Auditor Independence and Audit Quality: A Literature Review

Ling Lin
University of Massachusetts Dartmouth
Email: llin@umassd.edu

Nopmanee Kong Tepalagul
Boston University, USA
Chulalongkorn University, Thailand
Email: nopmanee@bu.edu

Abstract

This paper reviews literatures related to auditor independence and audit quality. The review is structured based on the four main threats to auditor independence, namely client importance, non-audit services, auditor tenure, and client's affiliation with CPA firms. For each of the threats, we discuss findings related to the incentives, perception, and behavior of the auditor and the client, the effects of each threat on actual and perceived quality of audit and financial reports. We conclude that inconclusive evidence together with recent changes in auditing profession provides opportunities for further studies on auditor independence and audit quality issues.

1. INTRODUCTION

Auditor independence is important because it has an impact on the audit quality. DeAngelo (1981b) suggests that audit quality is defined as the probability that (1) the auditor will uncover the breach and (2) report the breach. If the auditor does not remain independent, auditor will be less likely to report the irregularities and hence, the audit quality will be impaired.

Since the independence of the auditor is a critical issue for the auditing profession, many studies have been performed in this area. This paper reviews evidence related to the auditor independence and audit quality. Existing literatures mainly cover four threats to auditor independence, which are client importance, non-audit services (NAS), auditor tenure, and client's affiliation with CPA firms.

Client importance involves the degree of auditors being economically dependent on the client. When providing service to the client, an audit firm receives remuneration from the client, resulting in auditors being financially bonded to the client (DeAngelo, 1981a). If the client constitutes a relatively large part of an auditor's portfolio, an auditor has an incentive to retain the client to warrant a future source of revenues and profits and therefore, to compromise independence and act in favor of the client (Blay, 2005).

Non-audit services can also adversely affect auditor independence. When the external auditors provide non-audit service to the client, they receive more income, which may result in greater economic dependence, as discussed earlier. Furthermore, the joint provision of audit and non-audit service by the same auditor may cause conflict of interest since he may become less skeptical in reviewing his own work.

Auditor tenure can lead to impairment of independence. As the auditor-client relationship lengthens, the auditor may develop close relationship with the client and become more likely to act in favor of management, resulting in reduced objectivity and audit quality.

Client's affiliation with CPA firms involves the situation where part of the client's personnel used to work for the current auditor. The affiliation can cause impairment of independence from personal relationship between the client's officer and the auditor or the ex-auditor's acquaintance and circumvention of the audit methodology (Lennox, 2005).

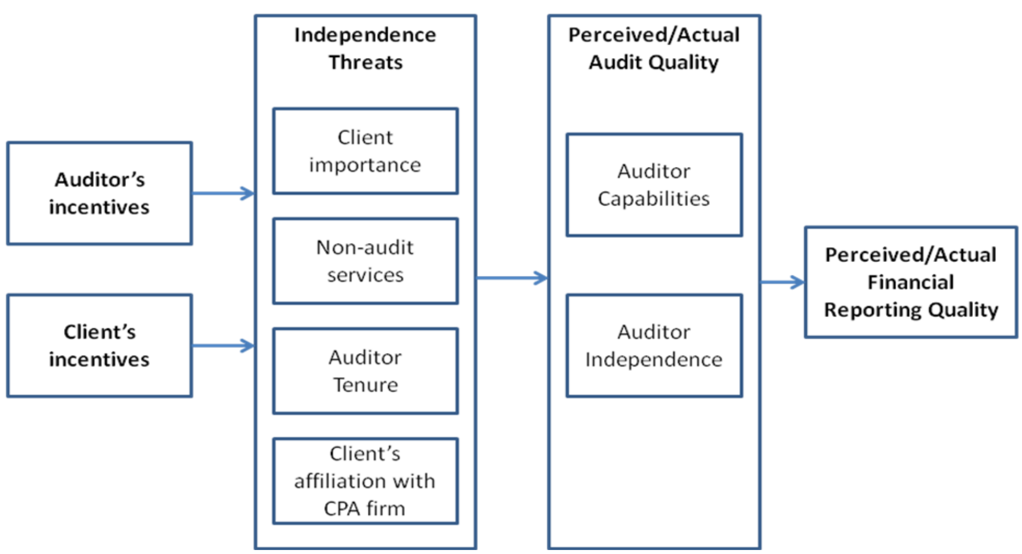
In this paper, we cover our literature review on only published manuscripts. Keywords, such as 'auditor independence', are used to search and identify relevant papers. We limit the search to the following leading journals related to auditing: *The Accounting Review* (TAR), *Journal of Accounting Research* (JAR), *Journal of Accounting and Economics* (JAE), *Contemporary Accounting Research* (CAR), *Review of Accounting Studies* (RAST), *Journal of Accounting and Public Policy* (JAPP), *Auditing: A Journal of Practice and Theory* (AJPT), *Journal of Accounting, Auditing, and Finance* (JAAF), and *Accounting, Organizations, and Society* (AOS).

The remainder of the paper is organized as follows. Section 2 discusses the framework for auditor independence research. The next four sections, Section 3 to Section 6, cover previous research findings related to client importance, non-audit services, auditor tenure, and client's affiliation with the CPA firms, respectively. The main findings of the research in each area are presented in the tables at the end of each of the four sections. Section 7 concludes the paper and suggests directions for future research.

2. A FRAMEWORK FOR RESEARCH IN AUDITOR INDEPENDENCE AND AUDIT QUALITY

Figure 1 presents a simplified framework for auditor independence and audit quality research. It shows the basic factors related to auditor independence threats, their causes and effects on audit quality.

Figure 1: A Framework for Research in Auditor Independence and Audit Quality



The four main threats to auditor independence result from the auditor-client relationship. Auditors and clients in different levels and firms are likely to have diverse incentives, resulting in different perception on auditor independence and its effects. These incentives and perception cause the behavior of auditors and clients and the degree of independence threats to differ among firms.

The major threats, as depicted in Figure 1, affect the audit quality. However, the effects of the threats on audit quality cannot be determined from only their influences on independence. Although the threats would normally reduce the auditor independence, or the probability of auditors reporting the discovered breach (DeAngelo, 1981b), they also have some effects on audit capabilities. Therefore, the impacts of independence threats on the quality of the audit and, eventually, the financial reports are determined by their net effects between auditor capabilities and independence.

The following literature review is structured around the above framework. We dedicate one section to each threat. In each of the four sections, we review the evidence related to the incentives, perception, and behavior of the auditor and the client, the effects of each threat on actual and perceived quality of audit and financial reports.

3. CLIENT IMPORTANCE

The literatures related to client importance involve many research methods. The studies that employ modeling techniques provide strong theoretical ground for this research area. Many studies also use archival and experiment methods to support the theoretical arguments.

3.1 Auditors' incentives/benefits, perception, and behavior

Theoretical modeling papers in this area suggest different conditions related to auditor's economic dependence on the client and auditor independence. A few papers support the notion that high litigation risk would decrease the likelihood that the auditors will act in favor of the client (Farmer, Rittenberg, and Trompeter, 1987; Schatzberg and Sevcik, 1994; Calegari, Schatzberg, and Sevcik, 1998). In case of audit failure, an auditor may be subject to legal actions raised by related stakeholders, usually either the regulatory agencies or investors. Given such event, the reputation of the auditor is harmed and the auditor will potentially lose fees from other clients (DeAngelo, 1981b).

Therefore, high litigation risk serves as an incentive for auditors to remain independent despite the economic dependence.

Several papers investigate the effect of low-balling on auditor independence and audit quality. DeAngelo (1981a) contends that the fee reductions resulted from low-balling are sunk costs and, hence, do not impair auditor independence. Dopuch and King (1996) add that in non-competitive market settings, high degree of lowballing did result in lower audit quality. Lee and Gu (1998), however, suggest that like legal liability, low-balling provides incentive for auditors to maintain independence. They argue that low-ball fee structure, as compared to flat fee structure, reduce the transaction cost associated with audit contract and help improve auditor independence.

Magee and Tseng (1990) indicate that, without contingent audit fees and binding multi-period commitment, the value of incumbency can negatively affect auditor independence only if: (1) there is a disagreement on appropriate reporting policy and (2) the reporting disagreement between auditor and client cover more than one reporting period. On the other hand, positive value of incumbency will not lead to a compromise of independence but to the client-initiated changes, if the reporting disagreement is important for either the client or the auditor.

The evidence on the effect of client importance on auditor's behavior is mixed. While a few earlier studies use different proxies to investigate the effect of economic dependence on the auditor independence, the studies in this area mainly use an auditor's propensity to issue qualified audit report. In an early study, Deis, Jr. and Giroux (1992) use quality control review findings as surrogate for audit quality. They find that audit quality increases with the number of the audit firm's client. Wright and Wright (1997) apply the decision to waive audit adjustment and indicate that auditors are more likely to waive audit adjustment as the client size increases. However, when taking into account the direction of income effect, they do not find clear evidence of bias towards larger clients.

Krishnan and Krishnan (1996) report that, given that the client deserves a qualified opinion, auditors are less likely to issue the qualified opinion when a client's decile position in the auditor's portfolio is higher. An experiment, likewise, also suggest that auditors facing a high level of independence threats are less likely to reach a going concern opinion (Blay, 2005). Craswell, Stokes and Laughton (2002), on the other hand, do not find significant association between auditor fee dependence and the propensity to issue qualified audit report in Australia.

