Audit quality research in the United States

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THEMA

DeAngelo (1981) defines a high-quality audit as an audit in which: (1) the risk that an undetected material error exists in the financial statements is kept at a low level, and (2) material financial statement errors uncovered during the audit are corrected or the auditor's report is appropriately modified. Unfortunately, it is difficult, if not impossible, to directly observe, there two components of audit quality. As an alternative, researchers have used surrogate measures to evaluate audit quality.

Studies in the U.S. have examined audit quality by focusing on: (1) litigation against audit firms, (2) auditor selection, auditor changes, and firm size, (3) the nature of auditors' opinions, (4) the pricing of audit services, and (5) perceptions of users. This literature review paper summarizes selected studies from these different areas.

Litigation Against Audit Firms

St. Pierre and Anderson (1984) analyzed 129 lawsuits (334 alleged errors) against accounting firms to determine the factors commonly associated with such suits. Among the results of the study were: (1) more cases are due to auditors' interpretation of standards than to procedural errors, (2) many lawsuits are related to an auditor's new clients, (3) public companies are 'overrepresented' in the sample of lawsuits analyzed, (4) no suits involved undervalued assets, understated revenues, or overstated expenses, and (5) client bankruptcy or severe financial distress was present in 50% of the litigation against auditors.

Palmrose (1987) analyzed over 450 lawsuits against the 15 largest audit firms from the period 1960 - 1985. Business failure or severe financial distress was found to be present in 50 percent of litigation against auditors. Management fraud was present in 40 percent of the cases.

Palmrose (1988) analyzed litigation against auditors (472 cases and 183 resolutions) to identify quality differences among individual audit firms. She argued that low (high) levels of litigation would be associated with high (low) quality audits. Using total litigation as the measurement base, Palmrose found that Ernst & Whinney and Deloitte Haskins & Sells provided the highest quality audits. When meritorious litigation was used as the measurement base, Arthur Young, Ernst & Whinney, and Price Waterhouse were found to have provided the highest quality audits. Litigation differences among the Big Eight firms were not statistically significant. Palmrose did find a significant difference between Big Eight and non-Big Eight firms in terms of litigation levels. After adjusting

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for firm size, there were fewer lawsuits against Big Eight firms than against non-Big Eight firms.

This finding is consistent with previous research that suggests that Big Eight firms are quality-differentiated suppliers of audit services.

Stice (1991) analyzed litigation against auditors (49 observations) to identify financial and market variables associated with such litigation. He found the ratios of accounts receivable and inventory to total assets, variance of abnormal client returns, financial condition, and market value to be positively associated with lawsuits against auditors.

Carcello and Palmrose (1994) examined the relationship between audit reporting and litigation for a sample of 655 publicly-held companies filing for bankruptcy between 1972 and 1992. Client size, financial fraud, and reported profits immediately prior to failure were positively associated with litigation against auditors. They also found that issuance of timely modified audit reports served to mitigate the extent and severity of subsequent litigation against the auditor.

The results from auditor litigation studies suggest that financial condition, management fraud, client size, and ownership status are positively associated with subsequent litigation. Financial distress or bankruptcy is frequently present in lawsuits against auditors; however, only a small portion of all bankruptcy filings result in a lawsuit against auditors. Evaluating audit quality differences across firms using litigation rates yields mixed results. Big Eight firms appear to provide higher quality audits than do non-Big Eight firms. However, intra-Big Eight quality differences are more tenuous and are dependent upon how litigation is defined (total or meritorious).

Auditor Selection, Auditor Changes, and Firm Size

Carpenter and Strawser (1971) examined auditor switches associated with an initial public offering (IPO). They found that companies going public often switched from a non-Big Eight auditor to a Big Eight firm in connection with their IPO. Carpenter and Strawser concluded that companies switched auditors because of the greater prestige, reputation, and technical competence that Big Eight auditors were presumed to possess.

