

*Journal of Accounting Literature*  
Vol. 25, 2006, pp. 169-211

## **Non-Audit Services and Auditor Independence: A Review of the Literature**

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### **1.0 INTRODUCTION**

For nearly 30 years accounting researchers have examined issues relating to the auditor's provision of non-audit services (NAS), including bookkeeping, appraisal/valuation, actuarial services, tax work, internal auditing, and financial information systems design and implementation. A common focus of the research is whether providing NAS impairs the auditor's independence – in fact<sup>1</sup> or appearance. This paper reviews and synthesizes the large body of research on NAS and auditor independence. The extant studies have typically taken the perspective of one of three stakeholder groups: financial statement users, auditors, or managers. For financial statement users, the primary issue is whether NAS affects auditor independence in *appearance*. For the other two stakeholder groups, the primary issue is whether NAS affects auditor independence in *fact*. We organize the paper around decisions and judgments relating to each stakeholder group and how auditor independence is affected.

The provision of NAS by auditors is not without potential benefits. Some contend that NAS enhances the auditors' knowledge of the client, leading to a more efficient and effective audit (e.g., Simunic [1984]; Beck et al. [1988a]). Ryan et al. [2001, p. 380] argue that restricting NAS can inhibit the auditor's acquisition of task-specific knowledge capital, thereby reducing auditor competence and lowering audit quality. Albrecht and Sack [2000] assert that limiting NAS will impact CPA firms' ability to hire and retain highly qualified individuals.

However, even assuming these benefits, the value of NAS by auditors depends upon the cost/benefit tradeoff, with compromises in auditor independence as one of the most critical potential costs. For example, NAS creates an

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<sup>1</sup> Though the construct of independence in fact has long been in use in the auditing literature, it is virtually impossible to prove, as only the auditor himself or herself knows for sure whether this independence has been compromised. Hence, findings related to independence in fact need to be interpreted with caution.

economic bond between the auditor and client, which some counter can cause the auditor to lose objectivity (e.g., Ashbaugh [2004]). This concern magnified in recent years as NAS fees (relative to audit fees) skyrocketed (Earnscliffe Research and Communications [1999]). The popular press routinely questioned the auditor's ability to maintain independence in light of significant NAS fees (e.g., Kahn [2002]; Solomon [2002]). The sentiment even spilled over into accounting texts, as evidenced by the following statement.

Excessive nonaudit fees paid to the external auditor should also be carefully assessed, given the many recent scandals involving auditors issuing clean opinions for questionable accounting, while at the same time collecting enormous consulting fees (Fraser and Ormiston [2004, p. 20]).

Apart from concerns about auditor objectivity, regulators also must consider whether NAS affects users' perceptions of independence (e.g., Panel on Audit Effectiveness [2000]). For audit services to have value, users must perceive that NAS fees do not color the auditor's judgment. A myriad of studies have examined this issue, though the findings are difficult to summarize due to differences in user groups, time periods, and the specific type of NAS examined.

Over the years, regulators have taken actions in response to concerns over the auditor's provision of NAS. In 1978 the Securities and Exchange Commission (SEC) issued Accounting Series Release (ASR) No. 250, requiring the disclosure of (1) total NAS fees as a percentage of audit fees, (2) the specific nature of NAS, and (3) a breakdown of each NAS in excess of three percent of audit fees. The SEC rescinded ASR No. 250 in 1982, concluding that investors were not interested in the fee disclosures. As a point of reference, the median NAS fees were 14 percent of audit fees during the time that ASR No. 250 was effective (Hackenbrack [2004]).

In 2000 the SEC prohibited CPA firms from performing both audits and certain NAS, and again, mandated fee disclosures. The SEC prescribed that companies disclose the dollar amount of fees for (1) audit services, (2) financial information system design and implementation services, and (3) all other NAS services. The ensuing fee disclosures revealed that the median NAS fees were nearly 100 percent of audit fees (e.g., Frankel et al. [2002]).

In 2002 the Sarbanes-Oxley Act (SOX) was passed, placing additional, more severe restrictions on the auditor's provision of NAS. These prohibitions include internal audit outsourcing as well as financial information system design and implementation services. In 2003 the SEC modified fee disclosures again, requiring the disclosure of fees for (1) audit services, (2) audit-related services, (3) tax services, and (4) all other NAS services. Not surprisingly, the auditor's provision of NAS continues to be a topic of discussion and debate. Some contend that regulators actions (e.g., SOX) are the result of a need for political expediency,<sup>2</sup> the effect being to legislate away a non-problem

<sup>2</sup> Asare et al. [2005] discuss three perspectives on regulation. The Public Interest perspective seeks to improve the operation of the economy, the Public Administration perspective focuses on determining the best regulatory tool, and the Public Choice perspective views the regulator as a rational maximizer who supplies regulations in response to lobbying activity. Our notion of political expediency corresponds to this latter perspective.

(Romano [2005]). Others assert that many questions still need to be addressed regarding the auditor's provision of NAS (e.g., DeFond and Francis [2005]). For instance, the effect of disclosing conflicts of interest (such as NAS fees) on individual behavior is not well understood (e.g., Hilton et al. [1993]; Cain et al. [2005]; Miller [2005]).

The next three sections of the paper discuss decisions and judgments relating to each of the three stakeholder groups and how auditor independence is affected. In each section, we review prior studies, summarize the findings, and make suggestions for future research. The final section offers concluding remarks (summarizing the findings) and reiterates significant, non-resolved issues that need to be addressed.

## **2.0 USERS' JUDGMENTS AND DECISIONS**

First we discuss studies that examine whether the auditor's provision of NAS affects users' decisions and/or perceptions, ultimately reflecting whether NAS impairs independence in appearance. We look first at users in the equity markets and then at users in debt markets.

### **2.1 Equity Investment Community**

Research in this area examines the judgments/decisions of a cross section of equity investors, broadly defined to include financial analysts, corporate board members, shareholders, and experimental market participants (as surrogates for investors). The studies investigate perceptions of auditor independence, investor behavior and market reactions, and the role of corporate governance in the perception of the auditor's provision of NAS.

#### **2.1.1 Perceptions of Independence**

Research focusing on the perception of independence by equity investors largely encompasses surveys and experiments covering a wide variety of NAS settings. Overall, evidence from both pre- and post- Enron periods suggests that perceptions of independence may depend upon the size of the NAS relationship (e.g., Pany and Reckers [1983]) and/or the type of NAS provided (e.g., Mauldin [2003]) with concerns mitigated when separate personnel perform audit and NAS (e.g., Pany and Reckers [1984]).

Reckers and Stagliano [1981] use a survey approach to examine the effect of five types of NAS (acquisition search, pension and actuarial services, systems design, tax planning, and tax preparation) on chartered financial analysts' perceptions of independence. Analysts express a very high degree of confidence in auditors' ability to remain independent, regardless of the type of NAS provided. Jenkins and Krawczyk [2003] survey the general public, as representatives of investors, and assess perceptions of auditor independence for six types of NAS, two of which overlap Reckers and Stagliano (appraisal/valuation and tax return preparation) and four different types (legal consulting, internal auditing, bookkeeping, and general consulting). Here too, the general public's perceptions are not negatively affected by any of the NAS

included in the study. By comparison, Mauldin [2003] reports that professional investors perceive that independence is impaired when the auditor provides internal audit services or merger and acquisition services, both services overlapping those in the Jenkins and Krawczyk study.