Previous research findings indicate similar results for Big-five and non-big five firms. With respect to Big-five firms, Reynolds and Francis (2001) report that Big-five firms are more conservative towards larger clients in offices. They find that larger potentially distressed clients are more likely to receive going-concern audit report. Hunt and Lulseged (2007) provide the evidence that non-big5 auditors are not less likely to compromise their independence with larger clients by issuing less going-concern opinions.

On a partner level, Trompeter (1994) and Carcello, Hermanson, and Huss (2000) find that the economic importance of the client has a negative effect on the partner independence. Trompeter reports from his experiment that partners in firms with compensation scheme closely tied to client retention are less conservative in downward adjustment to income. Carcello, Hermanson, and Huss, from an archival study, find that partners in small-pool audit firm are more likely to be affected by client size than those in large-pool firms when considering going-concern issues.

3.2 Clients' incentives/benefits, perception, and behavior

Much of the research related to economic dependence place a major concern on auditor's part and very little has been done on clients' perspective.

3.3 Financial reporting quality

There are few papers on the effect of client importance on financial reporting quality. The evidence is mostly consistent with the favorable effect of economic significance. Using accruals to proxy for financial reporting quality, Reynolds and Francis (2001) find that big-five firms are more conservative towards larger clients in offices. They report that larger clients of the big-five firms had lower magnitude and variances of accruals. A subsequent study by Chung and Kallapur (2003), however, report no significant association between client importance measures and abnormal accruals. Hunt and Lulseged (2007) find some significant evidence of negative association between discretionary accruals and client economic influence on non-big5 auditors but their result is contingent upon sales-based measure but not fee-based measure.

Gaver and Paterson (2007) investigate the effect of economic dependence on the financial reporting quality of the non-life insurance companies. They find that although financially weak non-life insurers tend to understate their loss reserve, the magnitude of understatement decreases with the economic significance to the local practice office of the auditor.

3.4 Users' perception and behavior

There are few papers in this area. An early study by Pany and Reckers (1980) find that size of the client, defined as one percent and ten percent of the office revenue, is not perceived as impairing auditor independence but even a small amount of gifts and purchase discounts are perceived as decreasing auditor independence. In Knapp's (1985) study, loan officers perceive that high competition in the audit service market slightly reduces the perceived likelihood of auditors to resist client pressure in audit conflict. Moreover, his results also suggest that auditors are perceived to be less likely to resist client pressure when audit clients had better financial condition. Khurana and Raman (2006) study the association between ex-ante cost of equity capital and client's relative size in office and national firm level. They report that investors view economic dependence on the client, as reflected in cost of equity capital, negatively.

Table 1 summarizes the literatures related to client importance, auditor independence, and audit quality. The papers are listed chronologically by years of publication and then alphabetically by authors' names.

Table 1
Literatures Concerning Client Importance, Auditor Independence, and Audit Quality

Article	Journal	Audit Quality/ Independence-Related Variable(s)	Test Variable(s)	Method(s)	Related Findings
Pany and Reckers (1980)	TAR	Stockholders' perception of auditor independence	Client size Gift, purchase discount	Survey	Size of the client, defined as one percent and ten percent of the office revenue, is not perceived as impairing auditor independence. Even a small amount of gifts and purchase discounts are perceived as decreasing auditor independence.
DeAngelo (1981a)	JAE	Auditor independence	Low-balling Client-specific quasi-rents	Modelling	Expected future quasi-rents decrease the optimal level of auditor independence and leads auditors to low-ball in the initial period to gain incumbency. The fee reductions are sunk costs and, hence, do not impair auditor independence.
Knapp (1985)	TAR	Users' perception of auditor's ability to resist client pressure	Degree of competition in audit market Client's financial condition	Experiment	High competition in the audit service market slightly reduces the likelihood of auditors to resist client pressure in audit conflict. Auditors are perceived to be less likely to resist client pressure when audit clients had better financial condition.
Farmer, Rittenberg, and Trompeter (1987)	AJPT	Auditors' perception of independence Audit judgment	Threat of losing the client and potential lawsuit Auditor rank	Experiment	Auditors agree with the client more often when threat of losing client is high and litigation risk is low. Audit partners and managers favor the client less often than the senior and staff.
Magee and Tseng (1990)	TAR	Auditor's reporting decision	Quasi-rent	Modelling	Without contingent audit fees and binding multi-period commitment, the value of incumbency can negatively affect auditor independence only if: (1) there is a disagreement on appropriate reporting policy and (2) the reporting disagreement between auditor and client cover more than one reporting period. Positive value of incumbency will not lead to a compromise of independence but to the client-initiated changes, if the reporting disagreement is important for either the client or the auditor.

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Article	Journal	Audit Quality/ Independence-Related Variable(s)	Test Variable(s)	Method(s)	Related Findings
Deis, Jr. and Giroux (1992)	TAR	Quality control review findings	Number of clients	Archival	Audit quality increases with the number of the audit firm's client.
Kanodia and Mukherji (1994)	TAR	Client's threat of terminating auditor-client relationship	Lowballing	Modelling	Given the information asymmetry, the client does not know the auditor's value of incumbency but such value would be lower if the client has most or all bargaining power. Although there is no client pressure, lowballing and auditor turnover can still occur as a result of efficient pricing mechanism.
Trompeter (1994)	AJPT	Audit partner judgment	Partner compensation scheme.	Experiment	Partners in firms with compensation scheme closely tied to client retention are less conservative in downward adjustment to income.
Schatzberg and Sevcik (1994)	CAR	Truthful reporting	Expected future profit Probability of investigation and penalty	Modelling and Experiment	Sellers remain independent when the probability and expected penalty are high. They become biased only when expected future profits are greater than expected penalty.
Dopuch and King (1996)	JAAF	Service quality	Lowballing	Experiment	Decreasing marginal cost of auditing causes auditing firms to low-ball their audit fee but the lowballing did not result in reduced audit quality, relative to no-lowball settings. In non-competitive market settings, high degree of lowballing did result in lower audit quality.
Krishnan and Krishnan (1996)	JAAF	Propensity to issue qualified reports	Client size	Archival	Given that the client deserves a qualified opinion, auditors are less likely to issue the qualified opinion when a client's decile position in the auditor's portfolio is higher.
Wright and Wright (1997)	JAAF	Auditor's decision to waive audit adjustments	Client size	Archival	Auditors are more likely to waive audit adjustment as the client size increases. However, when taking into account the direction of income effect, there is no clear evidence of bias towards larger clients.

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Article	Journal	Audit Quality/ Independence-Related Variable(s)	Test Variable(s)	Method(s)	Related Findings
Calegari, Schatzberg, and Sevcik (1998)	TAR	Reporting behavior	Auditor's belief about the treatment of reporting issue	Experiment	In the absence of low-balling, although auditors had homogeneous belief about appropriate reporting issue, auditors might engage in cooperative behavior in favor of the client, if the penalty for misreporting is low.
Lee and Gu (1998)	TAR	Collusion with the client	Lowballing	Modelling	Similar to legal liability, low-balling provides incentive for auditors to maintain independence. Low-ball fee structure, as compared to flat fee structure, reduce the transaction cost associated with audit contract and help improve auditor independence.
Carcello, Hermanson, and Huss (2000)	AJPT	Propensity to issue going concern opinion	Partner compensation plan Client size	Archival	Partners in small-pool audit firm are more likely to be affected by client size than those in large-pool firms when considering going-concern issues.
Reynolds and Francis (2001)	JAE	Magnitude and variances of accruals Propensity to issue going concern opinion	Client's relative size in office	Archival	Big-five firms are more conservative towards larger clients in offices. Larger clients had lower magnitude and variances of accruals and larger potentially distressed clients are more likely to receive going-concern audit report.
Craswell, Stokes and Laughton (2002)	JAE	Propensity to issue qualified audit opinion	Client's relative size in office and national firm level	Archival [Australia]	There is no significant association between auditor fee dependence and the propensity to issue qualified audit report.
Chung and Kallapur (2003)	TAR	Abnormal accruals	Client's relative size in office and national firm level	Archival	There is no significant association between client importance measures and abnormal accruals.

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Article	Journal	Audit Quality/ Independence-Related Variable(s)	Test Variable(s)	Method(s)	Related Findings
Bandyopadhyay and Kao (2004)	CAR	Audit fee	Client's relative size in office Audit market concentration	Survey and archival [Canada]	There is a significantly negative association between audit fees and client influence, measured by the number of rival offices in nearby geographical area. The evidence is weaker when examining the relative importance of the client to the local auditor's office.
Casterella, Francis, Lewis, Walker (2004)	AJPT	Audit fee	Client's relative size in the industry clientele	Archival	Big 6 auditors charge specialist premium to small, low bargaining power clients, but not to the large, high bargaining power clients. Audit fees tend to decrease with their relative size in auditor's industry clientele.
Blay (2005)	CAR	Going-concern reporting decision	Independence threat Litigation risk	Experiment	Auditors facing a high level of independence threats are less likely to reach a going concern opinion while those facing high level of litigation risk are more likely to issue going-concern audit report. The relation between risk and auditor decision is fully moderated by financial assessment of the evidence.
Ghosh and Lustgarten (2006)	CAR	Fee discount	Auditor size Market structure	Archival	Rivalry, proxied by client turnover and price competition, is higher among small audit firms and fee discount is more intense in the atomistic sector.
Khurana and Raman (2006)	CAR	Ex-ante cost of equity capital	Client's relative size in office and national firm level	Archival	Investors view economic dependence on the client negatively.
Bamber and Iyer (2007)	AJPT	Auditors' identification and acquiescence with their clients	Perception of client importance	Structural modelling and survey	Higher client importance increases auditor's identification with the client, which in turns, increase the likelihood of auditor acquiescing to client's preference.