DeAngelo (1981) posited that large audit firms perform higher quality audits than do small firms. When auditors 'earn client specific quasi-rents, audit quality is not independent of audit firm size' (p. 197). Large firms have more to lose with one ineffective audit; therefore, they are expected to have higher audit quality.

Nichols and Smith (1983) measured audit quality differences by focusing on abnormal security returns. They hypothesized that positive abnormal returns accrue to companies switching from a non-Big Eight auditor to a Big Eight auditor, and that negative abnormal returns accrue to companies switching in the opposite direction. Nichols and Smith found directional support for this hypothesis.

Simunic and Stein (1987) found weak evidence that companies were more likely to switch to a Big Eight auditor as their agency costs increased. This finding is consistent with the view of the Big Eight as higher quality auditors, for a higher quality monitor would serve to reduce agency costs.

Ettredge et al. (1988) found weak evidence that the correlation between unexpected earnings and abnormal returns was greater for 50 Big Eight clients than for 50 non-Big Eight clients that were matched by size and industry. This finding is consistent with higher Big Eight audit quality leading to higher quality earnings releases for Big Eight clients.

Beatty (1989) found an inverse relationship between auditor reputation and initial return in the IPO market. Specifically, he found a significantly lower initial return to investors when the company used a Big Eight auditor. In the IPO market, the greater reputation of the Big Eight firms resulted in a higher offering price (lower initial return).

Eichenseher et al. (1989) studied auditor switching among OTC companies. They found that companies switching from a non-Big Eight firm to a Big Eight firm experienced positive abnormal returns. Companies switching in the opposite direction, or those switching between firms within the same class, experienced negative abnormal returns. These results also suggest a quality difference between the Big Eight and other firms.

Menon and Williams (1991) examined the impact of auditor credibility on initial public offerings. In 'firm commitment' offerings, clients associated with Big Eight firms appeared to be charged lower investment banking fees. This finding suggests a reputation, or quality, difference between the Big Eight and other firms.

The results from auditor selection and auditor change studies suggest that market participants perceive Big Eight auditors as quality-differentiated suppliers. Investment bankers prefer to be associated with a Big Eight firm. Entities audited by a Big Eight firm earn a lower return (due to reduced risk) in the IPO market. There is some evidence of positive abnormal returns when a company switches to a Big Eight auditor and of negative abnormal returns when the auditor switch is in the opposite direction. These results are consistent with DeAngelo's (1981) theoretical argument that Big Eight firms are higher quality suppliers of audit services.

Nature of Auditors' Opinions

Wyer et al. (1988) performed a weak test of DeAngelo's size theory (1981) by comparing large and small audit firms on the percentage of their total audit opinions in 1986 that were unqualified, and disclaimed. They found no significant differences between classes of firms in the percentage of qualified opinions issued, and they concluded that these findings were inconsistent with DeAngelo's theory. However, Wyer et al. did not control for the riskiness of the firms' client portfolios. It is likely that large firms engage less risky clients, thus holding down the percentage of qualified opinions issued by such firms.

McKeown et al. (1991) examined the association between client characteristics and auditors' propensity to qualify bankruptcy-related opinions. The sample was 134 NYSE or AMEX companies that declared bankruptcy from 1974 to 1985. McKeown et al. found that auditors were less likely to qualify the opinions of (1) companies with ambigouos (low) bankruptcy probabilities, (2) larger companies, and (3) companies with a short time period (audit lag) between the balance sheet date and audit opinion date.

Carcello et al. (1995) examined the association between audit firm structure and auditors' propensity to qualify bankruptcy-related opinions. The sample represented substantially all the bankruptcy-filings by publicly-held clients of the Big Eight firms during the 1980s. The authors found a positive relation between audit structure and propensity to qualify in this setting.