A comparison of these studies, however, is difficult. For example, the wide variety of non-overlapping NAS examined makes it difficult to draw conclusions when differing results may suggest that type of NAS matters. In addition, the data in Reckers and Stagliano [1981] were collected nearly 25 years ago. As mentioned earlier, the fees generated from NAS have grown over time [Levitt, 2000]. Yet, while the "no impairment" results of Jenkins and Krawczyk [2003] are more recent, it may be that the use of the unsophisticated general public as participants drives this result in contrast to the "impairment" result Mauldin [2003] finds with professional investors in a similar study.

Results of extant research are more consistent concerning the effect of having different personnel perform the audit and NAS, finding that the use of different personnel mitigates concerns over impairment of independence (Lowe and Pany [1995]). Pany and Reckers [1984] survey 67 chartered financial analysts and 46 corporate stockholders and find that independence concerns decrease when NAS are performed by a separate division of the CPA firm rather than by the staff that conducts the audit. Swanger and Chewning [2001] examine the effect of internal audit outsourcing on analysts' perceptions of independence. They also find that perceptions are lowered when the auditor provides internal audit services but this is mitigated when the NAS are provided by a different division of the CPA firm. Hill and Booker [2004] examine state accountancy regulators' perceptions of independence for an auditor performing tax work for a nonpublic entity versus an auditor performing tax work and internal audit work.<sup>3</sup> They report that assessments of independence are not affected as long as separate personnel perform external and internal audit work.

In a study investigating the perceptions of corporate board members, Pany and Reckers [1983] had participants complete 18 cases involving decisions to engage a corporation's current CPA firm in NAS. The decision context states that the NAS personnel will not be from the audit department of the CPA firm. The study examines three types of NAS (tax preparation, acquisition review, and systems design) and two levels of NAS (10 percent and 40 percent of the audit fee). In this environment, Pany and Reckers [1983] find that board members are least likely to approve systems design proposals and are less likely to approve NAS proposals at the 40 percent level. We note that the acquisition review results conflict with Mauldin's [2003] merger and acquisition services results where she found evidence of impaired independence. However, Mauldin's [2003] context did not provide for separate personnel performing the services.

Gaynor et al. [2005] also study decisions made by corporate board members, with some responding as audit committee members and others responding as investors. Results show that both audit committee members and inves-

<sup>3</sup> Since one of the main functions of accounting regulators is to protect investors, we place this study in the section relating to the investment community.

tors are more likely to recommend joint provision of auditing and NAS if audit quality improves. Unlike investors, though, audit committee members are reluctant to recommend joint provision when public disclosures are required, even at the expense of audit quality improvement. The authors conclude that, while audit committee members, like investors, assess the tradeoff between possible decreased independence and audit quality improvement, they also consider the added cost of investor perceptions of decreased independence in the light of fee disclosures.

Lowe and Pany [1996] investigate how financial analysts' perceptions and investment decisions are affected by CPA firms' provision of NAS with clients to third parties. The results indicate that the materiality of the business relationship (between the CPA firm and its client) significantly affects the perceptions and investment decisions of financial analysts. As in other studies, having different personnel perform audit services and NAS reduces concerns.

The findings on perceptions of independence by those in the equity investment community are mixed but generally suggest that there are situations where NAS negatively affects investors' perceptions of auditor independence. The materiality of the relationship appears to be an issue and some types of NAS (acquisition-related services, internal auditing, and systems design) trigger concerns in some studies. However, the concerns are lessened when separate personnel perform the audit. There is no obvious change in study results across time (for example, pre- versus post-Enron); however, as mentioned above, the wide variety of non-overlapping types of NAS and the variety of participants make generalizations difficult.

### 2.1.2 Investor Behavior and Market Reactions

The results of research on investor behavior (experimental markets) and market reactions (archival capital market data) do not provide consistent evidence that the provision of NAS negatively affects asset values or prices. However, other behavior, such as the likelihood of suing the auditor, suggests that investors consider NAS an *ex post* justification for impaired independence.

Dopuch and King [1991] use an experimental markets method to gauge the market's assessment of the auditor providing NAS. The findings indicate that asset prices are not affected by the auditor's provision of NAS. The implication is that the marginal investor (buyer) is not affected by the auditor's provision of NAS – and that independence in appearance is not impaired by NAS. In a related study, Dopuch et al. [2003] investigate whether the auditor's provision of NAS affects asset price in a double auction institution. They manipulate the auditor's independence in fact (the auditor's report is unbiased versus biased) and participants' beliefs about independence (NAS often results in a biased versus unbiased report). Dopuch et al. find that asset prices reflect participants' beliefs with NAS resulting in lower prices, even when the beliefs are incorrect. Strikingly, the effect persists over time (see also Davis and Hollie [forthcoming] for a similar finding). However, because participants are told that NAS often results in a biased report, it is not clear that provision of NAS would result in the same belief outside of the experimental setting (Zhang [2003]).

Church and Zhang [2005] also use experimental markets to investigate the effect of NAS on investors' assessments of asset value and willingness to sue the auditor (to recoup a decline in asset value). They find that assessments of asset value are not affected by NAS, though investors' willingness to sue the auditor increases when NAS are provided. Therefore, even if the unaffected asset value implies that investors do not perceive compromised independence, their willingness to sue indicates that they see the provision of NAS as sufficiently suggestive of compromised independence to support a legal recourse.

In addition to the experimental market studies, archival research has examined whether investors (i.e., the market) react negatively to the disclosure of NAS fees, with mixed results. Frankel et al. [2002] document a negative association between the proportion of total fees generated from NAS and the market's reaction to proxy fee disclosures. The result is consistent with users believing that financial statement credibility decreases as the proportion of fees from NAS increases (i.e., an impairment of independence in appearance). However, as the authors acknowledge, it is also consistent with proxy fee disclosures conveying other information to users (e.g., information about management quality or difficulties facing the firm). To circumvent the potential correlated omitted variables problem, Ashbaugh et al. [2003] use a within-firm approach. They compare the abnormal returns associated with a company's proxy statement filing in the first year containing fee disclosures with abnormal returns in the prior year excluding fee disclosures. They fail to find a difference in abnormal returns between the two years. The findings suggest that fees generated from NAS do not affect investors' perceptions of auditor independence. Although a potential drawback of the within-firm approach is that return comparisons are not from contemporaneous periods of time, it does suggest that the Frankel et al. [2002] results may be picking up some other confounding effect.

In another study, Chaney and Philipich [2002] examine the stock market's reaction to events surrounding the demise of Arthur Andersen, LLP. As part of the study, they test whether the provision of NAS affects the cumulative abnormal returns of Andersen's clients following the firm's admission of document shredding (see CNNMoney [2002]). Chaney and Philipich found no significant differences, suggesting that the market is not concerned about NAS – at least not beyond Andersen's other troubles. Krishnan et al. [2005] investigate whether the provision of NAS is associated with companies' earnings response coefficient (ERC). They document a negative association between NAS fees and ERC, which suggests that, from the market's perspective, independence in appearance may be affected.

Although the extant research does not suggest that provision of NAS necessarily leads to lower asset prices, NAS potentially may affect the behavior and perception of market participants (see Church and Zhang [2005] and Krishnan et al. [2005]). The available evidence, however, is quite modest. Only a handful of experimental studies have been conducted with differing market institutions (e.g., Vickrey auctions and double auctions)<sup>4</sup> and differing

<sup>4</sup> In a Vickrey auction, potential buyers submit sealed bids. The highest bidder wins, but pays the second highest bid. In a double auction market, traders wishing to buy or sell publicly post bids and asks, respectively. An exchange occurs when a match is achieved (i.e., the posted bid equals the posted ask).