Table 1
Literatures Concerning Client Importance, Auditor Independence, and Audit Quality

Article	Journal	Audit Quality/ Independence-Related Variable(s)	Test Variable(s)	Method(s)	Related Findings
Gaver and Paterson (2007)	JAE	Loss reserve understatement	Client's relative size in office	Archival	Financially weak non-life insurers tend to understate their loss reserve. However, the magnitude of understatement decreases with the economic significance to the local practice office of the auditor.
Hunt and Lulseged (2007)	JAPP	Discretionary accruals Propensity to issue going-concern report	Client's relative size in office and national firm level	Archival	There are some significant evidence of negative association between discretionary accruals and client economic influence on non-big5 auditors. However, the result is contingent upon sales-based measure but not fee-based measure. Non-big5 auditors are not less likely to compromise their independence with larger clients by issuing less going-concern opinions.

4. NON-AUDIT SERVICES

The majority of the studies related to auditor independence are devoted to the external auditor's provision of non-audit services. The studies encompass a variety of research methodologies, including archival, survey, modeling, and experiment.

4.1 Auditors' incentives/benefits, perception, and behavior

Auditors have an economic incentive to provide non-audit service to their audit clients. Non-audit services are usually viewed as more profitable. From the experiment, Dopuch and King (1991) indicate that restricting an auditor from providing both audit and non-audit services does not lead to improved efficiencies but may result in auditors choosing non-audit over audit service. However, Asare, Cohen, and Trompeter (2005) produce contradictory findings. They report that the potential to obtain non-audit service engagements did not affect client acceptance or staffing decisions by the auditor.

Apart from the economic incentives for non-audit services, there has also been a support for knowledge spillover argument. Simunic (1984) contends that the joint provision of audit and non-audit service may result in spillover of knowledge between both services. Beck and Wu (2006) demonstrate through their modelling study that appropriate amount of non-audit services may also help auditors to reduce earnings uncertainty and reduce engagement risk, hence, increase audit quality. In such case, auditors may be willing to perform NAS without charging the client.

Many researchers perform studies on the association between audit and non-audit fees. They argue that the significant association between the two types of fees represents the pricing effect of knowledge externality between the services. The evidence on this association is mixed. While results from some studies exhibit a positive association between audit fees and either provision or magnitude of non-audit service (Simunic, 1984; Simon, 1985; Palmrose, 1986), the other studies suggest no association (e.g. Abdel-khalik, 1990; Whisenant, Sankaraguruswamy, and Raghunandan, 2003)

However, the archival studies on pricing effects do not provide direct evidence of knowledge spillover, which may require the examination of audit work papers. (Joe & Vandervelde, 2007). They are mainly used because it is difficult to obtain the actual evidence of knowledge externality.

Davis, Ricchiute, and Trompeter (1993) report that there is weak evidence of positive association between audit effort and NAS fees but no significant evidence of association between non-audit and audit fees. Joe and Vandervelde (2007) report from their experiment that there is significant evidence of knowledge transfer when the same auditor performed both audit and non-audit service but not when the auditor had access to non-audit service working papers. They also state that the joint provision of audit and non-audit services by the same firm resulted in fewer frauds identified by the auditor. Therefore, whether auditors actually receive benefits from knowledge transfer between both services is still questionable.

Turning to the archival evidence on the auditor's behavior, the studies on this area use the propensity of the auditors to issue going concern opinion to study whether the auditors lose their objectivity as a result of non-audit service provision. Findings are mostly consistent with no significant evidence of adverse effect of non-audit service on propensity to issue going concern opinion (DeFond, Raghunandan, and Subramanyam, 2002; Geiger and Rama, 2003). On the other hand, Lim and Tan (2008) find that issuance of going-concern audit report is actually more likely when the level of non-audit services acquired from industry specialists increase.

4.2 Clients' incentives/benefits, perception, and behavior

Besides auditors, clients also have incentives to purchase non-audit services from their external auditors. Most importantly, the Public Oversight Board (POB) (1979) contends that clients may be able to save costs and receive higher quality service from their own auditors. If clients purchase the non-audit services from other firms which do not have prior knowledge about the client's business, understanding client's businesses and providing appropriate service may take longer time as well as relatively more efforts from the client's personnel to deal with the new service provider. In addition, since other auditors may need more effort and time, they probably charge more for their service.

Nevertheless, not all clients may prefer to obtain the service from their own external auditors. According to agency theory, companies need independent audit to reduce the agency costs. Clients with high agency costs may be less willing to obtain non-audit services from their auditors since doing so may result in reduction in perceived independence, audit quality and in monitoring value of the audit service (Parkash & Venable, 1993).

There are some literatures that provide evidence related to the auditee's incentive for non-audit service purchase from their auditors. Scheiner and Kiger (1982) report that non-audit services purchased by companies are found to be associated with audit firm, client's industry, trading exchange, and sales. Parkash and Venable (1993) suggest that demand for recurring NAS is associated with agency costs and auditor specialization but demand for non-recurring NAS generally is not related to agency costs. Consistent with the agency theory, Firth (1997) reports that firms with higher agency costs had lower magnitude of non-audit service purchases from their external auditors.

In addition, studies in this area involve different parties of the client firm. As far as shareholders are concerned, most literatures investigate the association between the magnitude of non-audit service and the shareholder's approval of the auditors. In an early study, Glezen and Millar (1985) suggest that the implementation of ASR No.250 and the magnitude of NAS are not associated with the decrease in auditor approval ratios. However, later evidence suggest otherwise. Raghunandan (2003) reports that the proportion of shareholders not voting for ratification is positively associated with the magnitude of non-audit fees. A contemporaneous study by Raghunandan and Rama (2003) suggests that in the presence of high non-audit fee ratio, shareholders are less likely to vote against ratification of the external auditor when the audit committee comprised only independent members. Mishra, Raghunandan, and Rama (2005) argue that the voting may also depend on the type of non-audit services. They find that audit-related fee ratio is negatively associated with the proportion of shareholders' voting against auditor ratification while tax-service and other service fee ratios exhibit positive associations with the proportion of such votes.

Other studies involve approval of the non-audit services by designated parties. In the pre-Sarbanes-Oxley Act (SOX) period, Pany and Reckers (1983) find that directors perceived non-audit services as impairing auditor independence and are less likely to approve such services when the magnitude of past or currently proposed non-audit service is high or when proposal involved system design services. Later studies after the implementation of the SOX mainly involve the relation of audit committee and the non-audit service. Abbott, Parker, Peters, and Raghunandan (2003) find that firms that had 100% independent audit committee, which met at least four times a year have lower magnitude of NAS purchase. Gaynor, McDaniel, and Neal (2006) state that, like investors, audit committees are more likely to pre-approve risk management services if they believe that audit quality will improve. Unlike investors, audit committees are less likely to recommend joint provision if the fee disclosure is required although joint provision likely results in better audit quality. Abbott, Parker, Peters, and Rama (2007) provide the evidence that the presence of audit committee with independent, active, and financially expert characteristics is negatively associated with the magnitude of outsourcing routine internal auditing activities to the external auditor.

4.3 Financial reporting quality

Many studies use accruals as surrogate for financial reporting quality. The evidence is not conclusive. Frankel, Johnson and Nelson (2002) find that NAS fees are positively related to discretionary accruals. However, subsequent evidence suggests no significant relationship (e.g. Ashbaugh, Lafond, and Mayhew, 2003; Chung and Kallapur, 2003; Huang, Mishra, and Raghunandan, 2007; Mitra, 2007). Reynolds, Deis, and Francis (2004) suggest that the positive association reported by Frankel et al is applied to only a subset of firms in their sample. After controlling for initial public offering and recent asset growth, the relationship between non-audit service and accruals is not significant.

Several studies provide additional evidence on the variables moderating the relationship between non-audit service and magnitude of accruals. Using the latent class mixture model, Larcker and Richardson (2004) find that a negative association between the magnitude of total fees and accruals is most stringent for weak governance firms. Gul, Jaggi, and Krishnan (2007) report that non-audit fees are positively associated with discretionary accruals when auditor tenure is short and client size is small.

Apart from accruals, Kinney, Palmrose, and Scholz (2004) use the restatement as a surrogate for low financial reporting quality. They report no significant evidence of association between fees for financial information system design and implementation or internal audit services and restatement. However, their results indicate that there is some statistically significant evidence of positive association between audit fees, audit-related fees, and unspecified non-audit fees and restatement and negative association between tax service fees and restatement. Ferguson, Seow, and Young (2004) use both restatement and the propensity of firms being subject to public or regulatory investigation in the UK as proxies and find that non-audit services leads to low financial reporting quality. Ruddock, Taylor, and Taylor (2006) use conservatism of earnings but do not find that higher magnitude of non-audit services result in reduced conservatism. Srinidhi and Gul (2007) report that higher non-audit fees are associated with lower accrual quality. Zhang, Zhou, and Zhou (2007) state that the likelihood of internal control weakness disclosure increases with the audit fee ratio.

