered personally by the researcher and returned by mail.

The overall response rate to the questionnaire was extremely encouraging at 64% (Table 1). Remenyi et al. (2002) suggest that a response rate above 60% is considered to be exemplary. The response rates for internal auditors and financial managers were 86.5 and 94% respectively, higher than those of accounts managers, managing partners, and audit supervisors, which were 77.7, 52 and 52%, respectively. Some were unable to complete the questionnaires, and the researcher was unable to contact respondents outside Tripoli because of poor communication facilities, including the official postal system.

RESULTS AND DISCUSSION

Quantitative findings

In order to elicit their perceptions of the relationship between audit firm size and audit quality, respondents from oil companies and audit firms were asked to indicate on a scale ranging from 1 - strongly disagree, to 5 -

strongly agree, their disagreement or agreement with the five statements given in Table 2.

The statement *The Big Four firms are more risk averse in respect of damage to their reputation from public scandals and/or audit failures* had the highest mean score (3.93), resulting from 70.1% of oil company respondents agreeing or strongly agreeing with it. The statement *The local audit firms achieve a lower level of audit quality* had the second highest mean score (3.91) with as many as 71.6% of oil company respondents agreeing or strongly agreeing with it.

The statement *The companies audited by the Big Four firms are more attractive to investors and creditors* had the third highest mean score (3.77) based on the responses from oil company participants. As many as 63.8% either agreed or strongly agreed with this statement. The statement *The Big Four Firms achieve a high level of audit quality* had the fourth highest mean score (3.75), with 70.9% of respondents agreeing or strongly agreeing with it. The statements *The Big Four firms perform more powerful, effective tests and are more credible than others* and *the size of the audit firm is positively associated with audit quality* had the fifth highest mean scores (3.65 and 3.63), with 69.3 and 64.6% of respondents agreeing or strongly agreeing with them, respectively.

As many as 66.1 and 63.8% of respondents either agreed or strongly agreed with the statements *The Big Four firms can plan the audit process more effectively and can obtain a greater variety of clients* and *the Big Four firms are more independent and more likely to issue qualified reports*. These statements achieved nearly the same mean scores (3.58 and 3.57). The Statement *The Big Four firms can report the real financial situation of the clients more readily than other firms* had the lowest mean score (3.49).

In the responses from audit firm representatives, the statement *The local audit firms achieve a lower level of audit quality* had the highest mean score (3.96), with 70.7% of audit firm respondents supporting it. The statements that *The size of the audit firm is positively associated with audit quality, The Big Four firms achieve a high level of audit quality* and *The companies audited by the Big Four firms are more attractive to investors and creditors* had the second highest and same mean score (3.78), with as many as 66.9, 63.8 and 68.1% of respondents either agreeing or strongly agreeing with them, respectively. The statement that *The Big Four firms perform more powerful, effective tests and are more credible than others* had the third highest mean score (3.71), with 61.9% of respondents either agreeing or strongly agreeing with it. The statement that *The Big Four firms are more risk averse in respect of damage to their reputation from public scandals and/or audit failures* had the fourth highest mean score (3.70), with 63.2% of respondents either agreeing or strongly agreeing with it. The statement that *The Big Four firms can plan the audit process more effectively and can obtain a greater variety of clients* had the fifth highest mean score (3.66) with as many as 62.8% of respondents either agreeing or strongly agreeing with it.

The statement that *The Big Four firms can report the real financial situation of the clients more readily than other firms* had the second lowest mean score (3.61), with as many as 57.8% of respondents either agreeing or strongly agreeing with it.

The statement that *The Big Four firms are more independent and more likely to issue qualified reports* had the lowest mean score (3.11), with 48.8% of respondents either agreeing or strongly agreeing with it.

Once again, because the overall responses of oil companies and audit firms' respondents were not completely homogeneous, an attempt was made to isolate the determinants of responses.

The analysis of differences between oil companies' and audit firms' responses is reported in Table 2, which reveals one significant difference at the 1% level and one at the 5%, as measured by the Mann Whitney U test.