Studies that have examined audit quality differences among firms based on audit opinions have produced mixed results. However, there does appear to be some evidence that suggests that firms employing a structured audit approach are more effective within some domains than firms employing an unstructured approach. Also, audit quality, if one defines it as the likelihood of modifying the opinion of a company that soon declares bankruptcy, appears to be inversely related to client size.

Pricing of Audit Services

Simunic (1980) examined the determinants of audit fees for a sample of 397 publicly-held companies. Client size and various measures of client complexity were significant in explaining audit fees. Simunic also found that Big Eight auditors enjoy scale economies, resulting in lower relative audit fees. He also found that Price Waterhouse (PW) audits commanded a fee premium.

Simon (1985) essentially replicated Simunic's 1980 study using obeservations drawn over the years 1978-1983. His results substantially support Simunic's findings; however, Simon did not find a positive fee premium associated with a PW audit.

Palmrose (1986) studied the determinants of audit fees using a sample of 361 companies drawn from the years 1980 and 1981. She found client size, client complexity, nature of audit opinion, and ownership status (public/private) of the company significant in explaining audit fees. Palmrose also found that Big Eight firms were able to command a price premium. This result is consistent with either: (1) Big Eight firms as quality-differentiated suppliers, or (2) monopoly pricing by such firms. Data on audit production and cost functions would be needed (and they are not available) to evaluate these two competing explanations. Palmrose found some evidence that fee premiums may accrue to PW in certain industry sectors.

Francis and Simon (1987) examined audit pricing among small clients. Using a sample of 210 companies from 1984 they found that Big Eight firms command a fee premium within this market segment. This fee premium exists whether the comparison group is second-tier national firms or local/regional firms.

Gist (1994) examined the relationship between audit pricing and the degree of structure in the CPA firms' audit approach. Based on a sample of

109 publicly-held companies contacted during 1987, Gist concluded that firms using a structured audit approach charged lower fees than firms using either an intermediate or usnstructured approach. This result is consistent with the argument that a structured audit approach results in greater efficiency.

In general, audit pricing studies have found evidence consistent with the propostion that Big Eight firms command a price premium. There are mixed results as to whether any individual Big Eight firm (i.e., Price Waterhouse) can command such a premium, and audit pricing is lower among firms using a structured audit approach.

Perceptions of Users

In an experimental context, Shockley and Holt (1983) found that chief financial officers from large commercial banks can and do differentiate among Big Eight firms. Market share and firm conservatism were the most important factors in differentiating among firms.

Schroeder et al. (1986) gathered information from audit committee chairpersons of *Fortune 500* companies as to how they defined audit qaulity. Audit team factors (e.g., partner/manager involvement) were viewed as more important than were firm-wide factors (e.g., quality control procedures).

Imhoff (1988) analyzed quality differences between audit firms based on analysts' perceptions of the financial reporting practices of selected companies. Imhoff found no differences in perceived quality among the clients of the Big Eight or between the Big Eight clients and non-Big Eight clients. However, it is not clear that his study isolated audit firm quality form management quality or from the companies' disclosure strategies.

In an experimental study, Knapp (1991) examined the effect of auditor size, tenure, and strategy on the audit quality perceptions of audit committee members. Big Eight audit firms were viewed as more likely to disclose material errors than were local firms. Audit quality and auditor tenure were positively correlated in the early years of the client-auditor relationship; tenure and quality were negatively correlated when the existing client-auditor relationship had been in place for many years. There was no significant relationship between audit quality and an audit firm's approach to auditing (i.e., structured/unstructured audit approach).

Carcello et al (1992) investigated the attributes of audit service quality from the perspectives of audit partners, preparers, and financial statement users. Consistent with Schroeder et al. (1986), audit team factors were viewed as more important than firmwide factors. The four most important components of audit quality were: (1) audit team and firm experience with the client, (2) industry expertise, particularly at the audit team level, (3) responsiveness to client needs, and (4) compliance with the general standards section of Generally Accepted Auditing Standards.