4.4 Users' perception and behavior

The external auditor's provision of non-audit services may cast doubts on the financial statement users with regard to the financial reporting quality. The users may perceive economic dependence on the client as reducing auditor's objectivity and, hence, the quality of financial reports (Kinney, Palmrose, and Scholz, 2004). Perceptions of financial statement users on the non-audit service provision are important since the perceptions may affect decision making, for example, loan granting and investment decision (Lavin, 1977; Dykxhoorn and Sinning, 1982; Lowe, Geiger, and Pany, 1999).

Early evidence mainly involves the surveys of users' perception on auditor independence when the auditor offers the joint provision of audit and non-audit service. Results from these studies suggest that the perception of objectivity on non-audit service depends on a number of factors, including types of non-audit services provided by the auditor. For example, Lavin (1976, 1977) reports that EDP services are not viewed by loan directors and financial analysts as impairing auditor independence. They also find that payroll services are perceived by loan directors as reducing auditor's objectivity but there is no consensus among loan directors and research financial analysts about the effect of accounting services provision. Shockley (1981) state that audit firms which provide management advisory service to their clients are perceived by bankers and financial analysts to be more likely to lose their independence. Lowe, Geiger, and Pany (1999) find that auditors' involvement in internal audit-related management function had a significantly adverse impact on loan officers' perception of auditor independence, financial statement reliability, and loan approval.

The perceived effect of non-audit service on the auditor independence also depends on groups of users and staffing for the services. As for groups of users, Reckers and Stagliano (1981) argues that professional users are less concerned than naive users about independence problem induced by auditors' provision of NAS. For staffing issue, auditors are generally perceived to be less independent if there is no segregation between staff performing the audit and non-audit service (Lowe and Pany,1995; Lowe, Geiger, and Pany, 1999; Swanger and Chewning, Jr., 2001)

Apart from the surveys of the financial statement users' perception, the literatures in this area also encompass studies of the effect of non-audit service on the behavior of the users, mainly those in the equity and debt markets. For equity market, the empirical studies involve the effects of non-audit service magnitude on abnormal returns or earnings response coefficients. Some studies suggest no association between the magnitude of non-audit services and the capital market proxy (Chaney and Philipich, 2002; Ashbaugh, Lafond, and Mayhew, 2003). However, most evidence are consistent with the negative market reaction to the level of non-audit service in various circumstances, e.g. the fee disclosure date (Frankel, Johnson and Nelson, 2002), quarterly earnings announcement (Francis and Ke, 2006), key events leading up to the passage of Sarbanes-Oxley Act (Jain and Rezaee, 2006; Zhang, 2007), Arthur Andersen's clients around the indictment period (Krishnamurthy, Zhou, and Zhou, 2006).

Few other studies also suggest that non-audit service reduce the informativeness of earnings perceived by the investors. Krishnan, Sami, Zhang (2005) report that there is a significantly negative association between nonaudit fee-based measures and earnings response coefficients in 2001, which is the initial period of non-audit fee disclosure. Higgs and Skantz (2006) find limited evidence of negative relation between abnormal non-audit fees and earnings response coefficients. However, Lim and Tan (2008) indicate that earnings response coefficient increases with the level of non-audit services acquired from industry specialists.

As for the user's behavior in the debt market, previous literatures indicate that non-audit service has a negative impact on either the bond's ratings or cost of debts. Brandon, Crabtree, and Maher (2004) find that there is a negative association between the magnitude of non-audit service and audit client's bond's rating. However, they also report that adding non-audit service proxy in the bond ratings model did not improve the classification accuracy of the model. A recent study by Dhaliwal, Gleason, Heitzman, and Melendrez (2008) suggest that cost of debt increases with the magnitude of non-audit fees for investment-grade firms.

Summary of the main findings of non-audit service research is provided in Table 2.

Table 2
Literatures Concerning Non-audit Service, Auditor Independence, and Audit Quality

Article	Journal	Audit Quality/ Independence-Related Variable(s)	Test Variable(s)	Method(s)	Related Findings
Lavin (1976)	TAR	Users' perception of independence	Provision of NAS	Survey	Auditors view provision of accounting services as impairing independence while there is no consensus among loan directors and research financial analysts about the effect of this NAS provision. Auditors and loan directors viewed payroll service as a threat to independence. No consensus existed among financial analysts. EDP services are not viewed as impairing auditor independence.
Lavin (1977)	AOS	Users' perception of independence Users' decision making	Provision of NAS	Survey	There is no consensus among financial analyst whether provision of bookkeeping services adversely affect their perception of auditor independence while most financial analysts perceived EDP services as not impairing auditor independence. Their perception of independence affected the perception of whether the NAS provision would improve or impair their investment decision.
Reckers and Stagliano (1981)	AJPT	Users' perception of auditor independence	Magnitude of NAS	Survey	Both professional and naive financial statement users had high confidence in auditors' independence despite their involvement in NAS. Professional users are less concerned than naive users about independence problem induced by auditors' provision of NAS.
Shockley (1981)	TAR	Users' and CPAs' perception of auditor independence	Provision of NAS	Experiment	Audit firms which provide management advisory service to their clients are perceived by bankers, financial analysts and CPAs to be more likely to lose their independence.

Table 2
Literatures Concerning Non-audit Service, Auditor Independence, and Audit Quality

Article	Journal	Audit Quality/ Independence-Related Variable(s)	Test Variable(s)	Method(s)	Related Findings
Dykxhoorn and Sinning (1982)	AOS	Users' perception of independence and decision making	Provision of NAS	Survey [German]	Loan directors' and investment directors' perception of auditor independence, given provision of NAS by auditors, affect their lending or investment decisions.
Scheiner and Kiger (1982)	JAR	Type and quantity of NAS provided to audit clients	Audit firm Characteristics of audit clients	Archival	NAS provided to audit clients are primarily tax services. NAS provided is found to be associated with audit firm, client's industry, trading exchange, and sales.
Pany and Reckers (1983)	JAPP	Directors' perception of auditor independence Likelihood of approving NAS	Magnitude of current and past NAS Type of NAS	Survey	Directors perceived NAS as impairing auditor independence and are less likely to approve NAS when the magnitude of currently proposed NAS is high or when proposal involved system design services. Similar but weaker results also applied to magnitude of past NAS.
Pany and Reckers (1984)	AJPT	CPAs' and stockholders' perception of auditor independence	Knowledge about auditor's role Segregation of staff performing NAS Type of NAS	Survey	Segregation of audit and non-audit staff decreased independence concern of CPAs and stockholders. No significant differences in perception between CPAs and stockholders existed.
Scheiner (1984)	JAR	Change in magnitude of NAS	ASR No.250 disclosure requirement	Archival	Disclosure of NAS fees required by ASR No.250 did not substantially reduce the amount of NAS that auditors provided to their audit clients.
Simunic (1984)	JAR	Existence and pricing effect of knowledge spillover	Provision of NAS	Modelling and archival	Clients that also purchase NAS from their auditors paid higher audit fees than those who do not.

Table 2
Literatures Concerning Non-audit Service, Auditor Independence, and Audit Quality

Article	Journal	Audit Quality/ Independence-Related Variable(s)	Test Variable(s)	Method(s)	Related Findings
Glezen and Millar (1985)	JAR	Stockholder approval ratios of auditors	Presence of ASR No. 250 Magnitude of NAS	Archival	The implementation of ASR No.250 and the magnitude of NAS are not associated with the decrease in auditor approval ratios.
Knapp (1985)	TAR	Users' perception of auditor's ability to resist client pressure	Provision of NAS	Experiment	Significant amount of NAS provided to the client slightly reduced the likelihood of auditors to resist client pressure in audit conflict.
McKinley, Pany, and Reckers (1985)	JAR	Bank officers' loan decision Perception of auditor independence Financial statement reliability	Provision of NAS	Experiment	The provision of NAS did not adversely affect loan officers' perception of auditor independence, financial statement reliability, and loan decisions.
Simon (1985)	AJPT	Pricing effect of knowledge spillover	Magnitude of NAS	Archival	Non-audit service fees are positively associated with audit fees. No differential fee effect for Pricewaterhouse existed.
Palmrose (1986)	JAR	Pricing effect of knowledge spillover	Magnitude of NAS	Archival	There is a significantly positive association between audit and non-audit fees, especially for accounting-related management advisory services.
Pany and Reckers (1987)	AJPT	Users' perception of auditor independence	Provision of NAS	Experiment	Loan officers and financial analysts viewed auditors as lacking independence in within-subject designs but not in between-subject design.
Abdel-khalik (1990)	CAR	Pricing effect of knowledge spillover	Provision of NAS	Experiment	Purchase of NAS from the external auditor did not result in higher audit fees.