An inspection of each sample group's distribution of responses (which is reflected in the mean scores) shows a significant difference at the 1% level of significance between oil companies' and audit firms' respondents for one of the nine statements, and a significant difference at the 5% level for another one of the nine statements, using the Mann Whitney U test. These findings suggest that oil companies' respondents perceived the Big Four as producing a higher level of audit quality than non-Big Four audit firms. The Big Four firms are more risk averse in respect of damage to their reputation from public scandals and/or audit failures, and that the Big Four firms are more independent and more likely to issue qualified reports, which is consistent with the findings of Michael (2007) who determined that clients audited by large audit firms tend to have lower unusual accruals, and are more likely to meet the benchmark earnings targets of small earnings increases. He also found that large audit firms are more likely to issue going-concern reports. These results show that there is a significant variation in audit quality across different sizes of auditor practice offices, with larger offices providing higher quality audits. They are consistent with the conclusions drawn by Beatty (1989) and Titman and Trueman (1986) that since large audit firms (Big Four) have greater resources and possess identical technological capabilities, they are capable of performing more powerful tests. As a result, larger audit firms are more likely to be associated with more precise information than smaller audit firms.

The perceptions of size of audit firms based on position

Table 3 presents the analysis by position. Distributions of

Table 1. Questionnaire survey response rate.

Group	Distributed questionnaires	Useable questionnaires	Response rate
Managing partner	100	52	52
Audit supervisor	100	52	52
Auditor	100	56	56
Internal auditor	52	45	86.5
Financial manager	50	47	94
Accounts manager	45	35	77.7
Total	447	287	64

the responses from oil company staff and audit firm staff were significantly different at the 1% and 5% level, as measured by the Kruskal-Wallis statistic.

Overall perceptions of respondents showed one significant difference in the distribution of responses at the 1% level of significance as measured by the Kruskal Wallis test. Auditors had a significantly lower mean score (2.5) and accounts managers and financial managers had the highest mean score (4.26 and 3.49) for the statement *The Big Four firms are more independent and more likely to issue qualified reports*. This difference in the responses perhaps indicates that the oil company's respondents believe large firms are wealthier than small firms and would potentially be required to give in to larger claims in the event that they were to be sued. Hence, they might be more concerned about maintaining audit quality and their reputation in the audit market than smaller firms. The result might also explain why the Big Four have been reported as providing higher quality auditing and being more independent than non-Big Four firms in the literature (Michael, 2007; Becker et al., 1998; Francis et al., 1999; Francis and Krishnan, 1999; Dehkordi and Makarem, 2011; Francis, 2004; Jeong and Rho, 2004; Krishnan, 2005).

The perceptions of size of audit firm based on type of audit firm

The analysis by type of audit firm, as reported in Table 4, shows five significant differences between local audit firms, Arab or international firms, and local firms affiliated to one of the Big Four audit firms (non-Big Four and Big Four) at the 1 and 5% levels of significance, respectively, as measured by the Kruskal-Wallis test. The level of agreement with the statements *The companies audited by the Big firms are more attractive to investors and creditors* and *The Big Four firms are more independent and more likely to issue qualified reports* at the level of1% of significance was significantly higher for Big Four respondents (4.33 and 3.86, mean score, respectively) than for local, Arab, and international audit firm's (non-Big Four) respondents (3.83, 2.9 and 3.37, 3.21, respectively). This outcome is consistent with the study conducted by Michael (2007) who found that clients audited by large audit firms tend to have lower unusual accruals, and are more likely to meet the benchmark earnings targets of small earnings increases.

In addition, the analysis by type of audit firm in Table 4 shows three significant differences between local audit firms, local firms affiliated to an Arab or international audit firm, and local firms affiliated to one of the Big Four audit firms, (non-Big Four and Big Four) at the 5% level of significance, as measured by the Kruskal-Wallis test. The level of agreement with these three statements by Big Four audit firms' respondents was significantly higher than it was by non-Big Four audit firms' respondents. This disagreement in the responses from the Big Four audit firms' respondents perhaps indicates the main reasons why, in their view, the Big Four are perceived as producing a higher level of audit quality than the non-Big Four. The reasons may be summarised as follows:

1. The Big Four firms are more independent and more likely to issue qualified reports.
2. The Big Four firms can report the real financial situation of the clients more readily than other firms.
3. The Big Four firms perform more powerful, effective tests and are more credible than others. The Big Four firms can plan the audit process more effectively and can obtain a greater variety of clients.

It is worth mentioning here that these results strongly support previous studies, such as the one undertaken by De Angelo (1981a) who argued that audit quality is directly related to the size of auditing firm, that conducted by Dopuch and Simunic (1980) who reported that the Big Four are perceived as providing a higher level of audit quality than non-Big Four auditors because they are viewed as being more credible and have more resources, and the research by Morris and Strawser (1999) that found that banks receiving modified audit reports from Big Six audit firms were more likely to continue, and not be closed by the regulators, than those receiving

Table 2. Distribution of the evaluations given by the different statements regarding the size of audit firm and audit quality.