NAS settings (e.g., Dopuch et al. [2003] define the provision of NAS as being likely to result in biased reports). Further, archival studies are wrought with the empirical challenges of confounding events, making definitive evidence difficult to obtain. Additional work in this area is necessary to provide insights, primarily looking at different investor types (e.g., novice investors, sophisticated investors, institutional investors) and different types of NAS, but using a consistent and systematic approach to allow for comparison.

### 2.1.3 Corporate Governance

Another line of research has examined the interaction between NAS and corporate governance, in particular, shareholders' willingness to ratify the selection of the auditor and the nature of the audit committee. Results are consistent with a slight, but economically insignificant, effect on ratification and with audit committees acting as if auditor provision of NAS should be curtailed.

Glezen and Millar [1985] test whether ASR No. 250, which mandated the disclosure of NAS to audit fees ratio, impacts shareholder approval of the auditor. The authors obtain approval ratios (yes votes to total votes) from 178 companies. They find no significant decline in approval ratios between each of the three pre-disclosure years and the post-disclosure year. Notably, the average approval ratios exceed 99 percent.<sup>5</sup>

Three post-Enron studies find a negative relation between ratification ratios and the provision of NAS, although the findings generally are not economically significant. Raghunandan [2003] re-examines shareholder votes for a sample of 172 companies, collected from proxy statements filed on or after February 5, 2001 (when data became available following the SEC's requirement to disclose audit and NAS fees). He tests for differences in shareholder votes to ratify the auditor's selection based on the relative amount of NAS fees disclosed. The results reveal some association between approval ratios and the magnitude of NAS fees, but the economic consequence of the association appears to be minimal. Even in companies with high ratios of NAS to audit fees, the average shareholder ratification rate is around 97 percent.

Raghunandan and Rama [2003] examine whether approval ratios are affected by the composition of the audit committee. They provide evidence that in the presence of high NAS fees, shareholders are more likely to ratify the auditor's selection when the audit committee is comprised solely of independent directors. Again, the economic consequences appear to be minimal. The vast majority of shareholders do not appear to be concerned about auditor independence (using approval ratios as a proxy), even when NAS fees are very high.

Mishra et al. [2005] investigate the association between approval ratios and NAS fees subsequent to the Sarbanes-Oxley Act of 2002, which prohibits certain types of NAS (e.g., financial information systems design and implementation). The sample period also follows the SEC's Financial Reporting

<sup>5</sup> Also, no significant declines are apparent when companies are analyzed by industry or size, or when assessed against the magnitude of total NAS.

Release No. 68, which requires separate disclosure of NAS fees into audit-related, tax, and other fees. Mishra et al. find that approval ratios are negatively associated with (1) the tax-to-audit-fee ratio and (2) the other-to-audit fees ratio. However, as before, the economic consequences appear to be nominal.

Abbott et al. [2003a] investigate whether the ratio of NAS to audit fees is associated with audit committee composition and activity. Using a sample of 538 companies, they find that audit committees comprised solely of independent directors and meeting at least four times annually are significantly and negatively associated with the NAS fee ratio. This evidence is consistent with audit committee members perceiving a high level of NAS fees in a negative light and taking actions to decrease the NAS fee ratio (see also Gaynor et al. [2005], who find that audit committee members are reluctant to recommend joint provision of NAS and auditing when public disclosures are required, even at the expense of audit quality improvement). Lee and Mande [2005] criticize Abbott et al.'s use of the NAS fee ratio because it does not take into account the endogeneity of audit and non-audit fees. Instead, Lee and Mande use the natural log of the level of non-audit fees to proxy for the scope of NAS and find that there is no significant association between NAS and audit committee effectiveness.

Like Abbott et al. [2003a], Ghosh et al. [2005] also find a relation between the NAS fee ratio and governance. While they do not find a significant relationship with the independence of audit committee members, they do find a significantly negative relationship with the proportion of the board that is made up of independent directors, consistent with the results of Abbott et al. [2003a]. Ghosh et al. also find a significantly negative association between the NAS fee ratio and audit committee activity (i.e., the log of the annual number of meetings), but it is in one of their sensitivity analyses; they do not find it in their main analysis. In addition, they find a significantly positive association with board activity, which they interpret as indicating that the board sees NAS as providing economic efficiencies. Therefore, their results are mixed as to whether stronger corporate governance implies more or less NAS or is associated with a higher or lower perception of independence.

Lastly, Abbott et al. [2004] examine the relationship between audit committee effectiveness and internal audit outsourcing decisions. Results indicate that there is no association between audit committee effectiveness and non-recurring outsourced internal audit activities such as special projects and EDP consulting. However, audit committee effectiveness is hampered by the outsourcing of those internal audit activities that are most likely to impair auditor independence, such as routine internal audit work and financial statement audits of subsidiaries.

The findings in this area suggest that NAS do not affect stockholders' willingness to ratify the auditor's selection, with the result being robust to the time period examined. However, audit committee findings indicate that firms with active audit committees limit the auditor's provision of NAS. This is consistent with Church and Zhang's [2005] finding of an increased willingness to sue, as audit committees are aware that high NAS fees might lead to a higher likelihood of lawsuits irrespective of their impact (or lack thereof) on auditor independence.



## 2.2 Lenders

There are several pre-Enron studies that look at both equity investors (financial analysts) and loan officers in the same study. Although the evidence is mixed as to whether NAS compromises independence, for the most part the results are consistent across loan officers and equity investors. Results on lenders alone from more recent but overlapping time periods, however, suggest a more consistent concern with NAS than reported in the earlier sections for equity investors, though again this concern is mitigated by use of NAS personnel separate from the audit staff.

The inconsistent findings of studies that address the perceptions/decisions of both lenders and investors are typified by Lavin [1976]. The study surveys bank loan officers and financial analysts regarding their perceptions of auditor independence in various situations involving auditor-client relationships, with three situations involving NAS. For one situation (involving an accounting firm serving as a conduit between a client and a service bureau), there is a consensus within each group that the auditor is independent; for another situation (involving an accounting firm performing bookkeeping services and preparing financial statements for a client), there is a lack of consensus in each group about the auditor's independence; and for a third situation (involving an accounting firm preparing payroll and performing bookkeeping services for a client), there is a consensus among lending officers that the auditor is independent, but a lack of consensus among the financial analysts.

Pany and Reckers [1987] also report mixed findings. This study uses two within-subjects experimental designs and one between-subjects design to test whether NAS affects loan officers' and financial analysts' perceptions of auditor independence. For the within-subjects experiments, NAS is perceived to impair auditor independence. Conversely, in the between-subjects design, NAS do not affect perceptions of independence. Hence, different experimental designs may produce different results, and in particular, within-subjects designs may elicit demand effects that are caused when participants perceive the manipulations of variables across tasks.

Unlike the studies discussed above, Shockley [1981] does not get mixed results. Using bank loan officers and financial analysts, Shockley's findings reveal that CPA firms providing NAS are perceived as having a higher risk of losing independence than those not providing NAS. Pany and Reckers [1988] also obtain unambiguous results, but the findings suggest that NAS does not impair independence: neither lenders' nor financial analysts' judgments are negatively affected by the level of NAS.