Table 2
Literatures Concerning Non-audit Service, Auditor Independence, and Audit Quality

Article	Journal	Audit Quality/ Independence-Related Variable(s)	Test Variable(s)	Method(s)	Related Findings
Dopuch and King (1991)	JAR	Economic efficiency	Restriction on joint provision of NAS and auditing	Experiment	Restricting an auditor from providing both NAS and audit services did not lead to improved efficiencies but may result in auditors choosing NAS over audit service.
Davis, Ricchiute, and Trompeter (1993)	TAR	Audit effort Pricing effect of knowledge spillover	Magnitude of NAS	Archival	There is weak evidence of positive association between audit effort and NAS fees but no significant evidence of association between non-audit and audit fees.
Parkash and Venable (1993)	TAR	Magnitude of NAS (recurring/nonrecurring)	Agency costs Industry specialization	Archival	Results suggest that demand for recurring NAS is associated with agency costs and auditor specialization but demand for non-recurring NAS generally is not related to agency costs.
Lowe and Pany (1995)	AJPT	Bank officers' loan decision Perception of auditor independence Financial statement reliability	Nature of business relationship Magnitude of relationship	Experiment	Material business relationship with audit client had a significant negative effect on perception of auditor independence, financial statement reliability and loan granting decision. Auditors are perceived to be less independent when there is no separation between audit and consulting staff. There is an evidence of the effect of continuity of the engagement on the reliability of financial statements.
Firth (1997)	CAR	Magnitude of NAS	Agency costs	Archival [UK]	Firms with higher agency costs had lower magnitude of NAS purchases from their external auditors.

Table 2
Literatures Concerning Non-audit Service, Auditor Independence, and Audit Quality

Article	**Journal**	**Audit Quality/ Independence-Related Variable(s)**	**Test Variable(s)**	**Method(s)**	**Related Findings**
Lowe, Geiger, and Pany (1999)	AJPT	Bank officers' loan decision Perception of auditor independence Financial statement reliability	Outsourcing of internal audit function to external auditor	Experiment	Auditors' involvement in internal audit-related management function had a significantly adverse impact on loan officers' perception of auditor independence, financial statement reliability, and loan approval. Separation between external and internal audit staff had a significantly positive effect on users' perception of independence and loan approval.
Swanger and Chewning, Jr. (2001)	AJPT	Users' perception of auditor independence	Outsourcing of internal audit function to external auditor	Experiment	Auditors are perceived by financial analysts to be less independent when they performed internal audit function for audit clients. However, when they provide internal audit service to their audit clients, they are perceived to be more independent if the staff providing the service are in a separate division.
Chaney and Philipich (2002)	JAR	Market reaction	Magnitude of NAS	Archival	There is no significant association between NAS fees and cumulative abnormal returns of Andersen's clients when Andersen's audit quality is severely questioned.
DeFond, Raghunandan, and Subramanyam (2002)	JAR	Propensity to issue going-concern report	Magnitude of NAS	Archival	There is no significant association between NAS fees, total fees, and audit fees and the propensity to issue going-concern opinion. Results are robust even after controlling for unexpected fees and endogeneity.
Frankel, Johnson and Nelson (2002)	TAR	Small earnings surprise Discretionary accruals Market reaction	Magnitude of NAS	Archival	NAS fees are positively related to discretionary accruals and propensity to just meet/beat earnings forecasts and negatively associated with abnormal returns as of the fee disclosure date.

Table 2
Literatures Concerning Non-audit Service, Auditor Independence, and Audit Quality

Article	Journal	Audit Quality/ Independence-Related Variable(s)	Test Variable(s)	Method(s)	Related Findings
Abbott, Parker, Peters, and Raghunandan (2003)	CAR	Magnitude of NAS	Audit committee characteristics	Archival	Firms that had 100% independent audit committee, which met at least four times a year, have lower magnitude of NAS purchase.
Ashbaugh, LaFond, and Mayhew (2003)	TAR	Discretionary accruals Meeting earnings benchmark Cumulative abnormal returns	Magnitude of NAS	Archival	There is no evidence of relationship between non-audit fees and positive discretionary accruals, likelihood of beating forecast and cumulative abnormal returns.
Chung and Kallapur (2003)	TAR	Abnormal accruals	Magnitude of NAS	Archival	There is no significant evidence of association between abnormal accruals and magnitude of non-audit services.
Dopuch, King, and Schwartz (2003)	CAR	Investors' belief of auditor independence in fact	NAS disclosure	Experiment	Disclosure of NAS led to reduced accuracy of investors' belief of auditor independence in fact when independence in appearance is not in line with independence in fact.
Geiger and Rama (2003)	AJPT	Propensity to issue going concern opinion	Magnitude of NAS	Archival	There is no significant relation between non-audit fees and propensity to issue going concern opinion for financially distressed manufacturing companies.
Raghunandan (2003)	AJPT	Shareholders not voting for ratification of the auditor	Magnitude of NAS	Archival	The proportion of shareholders not voting for ratification is positively associated with the magnitude of non-audit fees. Shareholder approval rates were about 97%, even in companies with high non-audit fee ratio.

Table 2
Literatures Concerning Non-audit Service, Auditor Independence, and Audit Quality

Article	Journal	Audit Quality/ Independence-Related Variable(s)	Test Variable(s)	Method(s)	Related Findings
Raghunandan and Rama (2003)	AJPT	Shareholders not voting for ratification of the auditor	Magnitude of NAS Independence of the audit committee	Archival	In the presence of high non-audit fee ratio, shareholders are less likely to vote against ratification of the external auditor when the audit committee comprised only independent members.
Whisenant, Sankaraguruswamy, and Raghunandan (2003)	JAR	Pricing effect of knowledge spillover	Magnitude of audit and non-audit services	Archival	There is no significant association between audit and non-audit fee, using simultaneous equation specification, suggesting no knowledge-spillover effect.
Brandon, Crabtree, and Maher (2004)	AJPT	Bond ratings	Magnitude of NAS	Archival	There is a negative association between the magnitude of NAS and audit client's bond's rating. Adding NAS in the bond ratings model did not improve the classification accuracy of the model.
Ferguson, Seow, and Young (2004)	CAR	Restatement Accruals Likelihood of accounting practices being publicly criticized or subject to regulatory investigation	Magnitude of NAS	Archival [UK]	Evidence is mostly consistent with non-audit services leading to low financial reporting quality.
Kinney, Palmrose, and Scholz (2004)	JAR	Restatement	Magnitude of NAS	Archival	No significant evidence existed for the association between fees for financial information system design and implementation or internal audit services and restatement. There is some significant evidence of positive association between audit fees, audit-related fees, and unspecified NAS fees and restatement and negative relation between tax service fees and restatement.

Table 2
Literatures Concerning Non-audit Service, Auditor Independence, and Audit Quality

Article	Journal	Audit Quality/ Independence-Related Variable(s)	Test Variable(s)	Method(s)	Related Findings
Kornish and Levine (2004)	TAR	Truthful reporting	Auditor compensation Retention	Modelling	Audit committees can ensure truthful audit report by devising contingent compensation in a single-period model and contingent compensation and retention in multi-period framework.
Larcker and Richardson (2004)	JAR	Accruals	Magnitude of NAS Degree of governance	Archival	Results from latent class mixture model suggested a negative association between the magnitude of total fees and accruals. The association is most stringent for weak governance firms.
Reynolds, Deis, and Francis (2004)	AJPT	Discretionary accruals	Magnitude of NAS	Archival	After controlling for IPOs and recent asset growth, the relationship between NAS and accruals is not significant.
Asare, Cohen, and Trompeter (2005)	JAPP	Client acceptance decision Allocation of professional staff	Potential to provide NAS Business risks	Experiment	The potential to obtain non-audit service engagements did not affect client acceptance or staffing decisions.
Krishnan, Sami, Zhang (2005)	AJPT	Earnings response coefficient	Magnitude of NAS	Archival	There is a significantly negative association between NAS fee-based measures and earnings response coefficients in 2001, which is the initial period of NAS fee disclosure.
Mishra, Raghunandan, and Rama (2005)	AJPT	Shareholder's voting against ratification of auditors	Magnitude of NAS	Archival	Audit-related fee ratio is negatively associated with the proportion of shareholders' voting against auditor ratification while tax-service and other service fee ratios exhibited positive associations with the proportion of such votes.

Table 2
Literatures Concerning Non-audit Service, Auditor Independence, and Audit Quality

Article	Journal	Audit Quality/ Independence-Related Variable(s)	Test Variable(s)	Method(s)	Related Findings
Beck and Wu (2006)	CAR	Precision of the auditor's posterior beliefs about the client's earnings	Magnitude of NAS	Modelling	Large amount of NAS fees may lead auditors to perform NAS that result in increased engagement risk and decrease audit quality. NAS may also help auditors to reduce earnings uncertainty and reduce engagement risk, hence, increase audit quality. In this case, auditors may be willing to perform NAS without charging the client.
Francis and Ke (2006)	RAST	Earnings response coefficient	Magnitude of NAS	Archival	The market reaction on quarterly earnings surprises for firms with high levels of non-audit fees are lower than those with low levels of the fees.
Gaynor, McDaniel, and Neal (2006)	TAR	NAS pre-approval by audit committee	Mandated disclosure Perceived effect on audit quality	Experiment	Like investors, audit committees are more likely to pre-approve risk management services if they believe that audit quality will improve. Unlike investors, audit committees are less likely to recommend joint provision if the fee disclosure is required although joint provision likely result in better audit quality.
Higgs and Skantz (2006)	AJPT	Earnings response coefficient	Engagement profitability	Archival	There is limited finding of negative relation between abnormal non-audit fees and earnings response coefficients.
Jain and Rezaee (2006)	CAR	Abnormal returns	Magnitude of NAS	Archival	The association between NAS ratio and the abnormal returns around key events leading up to the passage of Sarbanes-Oxley Act is significantly negative.