Statement	Audit firms SD %	D %	NV %	A %	SA %	Mean	Median	Oil companies SD %	D %	NV %	A %	SA %	Mean	Median	Sig
The size of the audit firm is positively associated with audit quality.	5.6	7.5	20	37.5	29.4	3.78	4.00	10.2	13.4	11.8	32.3	32.3	3.63	4.00	
The Big Four firms can report the real financial situation of the clients more readily than other firms.	6.3	10.6	25.6	30.6	26.9	3.61	4.00	10.2	12.6	22.8	26.8	27.6	3.49	4.00	
The Big Four firms are more risk averse in respect of damage to their reputation from public scandals and/or audit failures.	2.5	11.9	22.5	39.4	23.8	3.70	4.00	3.1	9.4	17.3	31.5	38.6	3.93	4.00	**
The Big Four firms perform more powerful, effective tests and are more credible than others	8.1	10	20	26.3	35.6	3.71	4.00	15	11.8	3.9	32.3	37	3.65	4.00	
The Big Four Firms achieve a high level of audit quality	5.6	11.3	19.4	27.5	36.3	3.78	4.00	10.2	7.9	11	38.6	32.3	3.75	4.00	
The local audit firms achieve a lower level of audit quality	3.8	6.9	18.8	31.3	39.4	3.96	4.00	3.9	9.4	15	35.4	36.2	3.91	4.00	
The companies audited by the Big firms are more attractive to investors and creditors.	6.3	8.1	17.5	38.1	30	3.78	4.00	3.9	7.9	26	33.1	30.7	3.77	4.00	
The Big Four firms can plan the audit process more effectively and can obtain a greater variety of clients.	5.6	13.8	18.1	33.8	28.8	3.66	4.00	7.9	11	21	34.6	25.2	3.58	4.00	
The Big Four firms are more independent and more likely to issue qualified reports	18.1	15.2	21.3	27.5	17.5	3.11	3.00	9.4	11	18.9	34.6	26	3.57	4.00	*

*,** indicates distribution of responses is significantly different at the 1%, 5% levels, respectively using the Mann Whitney U test.

modified audit reports from non-Big Six audit firms. In contrast,banks receiving non-modified audit reports from non-Big Six (as the Big Four were then) audit firms were more likely to be closed than those receiving non-modified audit reports from Big Six audit firms. Overall, respondents' perceptions of the relationship between firm size and level of audit quality are consistent with the notion that higher audit quality is associated with the Big Four audit firms.

Qualitative findings

Audit firm size has been used as a surrogate for audit quality in prior literature (DeAngelo, 1981a). Moreover, prior research (Becker et al., 1998; Francis et al., 1999) has reported that Big Four audit clients present lower discretionary accruals than those of non-Big Four firms because Big Four auditors may have more expertise, resistance to clients' discretion, and awareness of financial and reputation loss, than non-Big Four auditors. Therefore, this section aims to demonstrate whether the size of the audit firm affects audit quality in Libya, and to identify reasons for possible quality difference by firm size.

The majority of interviewees (88% of oil companies and audit firms) agreed that the size of audit firms does indicate different levels of audit quality, and that they believe the Big Four audit firms to be more powerful, effective and

Table 3. Distribution of different statements regarding the size of audit firm based on position.

Statement	Audit firm staff						Oil company staff						
	Managing partner		Audit supervisor		Auditor		Internal auditor		Financial manager		Accounts manager		
	Mean	Median	Mean	Median	Mean	Median	Mean	Median	Mean	Median	Mean	Median	Sig
The size of the audit firm is positively associated with audit quality.	3.88	4.00	3.62	4.00	3.82	4.00	3.58	4.00	3.64	4.00	3.69	4.00	
The Big Four firms can report the real financial situation of the clients more readily than other firms.	3.67	4.00	3.44	400	3.71	4.00	3.58	4.00	3.30	3.00	3.63	4.00	
The Big Four firms are more risk averse in respect of damage to their reputation from public scandals and/or audit failures.	3.90	4.00	3.67	4.00	3.45	4.00	3.91	4.00	3.77	4.00	4.17	4.00	
The Big Four firms perform more powerful, effective tests and are more credible than others	3.63	4.00	4.10	4.00	3.43	3.00	3.42	3.00	3.62	4.00	3.97	4.00	
The Big Four Firms achieve a high level of audit quality.	3.92	4.00	3.71	4.00	3.70	4.00	3.84	4.00	3.51	4.00	3.94	4.00	
The local audit firms achieve a lower level of audit quality.	4.08	4.00	3.63	4.00	4.14	4.00	3.73	3.00	3.83	4.00	4.23	3.00	
The companies audited by the Big firms are more attractive to investors and creditors.	3.73	4.00	3.65	4.00	3.93	4.00	3.62	4.00	3.91	4.00	3.77	4.00	
The Big Four firms can plan the audit process more effectively and can obtain a greater variety of clients.	3.58	4.00	3.62	4.00	3.79	4.00	3.78	4.00	3.53	4.00	3.40	3.00	
The Big Four firms are more independent and more likely to issue qualified reports	3.40	4.00	3.42	4.00	2.54	2.50	3.11	3.00	3.49	4.00	4.26	4.00	*