Other research that focuses primarily on lenders' assessments of auditor independence finds concern with provision of NAS. Lowe et al. [1999] find that auditor performance of NAS (internal auditing) has a significantly negative impact on lenders' perceptions of auditor independence and financial statement reliability, resulting in low loan approval rates. Thornton et al. [2004] also find that bankers, as well as professional accountants, perceive that NAS (unspecified consulting) compromises auditor independence. Not surprisingly, respondents attribute fewer positive, and more negative, attributes to the provision of NAS after the Enron scandal. In a related study with profes-

sional accountants and bankers Thornton et al. [2006] obtain strong support for self-serving bias, i.e., respondents' positions on the effect of NAS on auditor independence correlate highly with their respective interests in the economic rents from the provision of NAS. They also test for a respondent knowledge effect, but there is no correlation between audit role awareness and perceptions of the impact of NAS on auditor independence.

Other studies investigate auditor independence indirectly – examining whether auditors who provide NAS are perceived to be unduly influenced by their clients. Knapp [1985] studies lending officers' perceptions of auditors' abilities to resist client pressure under different conflict situations, including a CPA firm's provision of NAS (cost accounting consulting). The findings suggest that a significant amount of NAS increases the perceived likelihood of a conflict being resolved in favor of the client. Gul [1991] also investigates the effects of NAS (design of financial and cost accounting systems) on perceptions of auditors' abilities to resist management pressure. Using bankers in New Zealand, Gul finds that auditors providing NAS are perceived as more likely to resolve conflicts in favor of clients than auditors not providing NAS.

In contrast to the vast majority of the NAS literature which deals with audit firms providing NAS *to* audit clients, Lowe and Pany [1995] focus on CPA firms that provide NAS (unspecified consulting) *with* their audit clients to third parties. Using this context, they study loan officers' perceptions of auditor independence, perceptions of financial statement reliability, and loan decisions.<sup>6</sup> Results indicate that the materiality of the business relationship affects perceptions and loan decisions. Because the study does not include a *no-business-relationship* condition, however, it does not really address independence impairment from providing NAS *with* clients.

McKinley et al. [1985] test whether CPA firms' provision of NAS (internal control design) influences bankers' lending decisions as well as their perceptions of financial statement reliability and auditor independence. Unlike those mentioned above, their results indicate that no decisions/perceptions are affected by CPA firms' provision of NAS. However, the setting in McKinley et al. [1985] characterizes the NAS as being performed by CPA firm personnel not involved in the audit. When Lowe and Pany [1995] pose a similar scenario – separate divisions of a CPA firm providing the audit and NAS – loan officers have fewer concerns about auditor independence. Likewise, Lowe et al. [1999] find that separating the staff performing outsourced internal audit services from staff performing the financial statement audit has a significant, positive impact on lenders' perceptions and loan approvals. Hence, there appears to be consistency across these studies that when the same personnel perform auditing and NAS, the studies find negative consequences, whereas when different personnel perform auditing and NAS, no perceived impairment arises. The latter result is consistent with the studies on equity investors.

Taken together, the studies discussed above provide mixed results that give rise to several avenues of pursuit. For example, the research on lenders

<sup>6</sup> Lowe and Pany [1995] examine three types of business relationships between the CPA firm and the client: the CPA firm is the prime contractor, the CPA firm is a subcontractor, and the CPA firm and client form a joint venture. No significant differences arise across the three types of business relationships.

seems to suggest a more consistent concern with provision of NAS than that on equity investors and it is important to understand why. One reason could be due to the types of NAS examined. The types of NAS represented in the lender research (internal control design, internal auditing, and cost accounting consulting as well as unspecified consulting) are much fewer than in the investor research. Hence, the results may be a function of the type of NAS. On the other hand, it may be the way the decisions are made in a market investment setting versus a private loan setting. For example, Brandon et al. [2004] conclude that bond ratings are not affected by NAS fees. This finding is contrary to evidence from other studies involving lending. However, bond ratings tend to be most relevant to capital market debt so that this may be in line with some of the equity investor evidence. A study conducted in Denmark by Quick and Warming-Rasmussen [2005] provides a further indication that setting may be important. The authors find that both shareholders and bank lenders perceive that NAS compromises auditor independence. Moreover, contrary to prior findings, the respondents do not perceive a greater degree of independence if NAS are performed by a separate department of the audit firm. The study may be affected by being post-Enron despite other evidence from this period indicating that separate departments mitigate concerns. However, it may also indicate differences associated with the Denmark setting relative to the U.S. and New Zealand settings of the other studies.

### 2.3 Future Research on Users' Judgments and Decisions

The large number of studies discussed in this section suggests that, in some instances, the provision of NAS negatively affects users' perceptions of auditor independence. But what is missing from the current body of research is a framework that explicates the effect of NAS on different user groups. Prior studies have used a wide cross-section of users, who vary in knowledge and sophistication. All else being equal, different groups may be affected differently by the auditors' provision of NAS. As mentioned above, investors and lenders can react differently because they are making judgments and decisions in different contexts. The auditor's provision of NAS potentially affects the perceived reliability of financial data. The impact may differ when considering future earnings potential (i.e., an investment opportunity) as opposed to assessing risk and creditworthiness (i.e., a lending opportunity). We encourage future research to examine "decision context" and, more specifically, that of lender versus investor when gauging the effect of NAS on users' behavior. The issue is primarily one of direct comparability. Experimental studies can be designed such that three factors are manipulated, including the auditor's provision of specific NAS (e.g., tax services provided versus tax services not provided), decision context (e.g., credit risk versus investment risk), and user (e.g., investor versus lender. An intriguing question is whether the provision of NAS has different effects on users assessments, conditioned on the decision context and the type of user. Future study also is needed to delineate the effect of NAS on different types of investors, including novices, nonprofessionals, and investment professionals (e.g., fund managers, financial analysts, etc.). Experimental research in financial accounting investigates different groups of

financial statement users and, not surprisingly, finds differences in judgments (e.g., Elliott et al. [2004]). This line of research can be extended to address the effect of the auditor's provision of NAS: i.e., whether different types of investors react differently.

As mentioned earlier, prior studies have looked at many different types of NAS. A direction for future study is the auditor's provision of tax services. Some contend that performing an audit of financial statements *and* preparing corporate taxes are inextricably linked. Kinney et al. [2004] provide evidence that tax work can be beneficial for financial statement quality. The most recent fee disclosure requirement, mandating separate disclosure of tax fees, provides ready data for archival study. Researchers can assess whether tax fees relative to audit or total fees affect users' judgment and decisions: e.g., the association between earnings response coefficients and tax fees or between leverage (creditworthiness) and tax fees. Empirical evidence suggests that companies may be concerned with the ratio of tax fees to audit fees. Maydew and Shackelford [2005] estimate that the ratio has fallen dramatically in recent years – from 100 percent in 2001 to 25 percent in 2004.

Another important avenue for future research is to explore the sensitivity of findings to procedural and design choices. Dopuch et al. [2003] provide participants with a belief as to the relationship between the provision of NAS and auditor independence. Zhang [2003] suggests that by supplying a belief, the procedure has a strong effect on participants' behavior, which is borne out by the study's findings. Pany and Reckers [1987] suggest that experimental settings can be sensitive to the use of a within- versus between-subjects design. Further, the specific wording used to elicit responses can be very important. This aspect, though often ignored, can be quite powerful in explaining inconsistent findings (e.g., Ruffle and Tykocinski [2000]; Plott and Zeiler [2005]). Table 1 contains a summary of the main findings in this section, as well as the areas for future research mentioned above.