Table 2
Literatures Concerning Non-audit Service, Auditor Independence, and Audit Quality

Article	Journal	Audit Quality/ Independence-Related Variable(s)	Test Variable(s)	Method(s)	Related Findings
Krishnamurthy, Zhou, and Zhou (2006)	CAR	Market reaction	Magnitude of NAS	Archival	There is a significantly negative association between cumulative abnormal returns of Arthur Andersen's clients around the indictment period and the magnitude of NAS fees.
Omer, Bedard, and Falsetta (2006)	TAR	Tax fees	Magnitude of NAS	Archival	Increase in tax fees is positively associated with decreasing tax rates. There is a significantly positive association between tax fee and unexpected audit fee during 2000-2001 but the association weakened in 2002. Propensity to voluntarily disclose tax fee is negatively related to the magnitude of NAS.
Ruddock, Taylor, and Taylor (2006)	CAR	Earnings conservatism	Unexpected NAS	Archival [Australia]	Higher NAS did not result in a decline in earnings conservatism.
Wu (2006)	CAR	Pricing effect of knowledge spillover	Presence of NAS	Modelling	Competition crossover effect between auditing and consulting market may cause difficulty in testing empirically for knowledge spillover effect. Researchers should incorporate audit market concentration and auditor expertise variables to control for such effects in audit fee regressions.
Abbott, Parker, Peters, and Rama (2007)	TAR	Magnitude and characteristics of outsourced internal audit activities	Audit committee effectiveness	Survey	The presence of audit committee with independent, active, and financially expert characteristics is negatively associated with the magnitude of outsourcing routine internal auditing activities to the external auditor.
Gul, Jaggi, and Krishnan (2007)	AJPT	Discretionary accruals	Magnitude of NAS Audit firm tenure	Archival	Non-audit fees are positively associated with discretionary accruals when auditor tenure is short and client size is small.

Table 2
Literatures Concerning Non-audit Service, Auditor Independence, and Audit Quality

Article	Journal	Audit Quality/ Independence-Related Variable(s)	Test Variable(s)	Method(s)	Related Findings
Huang, Mishra, and Raghunandan (2007)	AJPT	Accruals Small earnings surprise	Magnitude of NAS	Archival	There is no systematic relation between non-audit service fees and lower financial reporting quality.
Joe and Vandervelde (2007)	CAR	Knowledge transfer Identification of client's deficiencies	Provision of NAS	Experiment	There is significant evidence of knowledge transfer when the same auditor performed both audit and non-audit service but not when the auditor had access to non-audit service working papers. The joint provision of audit and non-audit services by the same firm resulted in fewer frauds identified by the auditor.
Mitra (2007)	JAAF	Abnormal accruals	Magnitude of NAS	Archival	There is no significant relationship between level of abnormal accruals and non-audit service fee measures.
Srinidhi and Gul (2007)	CAR	Accrual quality	Magnitude of NAS	Archival	Higher non-audit fees are associated with lower accrual quality while higher audit fees are associated with higher accrual quality.
Zhang (2007)	JAE	Market reaction	Magnitude of NAS	Archival	There is a significantly negative association between firms' cumulative abnormal returns around key SOX events and the magnitude of NAS purchase.
Zhang, Zhou, and Zhou (2007)	JAPP	Propensity to disclose internal control weakness	Magnitude of NAS	Archival	The likelihood of internal control weakness disclosure increased with the audit fee ratio.
Dhaliwal, Gleason, Heitzman, and Melendrez (2008)	JAAF	Cost of debt	Magnitude of NAS	Archival	Cost of debt increased with the magnitude of non-audit fees for investment-grade firms. For firms with investment grade debts, the negative association between earnings and cost of debt become weaker as audit fee increased. For firms with non-investment grade debts, the negative association between earnings and cost of debt become weaker as non-audit fee increased.

Table 2
Literatures Concerning Non-audit Service, Auditor Independence, and Audit Quality

Article	Journal	Audit Quality/ Independence-Related Variable(s)	Test Variable(s)	Method(s)	Related Findings
Lim and Tan (2008)	JAR	Propensity to issue going-concern opinion Propensity to miss analysts' forecast Discretionary current accruals Earnings response coefficient	Magnitude of NAS	Archival	Audit quality increases with the level of non-audit services acquired from industry specialists.

5. AUDITOR TENURE

There are two opposing views on the effects of auditor tenure on the audit quality. The first one suggests that as the auditor-client relationship lengthens, the auditor may develop close relationship with the client and become more likely to act in favor of management, thus reducing the audit quality. The other view, on the other hand, indicates that as the auditor tenure become longer, the auditor develop their understanding of the business and develop their expertise during the audit, resulting in higher audit quality. Literatures in the auditor tenure area, mostly archival or survey studies, have produced conflicting evidence related to the effects of auditor tenure on audit quality.

5.1 Auditors' incentives/benefits, perception, and behavior

Findings of the auditor tenure studies on the auditors' part have been mixed. Some studies suggest no association between tenure, and auditor's perception or behavior. In early study on auditor's perception, Shockley (1981) report that auditors did not perceive tenure exceeding five years as reducing auditor independence. Knechel and Vanstraelen (2007) find that longer auditor tenure neither increase nor reduce the likelihood of auditor's issuance of going concern report for a company that subsequently went bankrupt.

The other group of researchers produces contrary findings on the direction of association between tenure and auditor's behavior. Deis and Giroux (1992) report that the audit quality, represented by the quality control findings, decrease as the auditor-client relationship lengthen. Consistent with Deis and Giroux, Carey and Simnett (2006) also find that, in Australia, long audit partner tenure is associated with lower propensity to issue a going-concern report. However, the study involving going-concern report in the US suggest that audit reporting failures are significantly higher in the first few years of auditor-client relationship (Geiger and Raghunandan, 2002).

While prior research has focused on only audit firm tenure, results from Bamber and Iyer's (2007) study raise the point that incentive of the individual audit partner may conflict with that of the audit firm. Their study indicates that long audit partner tenure with the client increased auditor's identification with the client, which in turns, increased the likelihood of auditor acquiescing to client's preference. This suggests that the audit partner who usually deal with the client may become attached to the client and provide substandard audit. However, Bamber and Iyer also report that unlike audit partner tenure, audit firm tenure is found to be marginally associated with decreased acquiescence to the client's preference. The contrary association implies that, unlike the audit partner, audit firm have incentive to remain independent to secure their reputation.

5.2 Clients' incentives/benefits, perception, and behavior

There has been limited evidence on clients' incentives, perception, and behavior related to auditor tenure and available findings are mixed. Consistent with the learning-curve effect argument, Knapp (1991) finds that audit committee perceives that auditor tenure affects the likelihood of auditors discovering material errors. His findings indicate that auditors with tenure of between five and twenty years are perceived as being more likely to discover material errors than those with zero to five-year experience with the client.

Contrary to the perception-related study, research on client's incentives and behavior suggests otherwise. Carey and Simnett (2006) report that, in Australia, long audit partner tenure is associated with higher incidence of just meeting earnings benchmarks, indicating that client firms incur some benefits from maintaining long-term relationship with the auditor. Omer, Bedard, and Falsetta (2006) state that the level of tax services purchased by the client and probability of client voluntarily disclosing tax fee tend to increase with auditor tenure.

5.3 Financial reporting quality

Most empirical evidence on the effect of auditor tenure is consistent with longer audit tenure not resulting in lower financial reporting quality. The majority of studies use the magnitude and other forms of accruals as a surrogate for financial reporting quality. Myers, Myers, and Omer (2003) apply the dispersion of accruals as a proxy. They report that as auditor tenure lengthens, the discretionary accruals and current accruals are less dispersed, suggesting higher earnings quality. Carey and Simnett (2006) use the magnitude of abnormal working capital accruals and find no evidence of association between long audit partner tenure and the accruals. Chen, Lin, and Lin (2008) cover performance-adjusted discretionary accruals on their study of audit partner and audit firm tenure. Their results indicate that performance-adjusted discretionary accruals decrease with audit partner tenure and absolute discretionary accruals decreased with audit firm tenure, after controlling for audit partner tenure. Apart from accruals, Stanley and DeZoort (2007) utilize restatement as a proxy for low quality of financial reports. Their test results also suggest that as the length of auditor-client relationship increased, the likelihood of restatement decreased, suggesting better financial reporting quality.

Several other studies report results consistent with the notion that in early years, the auditors still need time to develop their understanding of the client's business and operations, so the quality of financial report may be lower in the early years of engagement. Johnson, Khurana, and Reynolds (2002) report that the quality of financial reports, represented by unexpected accruals and persistence of accruals, is lower for companies with short-tenure audit firms as compared to those with medium-tenure audit firms. However, they find no evidence of lower quality of financial reports for firms with long-tenure audit firms. Similarly, a study by Carcello and Nagy (2004) indicate that firms are more likely to receive AAER in the early years of auditor-client relationship but there is no evidence of higher propensity to receive AAER for long auditor tenure. Jenkins and Velury (2008) suggest that conservatism in reported earnings increases between short and medium tenure but does not change between medium and long tenure.