*,** indicates distribution of responses is significantly different at the 1%, 5% levels, respectively using the Kruskal-Wallis test.

independent than the non-Big Four firms. This finding confirms the questionnaire responses which showed that 69.3% of oil companies, and 61.9% of audit firms agreed that the Big Four firms perform more powerful and effective tests, and are consequently, more credible than other firms.

More than three-quarters of the interviewees (76%) believed that the level of audit quality in Libya depends upon the status of the audit firm, example, local audit firm affiliated to a foreign audit firm, and again, this confirmed the question-

Table 4. Distribution of different statements regarding the size of audit firm based on type of audit firm.

Statement	Local audit firm		International audit firm		Big Four audit firm		Sig
	Mean	Median	Mean	Median	Mean	Median	
The size of the audit firm is positively associated with audit quality.	3.71	4.00	3.72	4.00	4.19	5.00	
The Big Four firms can report the real financial situation of the clients more readily than other firms.	3.67	4.00	3.35	4.00	3.90	4.00	
The Big Four firms are more risk averse in respect of damage to their reputation from public scandals and/or audit failures.	3.71	4.00	3.44	4.00	4.19	4.00	**
The Big Four firms perform more powerful, effective tests and are more credible than others.	3.73	4.00	3.42	4.00	4.24	5.00	**
The Big Four Firms achieve a high level of audit quality	3.79	4.00	3.44	4.00	4.38	5.00	**
The local audit firms achieve a lower level of audit quality	3.89	4.00	4.00	4.00	4.19	4.00	
The companies audited by the Big firms are more attractive to investors and creditors.	3.83	4.00	3.37	4.00	4.33	4.00	*
The Big Four firms can plan the audit process more effectively and can obtain a greater variety of clients.	3.71	4.00	3.58	4.00	3.62	4.00	
The Big Four firms are more independent and more likely to issue qualified reports	2.90	3.00	3.21	3.00	3.86	4.00	*

*,** indicates distribution of responses is significantly different at the 1%, 5% levels, respectively using the Kruskal-Wallis test.

naire survey results, which showed that more than half of the oil company and audit firms' respondents (66.9 and 59.4%, respectively) similarly agreed this was the case.

The interviews indicated that Big Four firms are more structured in terms of staff training, technical support, and have wider resources than their counterparts in smaller audit firms. This is consistent with GAO (2003a), Mautz and Sharaf (1961) and Niemi (2004). It was pointed out that because of the greater availability of resources, the Big Four firms are able to employ more upright indivi-duals who have better qualifications and background. The quality of people is clearly influential on the quality of the service they provide, and well-qualified personnel have a positive impact on the audit process, since their professionalism motivates them to comply with accounting standards and codes of ethics and not to concur with irregularities in clients' accounts. This result confirms the questionnaire that 66.1% of oil companies and 62.8% of audit firms believed that the Big Four firms are more likely to issue qualified reports and to plan the audit process more effectively, thereby obtaining a greater variety of clients, and in consequence, being able to provide their audit staff with greater experience.

In addition, the interviews indicated that the Big Four firms are also in a position to offer job security, which makes their staff more confident in their work and in reporting their results. Therefore, they are better able to fight against management pressure.