### 3.0 AUDITORS' JUDGMENTS AND DECISIONS

In this section, we consider the effect of NAS on auditors' perceptions/decisions. A handful of studies examine whether auditors perceive NAS as compromising independence. We review these studies and then turn to research that addresses whether NAS, in fact, affects auditor behavior (effort and judgment) and, ultimately, the output of the audit (the audit opinion). If NAS negatively affects auditor behavior, then auditor independence may be compromised.

#### 3.1 Perceptions of Independence

Accountants may have a different perspective, compared to others, as to whether NAS can impair auditor independence. Accountants are generally knowledgeable of the American Institute of Certified Public Accountants' (AICPA) Code of Conduct, which prescribes acceptable behavior. Account-

Table 1  
Summary for Users' Judgments and Decisions

Panel A: Summary of Main Findings	Studies	Main Finding
Reckers & Stagliano [1981]	Analysts' perceptions of auditor independence are not affected by NAS.	
Jenkins & Krawczyk [2003]	The general publics' perceptions of auditor independence are not affected by NAS.	
Mauldin [2003]	Professional investors' perceptions of auditor independence are negatively affected by internal audit and merger and acquisition services.	
Pany & Reckers [1984]; Lowe & Pany [1996]; Lowe et al. [1999]; Hill & Booker [2004]; Swanger & Chewning [2001]	Using different personnel to perform the audit and NAS mitigates users' (analysts, state accountancy regulators, lenders, and stockholders) concerns.	
Pany & Reckers [1983]	Board members are less likely to approve NAS as the NAS fee increases.	
Gaynor et al. [2005]	Board members, acting as audit committee members, are less likely to approve NAS when public disclosure is required.	
Lowe & Pany [1996]	Analysts' and lenders' perceptions of auditor independence are negatively affected when the auditor provides NAS with the client to third parties. Perceptions become more negative as the materiality of the business relationship increases.	
Dopuch & King [1991]	NAS does not affect asset price in experimental markets.	

Table 1 (Continued)  
Summary for Users' Judgments and Decisions

Panel A: Summary of Main Findings	Studies	Main Finding
	Dopuch et al. [2003]; Davis & Hollie [forthcoming]	When experimental market participants are provided with a prior on the association between NAS and auditor independence, asset price is affected (i.e., the belief is reflected in asset price).
	Church & Zhang [2005]	NAS affects experimental market participants' willingness to sue the auditor to recoup losses.
	Frankel et al. [2002]	Negative association between NAS fees and abnormal returns.
	Ashbaugh et al. [2003]	No relation between NAS fees and abnormal returns.
	Chaney & Philipich [2002]	No association between NAS fees and cumulative abnormal returns for Andersen clients following Andersen's admission of document shredding.
	Krishnan et al. [2005]	Negative relation between NAS fees and earnings response coefficient.
	Glezen and Millar [1985]	Shareholder approval of auditors is not associated with NAS fees.
	Raghunandan [2003]; Mishra et al. [2005]	Shareholder approval of auditors is negatively associated with NAS fees.
	Raghunandan & Rama [2003]	When NAS fees are high, shareholders are more likely to approve auditors when audit committees consist entirely of independent directors.

Table 1 (Continued)  
Summary for Users' Judgments and Decisions

Panel A: Summary of Main Findings	Studies	Main Finding
	Abbott et al. [2003]	Audit committee effectiveness is negatively associated with NAS fees.
	Lee & Mande [2005]	No relation between NAS fees and audit committee effectiveness.
	Ghosh et al. [2005]	Mixed findings on the association between NAS fees and audit committee effectiveness;
	Abbott et al. [2004]	Audit committee effectiveness is hampered by outsourcing recurring internal audit activities.
	Lavin [1976]	Type of NAS affects users' perceptions of auditor independence.
	Pany and Reckers [1987]	Lenders' perceptions of auditor independence are affected negatively by NAS in a within-subject design, but not in a between-subject design.
	McKinley et al. [1985]; Pany & Reckers [1988]	NAS does not affect lenders' perceptions of auditor independence.
	Shockley [1981]; Lowe et al. [1999]; Thornton et al. [2004]	Lenders' perceptions of auditor independence are negatively affected by NAS.
	Thornton et al. [2006]	Lenders' and analysts' assessments of the effect of NAS on auditor independence reflect a self-serving bias.

Table 1 (Continued)  
Summary for Users' Judgments and Decisions

Panel A: Summary of Main Findings	Studies	Main Finding
	Knapp [1985]; Gul [1991]	Lenders perceive that the auditor resolves disputes in favor of the client when NAS fees are high.
	Quick & Warming-Rasmussen [2005]	Lenders and stockholders in Denmark perceive that NAS impairs auditor independence, even when separate personnel perform the audit and NAS.
	Panel B: Future Research Questions	<ul style="list-style-type: none"> <li>● How does decision context affect users' assessments of the auditor's provision of NAS?</li> <li>● How does the type of NAS affect users' assessments of the auditor's provision of NAS?</li> <li>● What differences emerge across different types of users (e.g., novice investor, nonprofessional investor, professional investor, and lender) in assessing the auditor's provision of NAS?</li> <li>● Can the provision of tax services have a positive effect on users' assessments of the auditor's provision of NAS?</li> </ul>



ants also have unique insight into the performance of an audit and may have first-hand experience as to the potential impact of NAS on independence in fact. Studies in this area use a wide cross-section of accountants and a variety of NAS situations and indicate that accountants find cause for concern in some, but not all, NAS situations.

Lavin [1976] surveys members of the AICPA (in addition to bank loan officers and financial analysts) and asks them to assess various auditor-client conflict situations, with three involving NAS.<sup>7</sup> Lavin finds that accountants have concerns about impaired independence only when the auditor provides significant accounting and bookkeeping services, suggesting that the type of NAS matters. Dykxhoorn and Sinning [1981] extend Lavin [1976] using German auditors and find similar results. Shockley [1981], on the other hand, surveys audit partners (along with bank loan officers and financial analysts) to determine whether perceptions of independence are affected by NAS and other factors, including auditor size, the competitiveness of the auditor's environment, and auditor tenure. He finds that, while partners have greater independence concerns when the auditor provides NAS, NAS is less important relative to auditor size and the competitiveness of the auditor's environment. This suggests, consistent with the investor evidence, that the nature of the business relationship matters.

In a more recent study, Jenkins and Krawczyk [2003] survey a cross section of CPA firm professionals, examining six types of NAS (see section 2.1.1). The results indicate that, while the general public's perceptions are not negatively affected by any of the six, CPAs' perceptions are negatively affected by the provision of bookkeeping (consistent with Lavin's evidence) and by legal consulting services. Thornton et al.'s [2004] survey of a cross-section of accountants (auditors, public accountants not involved in auditing, and industry accountants) also finds that NAS are generally perceived to compromise independence, although auditors are the least concerned. Beaulieu and Reinstein [2006] test the effects of providing summaries of academic NAS research on the beliefs of various accountant groups. Before reading these summaries, non-auditors working in small CPA firms believed that providing NAS to audit clients impairs independence more than did other practitioners (auditors working in small CPA firms, as well as both auditors and non-auditors working in large CPA firms). After reading the summaries, the non-auditors working in small CPA firms revised their beliefs more so than the other practitioners.

In general, research findings suggest that NAS can affect accountants' assessments of auditor independence. But the results point to specific types of NAS, such as bookkeeping services, and the types that cause concern for accountants differ in some cases from those that cause concern for users. A potentially important issue is whether different decision contexts or individual differences affect research findings. Notably, Gul [1987] provides evidence that cognitive style affects accountants' assessments of independence. If cog-

<sup>7</sup> For all three situations (maintaining payroll and other accounts, transmitting client-prepared data, and bookkeeping), the Securities and Exchange Commission's position, at the time, was that independence was impaired.

nitive styles affect assessments within the accounting profession, they may be even more likely to affect assessments across people in different professions. The studies discussed in our review paper clearly examine a wide cross-section of users and CPAs. Some of the mixed findings may be attributable to individual differences between studies or between participants following different career paths.