5.4 Users' perception and behavior

Previous literatures mainly suggest that the financial statement users do not perceive longer tenure as impairing auditor independence.

Based on the survey of perception of bankers and financial analysts, Shockley (1981) concludes that auditor's tenure exceeding five years is not significantly perceived as reducing auditor independence. Ghosh and Moon (2005) find that longer tenure is associated with better earnings quality perceived by equity market investors, as reflected in earnings response coefficients. Their results also suggest that the effects of earnings on stock rankings and analysts' forecast increase with auditor tenure.

The evidence related to the debt market indicates either positive or no effect of auditor tenure on debt market participants' perception. Mansi, Maxwell, and Miller (2004) find that longer audit tenure is associated with lower cost of debt financing in the bond market and such association is more pronounced for noninvestment-grade firms. However, results from Ghosh and Moon (2005) suggest that auditor tenure does not influence debt market analysts' perception of earnings quality. Fortin and Pittman (2007) when considering the debt pricing of the private firms, report no significant association between the length of auditor-client relationship and the yield spread of the private companies.

Recent study by Boone, Khurana, and Raman (2008) suggest that the relationship between auditor tenure and investor perception of auditor independence, is non-linear. They find that the equity risk premium decreases when the tenure become longer in early years but tends to increase after 13 years.

Although the evidence concerning the financial statement users mostly covers the audit firm tenure, Kaplan and Mauldin (2008) investigate the professional investors' perception related to audit firm and audit partner tenure. They report that there is no significant difference in independence perceived by non-professional investors between audit firm and audit partner rotations. More importantly, the non-professional investors perceived that strong audit committee can help strengthen auditor's independence.

Summary of literatures related to auditor tenure is provided in Table 3.

Table 3
Literatures Concerning Audit Tenure, Auditor Independence, and Audit Quality

Article	Journal	Audit Quality/ Independence-Related Variable(s)	Test Variable(s)	Method(s)	Related Findings
Shockley (1981)	TAR	Users' and CPAs' perception of auditor independence	Audit firm tenure	Survey	Auditor's tenure exceeding five years is not significantly perceived as reducing auditor independence.
Knapp (1991)	AJPT	Audit committee's perception of audit quality	Audit firm tenure	Survey	Audit committee perceived that auditor tenure affected the likelihood of auditors discovering material errors. Auditors, with tenure of between five and twenty years are perceived as being more likely to discover material errors than those with zero to five-year experience with the client.
Deis and Giroux (1992)	TAR	Quality control review findings	Audit firm tenure	Archival	Audit quality decreased as the auditor-client relationship lengthened.
Dopuch, King, and Schwartz (2001)	JAR	Issuance of biased report in favor of management	Mandatory rotation and retention	Experiment	Rotation requirement decreased auditors' incentive to compromise their independence through biased reporting in favor of management, as compared to no rotation and retention. Auditors tended to be least biased when both rotation and retention are mandatory.
Geiger and Raghunandan (2002)	AJPT	Failure to issue going concern opinion immediately prior to bankruptcy	Audit firm tenure	Archival	Failure to issue going concern audit opinion immediately before bankruptcy is more likely in the first few years of auditor-client relationship.
Johnson, Khurana, and Reynolds (2002)	CAR	Unexpected accrual Persistence of accruals	Audit firm tenure	Archival	The quality of financial reports is lower for companies with short-tenure audit firms as compared to those with medium-tenure audit firms. There is no evidence of lower quality of financial reports for firms with long-tenure audit firms.
Myers, Myers, and Omer (2003)	TAR	Discretionary and current accruals	Audit firm tenure	Archival	As auditor tenure lengthens, the discretionary accruals and current accruals are less dispersed, suggesting higher earnings quality.

Table 3
Literatures Concerning Audit Tenure, Auditor Independence, and Audit Quality

Article	Journal	Audit Quality/ Independence-Related Variable(s)	Test Variable(s)	Method(s)	Related Findings
Carcello and Nagy (2004)	AJPT	Propensity to receive AAERs	Audit firm tenure	Archival	Firms are more likely to receive AAER in the early years of auditor-client relationship. There is no evidence of higher propensity to receive AAER for long auditor tenure.
Mansi, Maxwell, and Miller (2004)	JAR	Cost of debt financing	Audit firm tenure	Archival	Longer audit tenure is associated with lower cost of debt financing. Such association is more pronounced for noninvestment-grade firms.
Ghosh and Moon (2005)	TAR	Earnings response coefficient Stock rankings, analysts' forecast, debt ratings	Audit firm tenure	Archival	Tenure is positively associated with investor perception of earnings quality, proxied by earnings response coefficients. The effects of earnings on stock rankings and analysts' forecast increase with auditor tenure while the influence of earnings on debt ratings does not change with tenure.
Carey and Simnett (2006)	TAR	Propensity to issue going-concern report Abnormal accruals Just meeting earnings benchmark	Audit partner tenure	Archival [Australia]	Long audit partner tenure is associated with lower propensity to issue a going-concern report and higher incidence of just meeting earnings benchmarks. There is no evidence that long audit partner tenure is associated with abnormal working capital accruals.
Omer, Bedard, and Falsetta (2006)	TAR	Tax fees	Audit firm tenure	Archival	The magnitude of tax service provided by the auditor is positively related to auditor tenure in 2002. Propensity to voluntarily disclose tax fee is positively related to the auditor tenure.

Table 3
Literatures Concerning Audit Tenure, Auditor Independence, and Audit Quality

Article	Journal	Audit Quality/ Independence-Related Variable(s)	Test Variable(s)	Method(s)	Related Findings
Bamber and Iyer (2007)	AJPT	Auditors' identification and acquiescence with their clients	Audit firm and audit partner tenure	Structural modelling and survey	Long audit partner tenure with the client increased auditor's identification with the client, which in turns, increased the likelihood of auditor acquiescing to client's preference. There is marginally significant evidence that audit firm tenure is associated with decreased acquiescence to the client's preference.
Fortin and Pittman (2007)	CAR	Debt pricing	Audit firm tenure	Archival	The length of auditor-client relationship is not significantly associated with debt pricing in private firms.
Knechel and Vanstraelen (2007)	AJPT	The likelihood of errors in issuing a going-concern opinion	Audit firm tenure	Archival [Belgium]	Longer auditor tenure did not reduce the likelihood of auditor's issuance of going concern report for a company that subsequently went bankrupt. There is a weak evidence of association between long auditor tenure and decreased likelihood that the auditors did not issue a going concern report for a company that did not subsequently go bankrupt.
Stanley and DeZoort (2007)	JAPP	Likelihood of financial restatements	Audit firm tenure	Archival	As the length of auditor-client relationship increased, the likelihood of restatement decreased. For short tenure, the likelihood of restatement is negatively associated with auditor industry specialization and audit fees. For long tenure, no significant evidence of association existed between restatement and non-audit fees.
Boone, Khurana, and Raman (2008)	JAAF	Equity risk premium	Audit firm tenure	Archival	There is a non-linear relationship between auditor tenure and equity risk premium. The equity risk premium decreased when the tenure become longer in early years but the premium increased in later years (>13 years).

Table 3
Literatures Concerning Audit Tenure, Auditor Independence, and Audit Quality

Article	Journal	Audit Quality/ Independence-Related Variable(s)	Test Variable(s)	Method(s)	Related Findings
Chen, Lin, and Lin (2008)	CAR	Discretionary accruals	Audit firm and audit partner tenure	Archival [Taiwan]	There is a negative relationship between audit partner tenure and performance-adjusted discretionary accruals. Absolute discretionary accruals decreased with audit firm tenure, after controlling for audit partner tenure.
Jenkins and Velury (2008)	JAPP	Conservatism in reported earnings	Audit firm tenure	Archival	Conservatism in reported earnings increased between short and medium tenure. However, it did not change between medium and long tenure.
Kaplan and Mauldin (2008)	JAPP	Non-professional investors' perception of independence	Audit firm and audit partner tenure	Experiment	There is no significant difference in independence perceived by non-professional investors between audit firm and audit partner rotations. The non-professional investors perceived that strong audit committee help strengthen auditor's independence.

6. CLIENTS' AFFILIATION WITH CPA FIRMS

Imhoff (1978) raises three potential problems that may lead to impairment of auditor independence with regard to client employment issue: (1) auditor may view client as the potential employer; (2) the closeness with management may create a distance between the auditor and shareholders, who are in fact the real employer of the auditor; and (3) the audit team may have difficulty in maintaining independence while dealing with their former colleagues. These problems lead to reduced objectivity and audit quality.

Compared to other causes of independence impairment, there is limited evidence on the affiliation issue, probably because the affiliation incidence is less prevalent than generally expected (Francis, 2004).

6.1 Auditors' incentives/benefits, perception, and behavior

Few papers examine the auditor-client employment issue from the auditor's position. Imhoff (1978) is the first to conduct a study of independence issues related to auditor-client employment (Kaplan and Whitecotton, 2001). From his first survey, Imhoff reports that auditor's employment by the client is not an uncommon practice. From a second survey, he finds that CPAs are less critical than the financial statement users with regard to independence concern. The results suggest that the difference in such perception is due to the time lapse between auditing and employment by the client, and the rank of ex-auditor. More specifically, auditor viewed auditing supervisor with 6-month time span between auditing and client employment as independent while financial statement users perceived otherwise.