The evaluation of audit qaulity attributes was significantly different across the three groups (partners, preparers, and users). There was a particularly large difference between users and the other two groups with regard to compliance with general standards. A CPA firm's compliance with general standards was significantly more important to users than to partners or preparers. This is not surprising since the value of an audit to users is largely dependent on a CPA's competence, independence, and due care.

Accounting Today (1992) developed a list of nine attributes of audit service quality. These attributes were: (1) flexibility and open-mindedness, (2) proactive approach to client service, (3) functional and technical expertise, (4) industry expertise, (5) practical advice, (6) creativity, (7) efficiency, (8) client responsiveness, and (9) competitive pricing. The chief accounting officers from a number of companies, which varied in size, evaluated their existing CPA firm using these attributes. Arthur Andersen (AA) was rated highest on six of these nine attributes.

Telberg (1993), using the same nine audit service quality attributes identified above, reported that AA and Price Waterhouse received the highest overall rankings in terms of client satisfaction. This ranking held across both mid-size companies (sales between \$5 million and \$199 million) and large companies (sales over \$200 million).

In their third annual evaluation of CPA firm performance, *Accounting Today* (1994) found that AA achieved the highest overall ratings. Other findings of note included: (1) client satisfaction levels are increasing, (2) industry expertise and the ability to frame advice accordingly was the characteristic valued most highly, and (3) failing to provide value for fees was the most frequent criticism.

Carcello et al. (1994), in a paper presented at the 1994 *MAB Conference*, evaluated the relationship between audit quality attributes and client satisfaction. They also examined whether client satisfaction was associated with a fee premium.

Data were gathered via a questionnaire that was sent to the controllers of *Fortune 1000* companies. The study had a response rate of approximately 50 percent. Carcello et al. found that eight of the 12 audit service quality attributes examined were positively associated with client satisfaction. These attributes were: (1) experience with the client, (2) industry expertise, (3) responsiveness to client needs, (4) quality commitment, (5) executive involvement, (6) conduct of field work, (7) effective and ongoing interaction with the audit committee, and (8) ethical standards.

Carcello et al. (1994) also found a positive association between client satisfaction and an audit fee premium. This result provides some limited evidence that audit services may be differentiable.

There have been a number of studies that examined users' perceptions of audit quality. Findings from these studies suggest that users can differentiate between classes of audit firms. In general, Big Six (Eight) auditors are viewed as providing higher quality services. In terms of audit quality attributes, audit team characteristics consistently are viewed as more important than are firm-wide factors. These studies also provide some evidence that the Big Six (Eight) audit market is not a commodity market.

Conclusions and Future Research Issues

Audit quality has been and continues to be one of the most important issues facing the accounting profession. It is a broad topic, one which has many dimensions. Audit quality can be discussed in its pure form, the probability that the financial statements are not misstated or if there is such a misstatement that the auditor's report is appropriately modified. However, this concept is not observable. In this paper, we present a review of selected research findings that have examined the issue of audit quality from a number of different perspectives, each of which uses an observable surrogate for quality.

There are a few findings that consistently appear in the literature. First, Big Six (Eight) firms appear to be quality-differentiated suppliers of audit services. Second, intra-Big Six (Eight) differences in audit quality are found less often. They tend to be small even if found, and such differences are sensitive to how one measures audit quality. Third, efforts to improve audit quality should be directed to the audit team more than to the firm itself. Fourth, audit services do not appear to be viewed as commodities by important segments of the audit services market.

Given the importance and the broad scope of the issue of audit quality, there remain a number of important research questions. Are there differences between firms in their abilities to detect material financial statement errors? If such differences exist among firms, what causes them and are such differences uniform across different countries? For which audit quality attributes are clients willing to pay a fee premium? What attributes cause clients to switch auditors? These questions and many more remain unanswered. Academic researchers have much more to learn about the dimensions of audit quality.

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