### 3.2 Auditor Behavior

Some research examines whether auditor effort and judgments “in fact” are affected by the provision of NAS. With respect to independence, evidence of lower effort might suggest a less thorough, and by implication less independent, audit. However, determining how effort choices affect audit quality in the presence of NAS is not easy. The implications for independence are confounded by the potential for knowledge spillovers which some contend arise from NAS, with the result being that auditor effort can be reduced while holding quality constant. Unfortunately, the presence of knowledge spillovers is debated and research does not provide clear-cut evidence, making it largely impossible to control for such effects (e.g., Antle et al [2002], Beck et al. [1988a]; Gigler and Penno [1995]; Wu [2006]). We review three studies that examine the effect of NAS on auditor effort choices, with each study employing a different research method. Then, we review research dealing with the effect of NAS on auditor judgment – whether judgments favor the client when NAS are provided.

#### 3.2.1 Auditor Effort

Few studies examine the association between audit effort and NAS, largely because data on the auditor’s production function are not readily available, and the three studies reviewed here provide inconclusive results. Using proprietary, working paper data, Davis et al. [1993] find a positive relationship between tax services and three audit effort measures and between accounting-related consulting services and audit hours weighted by billing-rate ratios. The findings suggest that additional effort is required in auditing clients that purchase NAS. These results are *not* consistent with claims that performing NAS provides auditors with incentives to compromise independence.

Dopuch and King [1991] use an experimental economics approach and find that auditors who provide NAS reduce audit testing as compared to auditors who do not provide NAS. The reduced testing, however, may be justified due to knowledge spillovers arising from NAS. The existence of knowledge spillovers is implicit in the experimental design. Yet, as mentioned earlier, research on this issue is unclear. Wu [2006] points out that the effect of knowledge spillovers on the auditor’s production function is quite complex.

Taking a different approach, Felix et al. [2005] examine whether NAS affects external auditors’ reliance on the work of internal auditors. Such reliance directly affects external auditors’ effort: more reliance implies less effort, though the reduced effort may be justifiable. Felix et al. [2005] survey internal and external auditors from 74 audit engagements and find that when signifi-

cant NAS is provided, client pressure to rely on the work of internal auditors affects auditors' reliance decisions. Notably, in such cases, internal audit quality and internal-external auditor coordination are not associated with auditors' reliance decisions. Hence, when significant NAS is provided, client pressure may affect the performance of the audit – and not necessarily for the better.

Overall, the findings do not offer a clear picture as to the effect of NAS on the auditor's effort choice. Additionally, the interpretation of the findings is muddled by uncertainty surrounding the presence and/or effect of knowledge spillovers.

### 3.2.2 Auditor Judgment

Studies that examine issues involving NAS and judgments do not provide evidence of compromised independence. Ponemon [1995] focuses on one specific NAS – litigation support. Auditors as well as litigation support specialists take the role of an accounting expert in an experiment that involves a lawsuit revolving around damaged inventory. Results indicate that the litigation support specialists' judgments are sensitive to the legal positions of their clients. In contrast, the auditor respondents show no such bias in favor of their clients' economic interests.

Davidson and Emby [1996] examine whether auditors' evaluation of internal control is affected by knowledge that their firm designed changes to the client's control system. One hundred and twelve Canadian auditors participate in the study, which manipulates the party responsible for the systems design changes (the auditing firm's systems design group versus the client's chief accountant) and the strength of the new control system (stronger versus weaker). The main effect for system designer is not statistically significant. Auditors' evaluations are not affected by the party responsible for design changes. However, a statistically significant interaction effect is found. Auditors react more strongly to changes designed by the auditing firm than to those designed by the client. When the changes designed by the auditing firm weakened (strengthened) the control system, the auditor increased (decreased) testing to a greater extent than when the client designed the changes.

Emby and Davidson [1998] investigate influences of management advisory services and other factors on the relative negotiating power of auditors and their clients. Practicing Canadian auditors evaluate a case describing an auditor-client dispute over the disclosure of a contingent liability. The results indicate that auditors are more likely to insist on disclosure when they provide management advisory services of a specialized nature to the client. The size of the participants' audit firms relative to the size of the client does not influence the auditors' judgment.

Asare et al. [2005] examine whether the potential to earn NAS fees entices auditors to accept high risk clients. Also, when high risk clients are accepted, they ascertain whether staffing decisions are made to compensate for such additional risk in an effort to maintain audit quality. An experiment with 73 audit partners reveals that a higher (lower) level of client risk decreases (increases) the likelihood of client acceptance and this relation does not depend on the provision of NAS. Moreover, the auditors' staffing strategies vary with the

level of client risk but not with the potential for providing NAS, suggesting that audit quality is not impacted by the provision of NAS.

The studies discussed above do *not* provide any evidence that NAS compromises auditor objectivity: that is, independence in fact is maintained, regardless of whether the auditor provides NAS. However, consistent with evidence for equity investors, the greater likelihood to disclose contingent liabilities when NAS is provided could suggest that independence in appearance may be impaired. Further, additional research is called for to provide insight on the auditor's ability to maintain objectivity in a real setting, which includes factors that are difficult to implement in the laboratory, several of which previously mentioned studies have suggested interact adversely with NAS provision (e.g., relations with a client that have developed over time, client pressures, CPA firm pressures, etc.).

### 3.3 Audit Opinions

Extant studies use analytical and archival methods to examine whether auditors report more favorably for companies that acquire NAS. The archival findings for Australia are suggestive of a potentially weak relation between provision of NAS and more favorable opinions, while the two U.S. studies show no such relation.

In the one analytical paper, Kornish and Levine [2004] use a common agency model to analytically investigate whether NAS affects the auditor's opinion. The authors demonstrate that in a single-period setting, managerial discretion over NAS fees can cause auditors to issue unqualified opinions on reports that do not warrant them. This result, however, unravels in a multi-period setting, leaving no incentive to provide unwarrantedly favorable opinions. In addition, Kornish and Levine [2004] show that if an audit committee has the power to retain or dismiss the auditor, the auditor has an incentive to report truthfully over time (i.e., to maintain independence in fact), regardless of NAS fees. This is consistent in spirit with the investor findings showing that active audit committees limit NAS.

Several empirical studies also examine the association between NAS fees and the auditor's opinion. Wines [1994] analyzes audit reports for publicly listed companies on the Australian Stock Exchange from 1980 to 1989. He finds that companies receiving unqualified reports over the time period spend more on NAS than companies receiving at least one audit qualification.

Barkess and Simnett [1994] collect data for the majority of the top 500 companies listed on the Australian Stock Exchange from 1986 to 1990 and find no significant relationship between NAS fees and audit qualifications. Craswell [1999] reports similar results, again using a sample of Australian companies. In contrast, Lennox [1999] studies the association between NAS fees and the auditor's opinion in the United Kingdom. In 1989 a proposal was introduced in the U.K. to require disclosure of NAS fees, ultimately becoming effective for years beginning after October 1, 1991. Approximately one-third of listed companies chose to disclose NAS fees early (i.e., before the requirement became effective). Using the sample of early disclosers, Lennox finds a positive weakly significant relationship between NAS fees and audit qualifica-

tions – companies having higher NAS fees are more likely to receive a qualified opinion. This result is made potentially stronger because these are the firms that chose to disclose early. Later disclosers may be more likely to include firms for whom NAS provision favorably affects the audit opinion.