On this issue, an auditor in one of Big Four audit firms remarked:

If it is a Big Four firm, I would have more confidence. There is a greater spread of expertise and there is less likely to be an independence *problem whereas with a smaller audit firm, they may be more dependent on one audit.*

This result confirms the questionnaire finding in respect of the statement The companies audited by the Big Four are more attractive to investors and creditors which had a high mean score (3.77 and 3.78), resulting from 63.8 and 68.1% of oil companies' and audit firms' respondents agreeing or strongly agreeing with it. This result might also explain why Big Four auditors have been reported as providing higher quality auditing than non-Big Four auditors in prior literature (Dehkordi and Makarem, 2011; Francis, 2004; Becker et al., 1998; Francis et al., 1999; Francis and Krishnan, 1999; Teoh and Wong, 1993; Niemi, 2004; Francis and Yu, 2009).
On this issue of the external perception of audit firm size, a financial manager in an oil company remarked:

There is a greater opportunity to influence a smaller practice than a larger practice because the latter is very well organised and has its own structures in place. A small firm won't have the same resources and will depend on individuals within the practice to try and bring the same checks and balances which a large firm, by having the structures in place, can automatically impose.

As Big Four audit firms have many audit clients, they might not be economically dependent on just a few of them. In addition, large firms have more wealth to pay larger potential claims if sued, than smaller firms (Simunic and Stein, 1996) and so, might be more concerned about maintaining audit quality and their reputation in the audit market than smaller firms. In addition, large size companies with good accounting systems and less earnings manipulation might possibly hire Big Four auditors because they might be concerned about the quality of their financial statement quality and the reputation of their companies. Therefore, they might select Big Four audit firms to signal a positive company image to the public (Chung and Kallapur, 2003).
An accounts manager in an oil company remarked:

I wouldn't necessarily be comfortable that the smaller audit firms would have the procedures or methodologies that the Big Four would have.

In addition, the interviewees disclosed that the Big Four firms have adequate resources and the financial ability to train their staff in related areas. Indeed, all of the Big Four firms encourage their staff to pursue professional qualifications by giving the appropriate support, such as study leave under the 'article-ship' scheme. Over the study period, personnel are given flexibility to attend classes and examinations, whereas many of the small and medium firms are unable to offer similar schemes. Thus, the interviewees indicated that staff from the Big Four firms are more loyal to, and honest with, their employers, and more able to resist clients' pressure than their counterparts from local audit firms. Furthermore, the knowledge gained from the training given makes the Big Four staff members more skilful and effective in terms of diagnosing activities that are inconsistent with clients' going-concern status.
An internal auditor in one of the oil companies raised the issue of greater objectivity, saying:

The Big Four are part of international groups which are obliged to satisfy international standards. The smaller firms don't have such ties, reporting structures or quality standards. The Big Four are less likely to give a personalised approach to their clients.

The majority of the interviewees (84% overall) believed that the foreign audit firms' claim that they provide a higher level of audit quality is due to their good international reputation, and their well-known brand names. It was pointed out that a large majority of the oil companies still prefer to engage the Big Four firms as their auditors, a preference which portrays that their financial reporting is consistent with global standards. Indeed, some companies that operate internationally associate themselves with reputable auditors to ease their dealing with foreign investors and companies. The interviews revealed that their foreign associates would always assess the credibility of their financial statements by reference to the auditor's name.

The importance of the auditor being known to be credible was raised by a managing partner in one of the Big Four audit firms who commented:

In the bigger audit firms you would find a huge diversity of clients whereas in the smaller audit firms, you may find that the auditor is a close friend of the company.

According to a Big Four managing partner:

The Big Four firms' auditors are able to maintain a higher level of audit quality, possibly due to their organisational structure, technology and competency.

Also, the interviewees commented on the fact that the Big Four firms have larger customer portfolios as compared to their counterparts in small firms, which means that they do not have to rely on any single customer. Thus, they are better placed to resist management pressure in situations of conflict and more able to report any negative findings. Small audit firms, on the other hand, have limited customer portfolios as pointed out by Pearson (1980a), and the termination of any audit job could affect their financial position. Interviewees did reveal that small audit firms might easily compromise with clients in order to retain them. In relation to the size of customer portfolio, one audit supervisor from a Big Four firm noted:

The Big Four can afford to lose customers, are more flexible and more powerful than small firms, and they want to keep the major companies such as oil companies.

On the other hand, a small minority of the interviewees disagreed that audit quality differs according to the size of audit firms. These participants believed this to be a misconception that comes from the clients' management, as a result of clients attempting to boost their reporting image by associating with audit firms that have a good reputation. It may be the case that the management does not have confidence in the company's reporting practices, and tries to find an easy way to divert the audience's attention by employing an international audit firm. It was pointed out that the differentiation is only to meet the consumers' requirements. The small firms' ability is in question simply because they are not being tested. Commenting on the difference between the Big Four and non-Big Four firms, an auditor of a local audit firm believed that the quality of Big Four and non-Big Four auditors in Libya did not significantly differ because it depended on individual competence and attitude rather than firm size. He said:

In my opinion, the quality of Big Four and non-Big Four auditors in Libya does not differ since I believe that their quality depends on individual competence and attitude Size does not matter. However, auditors in Big Four firms have advantages from international working systems and quality control, so people may have stereotyped image of Big Four quality without considering individual competency.