Kaplan and Whitecotton (2001) investigate the independence concern related to the potential employment relationship which occurs during the audit engagement. They examine the auditor's reporting intention when the audit manager is offered client employment. They use discretionary reporting model to experiment the auditors regarding the factors affecting the intention to report the employment offer to the audit partner. They find that the auditor has stronger intention to report the audit manager's potential affiliation with the client when perceived personal costs of reporting are lower or when perceived personal responsibility for reporting is higher.

Lennox (2005) studies the independence issues where executive officers are affiliated with audit firms. Apart from the common relationship that the client hires the auditor (referred to as ‘employment affiliation’), Lennox also includes the case where the company hires the officer’s former firm as the auditor (‘alma mater affiliation’). He hypothesizes and finds that auditors are more likely to issue clean audit opinions to companies with either employment or alma mater affiliated executives than to unaffiliated client firms.

6.2 Clients’ incentives/benefits, perception, and behavior

Previous research has indicated that companies may also have incentives to be affiliated to the audit firms. As discussed earlier, Lennox (2005) finds that companies with either employment or alma mater affiliated executives are significantly more likely to receive clean audit opinions. He also reports that after the auditor issue clean audit opinions, the turnover of the affiliated executives is lower than that of unaffiliated executive. He suggests that the lower turnover implies the value of affiliations is recognized by the client. Furthermore, Menon and William (2004) also report that firms with former partners are more likely than those without to just meet analysts’ forecasts. This indicates that managers may benefit from the affiliation with the audit firms.

Apart from the aforementioned potential benefits to the client firms, Iyer, Bamber and Barefield (1997) contend that the ex-auditor, who is employed by the client, also have personal incentives that may also encourage the alma mater affiliation. They demonstrate through a structural model that accounting firm’s policies and practices during the period that an employee is still with the firm affect the alumni identification with the firm. The alumni identification, along with the firm’s effort to maintain relationship with their alumni is related with alumni’s inclination to benefit their former firm.

Subsequent evidence from an archival study by Lennox and Park (2007) is consistent with Iyer, Bamber and Barefield’s findings. Lennox and Park show that probabilities of appointing officers’ former firms are higher if officers are alumni of those firms. However, companies are less likely to hire personnel from officers’ former firms if audit committees are more independent. This suggests that the audit committee perceives the affiliation as a threat to independence and that the effective audit committee can serve as a mechanism to lessen the independence problem.

6.3 Financial reporting quality

Previous empirical research has conflicting results on the effects of clients' affiliation with CPA firms on financial reporting quality. Menon and William (2004) find that companies which employ former partners as officers or directors have larger signed and unsigned abnormal accruals than other firms, even after controlling for performance.

On the other hand, findings from other studies are consistent with no adverse effect of the revolving door appointment on financial reporting quality. Geiger, North, and O'Connell (2005) indicate that the accruals of the firms that hire senior financial reporting personnel from external audit firms are not significantly higher than those of control firms (no-auditor, other audit firm, or no new-hire groups) for the years immediately before the hire, the year of hire, and three years surrounding the hire. Recent study by Geiger, Lennox, and North (2008) reports no significant evidence of lower financial reporting quality, proxied by accruals and likelihood to receive AAER, following the revolving door appointment.

6.4 Users' perception and behavior

Few studies provide evidence on the independence issue originated from outplacement of alumni in client firms. As mentioned in section 6.1, financial statement users seem to perceive independence problem more critically than CPAs, due to the time span between auditing and working for a client firm and the rank of the auditor (Imhoff, 1978). However, Geiger, Lennox, and North (2008) state that the revolving door appointment may also be perceived as bringing potential benefits to companies, through the knowledge and expertise of the ex-auditor. Their event-study findings indicate that the stock market viewed the appointment of firms' external auditors as their accounting and finance officers positively for smaller firms.

Literatures related to clients' affiliation with CPA firms are summarized in Table 4.

Table 4
Literatures Concerning Clients' Affiliation with CPA firm, Auditor Independence, and Audit Quality

Article	Journal	Audit Quality/ Independence-Related Variable(s)	Test Variable(s)	Method(s)	Related Findings
Imhoff (1978)	TAR	Users' and auditor's perception of independence	Clients' affiliation with CPA firm	Survey	Financial statement users (bankers and financial analysts) perceived independence problem more critically than CPAs. The time lapse between auditing and working for a client firm and the rank of the auditor are significantly related to differences in their perception.
Iyer, Bamber and Barefield (1997)	AOS	Alumni's inclination to benefit their former firm	Alumni's identification with their former firm Accounting firm and individual employee factors	Structural modelling and survey	Accounting firm's policies and practices during the period that an employee is still with the firm affect the alumni identification, and hence, their inclination to benefit their former firm. Accounting firm's effort to maintain relationship with their alumni is related with alumni's inclination to benefit their former firm.
Kaplan and Whitecotton (2001)	AJPT	Auditor's reporting intention when another auditor is offered client employment	Perceptions of the seriousness of the act Personal costs of reporting Responsibility for reporting Commitment to the accounting profession	Experiment	Auditors have stronger intentions to report another auditor's potential affiliation with the client when their perceived personal costs of reporting are lower or when perceived personal responsibility for reporting is higher.
Menon and William (2004)	TAR	Abnormal accruals Just meeting forecasts	Clients' affiliation with CPA firm	Archival	Companies which employ former partners as officers or directors have larger signed and unsigned abnormal accruals than other firms, even after controlling for performance. Firms with former partners are more likely than those without to just meet analysts' forecasts.

Table 4
Literatures Concerning Clients' Affiliation with CPA firm, Auditor Independence, and Audit Quality

Article	Journal	Audit Quality/ Independence-Related Variable(s)	Test Variable(s)	Method(s)	Related Findings
Lennox (2005)	JAE	Unfavorable audit opinion	Clients' affiliation with CPA firm	Archival	Companies with affiliated executives are significantly more likely to receive clean audit opinions. Similar results apply to employment and alma mater affiliation.
Geiger, North, and O'Connell (2005)	JAAF	Accruals	Clients' affiliation with CPA firm	Archival	The accruals of the firms that hire senior financial reporting personnel from external audit firms are not significantly higher than those of control firms (no-auditor, other audit firm, or no new-hire groups) for the years immediately before the hire, the year of hire, and three years surrounding the hire.
Lennox and Park (2007)	CAR	Probability of appointing officers' former firm Likelihood to hire personnel from officers' former firm	Clients' affiliation with CPA firm Independence of audit committee	Archival	Companies are less likely to hire personnel from officers' former firms if audit committees are more independent, suggesting that the audit committee perceived the affiliation as a threat to independence. Probabilities of appointing officers' former firms are higher if officers are alumni of those firms.
Geiger, Lennox, and North (2008)	RAST	Market reaction Discretionary accruals Client's likelihood of receiving AAER	Clients' affiliation with CPA firm	Archival	The stock market viewed the appointment of firms' external auditors as their accounting and finance officers positively for smaller companies. There is no evidence of lower financial reporting quality, proxied by accruals and likelihood to receive AAER, following the revolving door appointment.

7. CONCLUDING REMARKS AND FUTURE RESEARCH

The research on auditor independence in relation to audit quality has received considerable attention due to its significance to the auditing profession. In addition to recent changes in the auditing profession, our literature review shows that inconclusive evidence warrants further studies for auditor independence and audit quality issues. The following points provide some guidelines for future research in this area.

Firstly, as literatures in this area, especially the archival ones, depend largely on the U.S. data, it may be useful to extend future research to cover evidence from other countries. This is because the United States are generally recognized as extremely litigious environment. Using other countries with less litigious environment would provide the settings in which the litigation effects are reduced and the reputation effects can be better observed.

Moreover, like financial accounting research, research concerning auditor independence and audit quality may benefit from cross-countries comparison. People in different countries are likely to have different attitude and culture. As far as the auditing is concerned, the incentives, perception, and behavior of the auditors, clients, and financial report users in various countries may differ. Arnold, Bernardi, and Neidermeyer (1999), for example, performed an experiment on Big6 auditors from seven European countries. They found that there is some evidence of association between individualism and litigation, and the auditor's consideration to perform additional audit work.

Previous client importance studies are mostly performed at the national and office level. However, the decisions for audit engagement are practically made at the partner level. As some evidence suggests that partner compensation scheme affect auditor independence (e.g Trompeter, 1994), more studies on the partner level may help provide additional contribution to the literatures.

Likewise, the majority of the tenure research is devoted to audit firm level. Nevertheless, recent auditor tenure studies report that audit partner tenure, as well as audit firm tenure, affects financial reporting quality (e.g Chen, Lin, and Lin, 2008). Also, further research on audit partner tenure may help better justify the audit partner rotation required in many countries.

Finally, researchers can continue to generate future research questions around the requirements of the Sarbanes-Oxley Act, many of which aim towards auditor independence. The law has been in effect for over five years. This provides a good opportunity to perform related studies with less concern on limited sample size and higher generalizability across time periods. For instance, the

Sarbanes-Oxley Act requires firms to rotate their auditors every five years, hence, by now, the sample consisting of all listed firms subject to mandatory rotation is available for investigation.

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