Other studies focus on financially distressed companies. Sharma and Sidhu [2001] estimate a logit model, based on a sample of 49 bankrupt public Australian companies, to assess the auditor's propensity to issue a going-concern opinion. They find that the likelihood of a going-concern opinion decreases as the ratio of NAS to audit fees increases, suggesting that the auditor's independence may be impaired by NAS. Sharma [2001] reports a similar result. DeFond et al. [2002], however, perform a more-exhaustive analysis, using a U.S. sample of 1,158 financially distressed (though not necessarily bankrupt) companies filing with the SEC. They fail to find a significant relation between the auditor's propensity to issue a going-concern opinion and the ratio of NAS to audit fees and NAS to total fees. Moreover, the findings are robust to controlling for unexpected fees, endogeneity among the variables, and various alternative design specifications. Geiger and Rama [2003] report a similar result using a sample of 132 financially distressed U.S. manufacturing companies.

Looking further at the research on financially-distressed companies, the ratio of NAS to total fees appears to differ substantially across studies. In Sharma and Sidhu [2001] and Sharma [2001], the ratio is much smaller than in DeFond et al. [2002] or Geiger and Rama [2003]. The disparity may be reflective of fundamental differences in relative amounts spent on NAS in Australia versus the U.S. Moreover, the two countries have different legal environments, which may affect auditors' actions (i.e., auditors in the U.S. may be particularly concerned with liability exposure as the NAS fee ratio increases).

The research findings presented above provide little evidence that NAS fees negatively affect the auditor's opinion for U.S. firms. However, the evidence with respect to Australian and U.K. firms is mixed. The Sharma and Sidhu [2001] and Sharma [2001] results for distressed firms are consistent with two studies on a more general sample, suggesting that provision of NAS may be related to more favorable opinions. Two other studies on a more general sample of firms, however, do not support such a relation. This, again, leads to the question of whether something about the context (different country environment, primarily large firms, distressed firms, or use of different personnel) or something about the type of NAS (do the samples differ with respect to the NAS that is most commonly provided) produces different responses to provision of NAS.

### 3.4 Future Research on Auditors' Judgments and Decisions

As Asare et al. [2005] point out, the potential to provide NAS may be a greater factor in a client continuance decision than in the client acceptance decision which they examined. Hence, future research can extend Asare et al. [2005] to examine whether the potential to earn NAS fees entices auditors to retain clients and how this compares with client acceptance decisions when NAS is involved.

Several of the studies above found an association between NAS provision and audit opinions (Wines [1994], Sharma and Sidhu [2001], and Sharma [2001]). Arrunada [1999, p. 519] suggests that these studies probably suffer from selection bias because firms that do not purchase NAS are likely to be in worse financial condition than those firms that purchase NAS. Future research on this issue should, therefore, control for firms' financial condition.

None of the research in the area of auditor judgments and decisions has looked at whether penalties or sanctions on the auditor or audit firm have any influence. Future studies can test whether penalties or sanctions relating to independence impairment from NAS provision affect auditors' effort or opinions rendered.

Another neglected aspect of auditor judgments has been the provision of NAS for non-audit clients rather than for audit clients, as no study has investigated this issue. The knowledge spillover argument mentioned earlier might lead one to hypothesize that limiting NAS to non-audit clients would result in lower quality audits, as auditors would not have the knowledge that could have been obtained from providing NAS. Alternatively, another hypothesis might be that more audit effort would need to be expended to achieve the same audit quality as when auditors have acquired knowledge through providing NAS. Future research can test these hypotheses.

Moore et al. [2006] have proposed a theory of moral seduction which can be tested in the context of NAS. One component of this theory is that "ethical lapses are more likely to occur gradually, as the result of the process of escalation, than they are to occur rapidly (p.22)." Future research can examine how quickly independence impairment occurs when NAS are provided. Another component of moral seduction theory is that in addition to intentional bias, unconscious bias exists and each type of bias responds to different incentives. Future research can investigate how each type of bias resulting from the provision of NAS responds to various incentives. Also, when might unconscious biases transform into conscious ones?

The issue of unconscious bias may be particularly problematic. Bazerman et al. [2002] assert that even though auditors try to be objective and impartial, they may be swayed unconsciously by client preferences. The nature of the auditor-client relationship (i.e., the client hires the auditor) and the ambiguity inherent in financial reporting (e.g., the interpretation and application of GAAP) may result in the auditor unintentionally exhibiting bias (e.g., Bazerman et al. [1997]). Research indicates that when individuals are asked to make impartial judgments, their judgments are often biased, unconsciously in a self-serving manner (e.g., Loewenstein et al. [1993]). Bazerman et al. [1997] suggest that the bias is very powerful and eliminating it can prove very difficult: how do you get rid of a bias that arises outside the realm of consciousness? One possibility is to mandate auditor retention for a certain period of time (Bazerman et al. [2002]). We encourage future study to investigate means to mitigate unconscious, self-serving biases that may arise from the provision of NAS. Table 2 contains a summary of the research questions posed in this section, as well as a summary of main findings.

Table 2  
Summary for Auditors' Judgments and Decisions

Panel A: Summary of Main Findings	Studies	Main Finding
Lavín [1976]; Dykxhoorn & Sinning [1981]; Jenkins & Krawczyk [2003]	Shockley [1981] Thornton et al. [2004] Beaulieu & Reinstein [2006] Gul [1987] Davis et al. [1993] Dopuch & King [1991] Felix et al. [2005] Ponemon [1995] Davidson & Emby [1996]	Impairment of independence depends on type of NAS.  NAS is less important than auditor size or competitiveness. Auditors are less concerned about NAS than other accountants. Academic NAS research affects beliefs of non-auditors. Cognitive style affects assessments of independence. Additional effort is required in auditing clients that purchase NAS. Auditors who provide NAS reduce audit testing. When NAS is provided, client pressure may affect audit performance. In litigation support, auditors are not biased in favor of clients' interests. Auditors react more strongly to internal control design changes made by the audit firm than those made by the client.
Emby & Davidson [1998]		Auditors are more likely to insist on contingent liability disclosure when they provide NAS of a specialized nature.
Asare et al. [2005]		Audit quality is not impacted by the provision of NAS.
Kornish & Levine [2004]		When an audit committee can retain or dismiss an auditor, the auditor has an incentive to report truthfully, regardless of NAS fees.

Table 2 (Continued)  
Summary for Auditors' Judgments and Decisions

Panel A: Summary of Main Findings	Studies	Main Finding
Wines [1994]	Barkess & Simnett [1994]; Craswell [1999]	Companies receiving unqualified audit opinions spend more on NAS than companies receiving at least one audit qualification.
Lennox [1999]	Sharma & Sidhu [2001]; Sharma [2001]	No significant relationship between NAS fees and audit qualifications.
DeFond et al. [2002]; Geiger & Rama [2003]	Lennox [1999]	Positive relationship between NAS fees and audit qualifications.
Panel B: Future Research Questions	Sharma & Sidhu [2001]; Sharma [2001]	Likelihood of going concern opinions decrease as NAS ratios increase.
	DeFond et al. [2002]; Geiger & Rama [2003]	Likelihood of going concern opinions are unrelated to NAS ratios.
		Panel B: Future Research Questions
●		Does the potential to earn NAS fees entice auditors to retain clients, how does this compare with client acceptance decisions?
●		Are the associations found between NAS provision and audit opinions affected by client firms' financial condition?
●		Do penalties or sanctions for independence impairment due to NAS affect audit effort or audit opinions?
●		How quickly does independence impairment occur when NAS are provided?
●		How do different types of bias resulting from NAS respond to different incentives?
●		How can unconscious, self-serving biases resulting from NAS be mitigated?