However, a chief internal auditor from a large oil company disagreed with this view, arguing that:

The quality of Big Four and non-Big Four auditors differs because Big Four firms have more hi-tech resources. They hire competent staff and provide them with good training courses in order to render good services to their clients. Moreover, audit clients come from different groups. Big Four clients are large listed companies with higher audit fee whereas non-Big Four clients are small or medium size companies with lower fee. These differences contribute to differences in audit quality.

Considering all the responses from the interviewees, it seems obvious that the Big Four audit firms have more resources at their disposal, and are able to offer better on-going training to their staff. This appears to be understood in the marketplace and associated with a better quality service, as also is the non-reliance on clients to the same extent that smaller firms who have less of a reputation are compelled to do. Hence, audit quality might well differ by size of audit firm.

SUMMARY AND REVIEW OF FINDINGS

In relation to the impact of different sizes of audit firms on audit quality, a clear majority of oil companies and audit firms agreed that Big Four firms are superior to their non-Big Four counterparts in all of the reputation issues presented to them, and that the size of the audit firm is positively associated with audit quality.

Firstly, the questionnaire respondents concluded that Big Four audit firms are more attractive to investors and creditors because they are seen to provide reliable information that enables investors to properly assess risk and return profiles. Investors usually trust audit firms with a professional approach to auditing and a high level of audit quality. In the same manner, oil companies usually engage audit firms with a good reputation because they wish to enhance their own attractiveness to investors and creditors, and Big Four audit firms are considered to be better able to resist management pressure in conflict situations, thereby bringing enhanced credibility to any company that uses their auditing services. The Big Four auditors have greater resources, technical knowledge and global reach, which allows them to deal with clients more efficiently, and they are thus able to freely express their opinions without fear of their engagement being terminated by the client. In fact, Big Four audit firms may also exhibit higher levels of ethical reasoning and attract a greater variety of clients because of their appeal on quality grounds, and the associated benefits their reputation brings. Indeed, as the Big Four audit firms have greater resources and possess technological capabilities, they can plan the audit process more effectively, perform more powerful tests, and be more likely to publish more precise information.

Secondly, the majority of oil companies and audit firms agreed that Big Four audit firms are more risk averse and consequently, more disinclined to be associated with public scandals and/or audit failures than non-Big Four audit firms. These opinions might be an indication of the faith that the respondents still have in the ability and competence of the Big Four to undertake their duties effecttively and professionally, despite the well-publicised audit failures involving large firms that have occurred in different economic, political, geographical and cultural settings, which may not be applicable to the Libyan audit market. It is possible that the invention of communication technology that allows business to be done in real-time has made the Big Four auditors more careful in conducting their business and more risk averse, with the result that their reluctance to be associated with any wrongdoings is enhanced, since the availability of such technology would result in faster spread of negative news.

Finally, the majority of the respondents to the questionnaire recorded their belief that Big Four audit firms are more independent than non-Big Four auditors. Indeed, the Big Four auditors are likely to become the subject of interest to the public and regulators, especially when they are suspected of exhibiting negative behaviour. Therefore, Big Four audit firms have more incentive to behave independently than non-Big Four audit firms.

The results of the interview survey revealed that the perceived relationship between firm size and level of audit quality is consistent with the notion that higher audit quality is associated with foreign audit firms, in general.

In this connection, the interviewees were of the opinion that the Big Four firms were more independent than their counterpart non-Big Four firms, and this was seen as a direct result of their size, since this provided them with more resources that in turn filtered through to organisational practices, such as the provision of more training that ensures staff are skilled and effective in diagnosing activities that are inconsistent with a client's going-concern status. Such elements of organisational culture allow for the recruitment of more professionally-minded people, who subsequently provide a higher quality of service. It was felt by the interviewees that such high quality staff would naturally comply with international professional standards and work ethically, thereby being predisposed to resist management pressure. Overall, the Big Four firms were reported to be more powerful, effective and independent than the non-Big four firms, not least because after various accounting scandals and litigation concerning fraud and irregularities, they have more incentive to protect their reputation and continue with their high earnings.

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