## 4.0 ACQUIRING NAS AND MANAGERS' BEHAVIOR

This section looks at research on the association between NAS and managers' decisions/actions. First, we review studies that focus on the purchase of NAS from the incumbent auditor, including the amount and type of NAS purchased, because this sets the context for potential impairment of independence. Next, we turn to studies that examine the association between NAS and auditor tenure: that is, managers' decisions to retain the incumbent auditor when NAS are provided. As mentioned above, the auditor may be more accommodating when NAS are acquired over time. Afterwards, we consider studies on managers' behavior: specifically whether companies that acquire NAS are better able to manage earnings. The implication is that if NAS impairs independence in fact, earnings management may be more rampant when NAS are acquired.

### 4.1 NAS Purchases

Much of the research on NAS and managers' decisions addresses the amount and type of NAS purchased from audit firms. Studies often investigate the percentage of companies acquiring NAS from the incumbent auditor. Palmrose [1988] reports that out of 269 public and 92 privately held companies, 81 percent purchase some NAS, mostly from the incumbent. Francis and Pollard [1979] find that of 929 Australian companies, 74.5 percent acquire NAS from the incumbent. Barkess and Simnett [1994] report that from 1986-1990, an increasing number of the top 500 Australian companies purchase NAS from the incumbent auditor. Of note is that the amount of NAS (as proxied by the ratio of NAS to audit fees) varies considerably across studies.

Research on the type of NAS purchased from incumbents tends to be piecemeal rather than building upon itself. Reckers and Stagliano [1981] examine 100 SEC registrants and report that the most common type of NAS purchased from the incumbent is actuarial services/pension reviews. Scheiner and Kiger [1982] find that tax services are the most common type of NAS purchased from the incumbent. Using a sample of Australian companies, Francis and Pollard [1979] find that that non-recurring NAS are primarily purchased from the incumbent.

Two studies investigate the association between managers' purchase of NAS and agency costs. Parkash and Venable [1993] find that the amount of NAS purchased from the incumbent varies with proxies for agency costs. Firms with more dispersed ownership and little management ownership purchase fewer NAS. Firth [1997], on the other hand, finds that fewer NAS are purchased by companies with larger director shareholdings and larger "largest" shareholders, implying that lower ownership concentrations are associated with larger purchases of NAS – the complete opposite of Parkash and Venable [1993]. The results reported by Mitra and Hossain [2006] support Firth's findings. They find no relationship with the combined percent of shares owned by institutional owners with 5 percent or less, but they find a negative relationship between the proportion of NAS fees and the percent of shares owned by large

shareholders (5 percent or more). However, the results for their large shareholders hold only for firms in the middle two quartiles of their size measure, and they have no explanation for this result. More research is needed, with more refined measures for agency costs, to better understand the relation between such costs and NAS purchases from the incumbent.

Other research examines whether mandated disclosure requirements (e.g., fee disclosures) affect the purchase of NAS from the incumbent. The underlying notion is that if NAS purchases imply that auditor independence is impaired or that the appearance of independence is compromised, mandating disclosure may reduce the purchase of NAS. Such actions may be necessary to restore financial statement reliability. Scheiner [1984] finds little evidence that the amount or type of NAS purchased from the incumbent is affected by the U.S.'s ASR No. 250 required disclosures. However, Iyer et al. [2003], using mandated fee disclosures in the U.K. that became effective in 1992, find that early adopters purchase fewer NAS and have a smaller NAS to audit fee ratio than other companies. In a more recent U.S. study, Hackenbrack [2004] documents that while the SEC's fee disclosure requirement (mandated in 2000) has not affected the overall quantity of NAS purchased, the purchase of NAS from the incumbent decreased.<sup>8</sup> Omer et al. [2006] provide evidence that mandated tax fee disclosures (in 2003) affect the purchase of auditor-provided tax services. Firms that have a short association with the auditor cut back on the purchase of auditor-provided tax services. By comparison, firms that have a longstanding relation with the auditor do not appear to alter decisions to purchase tax services. Lastly, Gaynor et al. [2005], discussed earlier (refer to section 2.1.1) report that auditor committee members are less likely to approve NAS from the incumbent when fees are disclosed, even if audit quality is improved.

The NAS landscape has changed dramatically over time (Abbott et al. [2003b]) but the majority of the research reviewed (on NAS purchases) was performed before the late 1990s. It is not surprising that recent studies find a decrease in NAS purchased from the incumbent. Managers are likely concerned that the magnitude of NAS purchased from the incumbent affects stakeholders' assessments of auditor independence: that is, independence in appearance is more likely to be compromised as the amount of NAS acquired increases. However, relatively little is known about *what* factors affect managers' decisions to acquire NAS, let alone the specific type of NAS. In addition, the research discussed earlier concerning audit committees indicates that more research is needed to assess the effect of corporate governance mechanisms on decisions to acquire NAS in today's environment. Finally, consideration needs to be given to what type of NAS should be allowed versus banned. Regulators do not allow the auditor to provide certain NAS, but it is unclear whether the bans are necessary or whether other NAS should be prohibited. The issue is particularly relevant in that section 202 of SOX allows the Public Company Accounting Oversight Board to ban other NAS if such services are deemed impermissible (see also Asare et al. [2005]).

<sup>8</sup> Also of note is that Hackenbrack's study includes a much larger sample (8,038 firms) than that in Iyer et al. (156 firms) or Scheiner (340 firms).

## 4.2 Auditor Tenure and NAS

A few studies consider the effects of NAS on auditor retention. An auditor's provision of NAS to clients may depend upon maintaining a continuing audit relationship with management from year-to-year. Therefore, management's decision to retain the auditor could cause auditors to compromise decisions/judgments in the interests of that relationship, thus impairing independence. Alternatively, the decision to retain the auditor could be due to the auditor's increasing understanding of the firm, thus suggesting greater economic efficiencies.

Beck et al. [1988a] develop an analytical model demonstrating that the nature of NAS engagements – whether recurring or nonrecurring – affects the strength of the economic bond between managers and the auditor. Because knowledge spillovers from recurring NAS presumably lower the present value of economic rents, the incremental manager-auditor bond from recurring engagements is reduced. In contrast, knowledge spillovers from nonrecurring NAS engagements increase this bond. However, tests of the model do not support the predictions (Beck et al. [1988b]). The failure of empirical data to support the theoretical model may revolve around incorrect assumptions regarding knowledge spillovers. As mentioned previously, the presence and effect of knowledge spillovers is the subject of much debate.

DeBerg et al. [1991] examine the relation between NAS purchases and manager's decision to change auditors. They find no significant differences between the level of total, recurring, and nonrecurring NAS purchased by a sample of companies changing auditors and a matched sample not changing auditors. For companies changing auditors, however, DeBerg et al. document a significant decrease in the average amount of NAS purchased immediately following the auditor change. The successor auditor provides fewer total NAS and fewer recurring NAS than the predecessor. The implication of this latter finding is not clear but seems to say little with respect to auditor independence.<sup>9</sup>

Iyer and Rama [2004] conduct a survey of company officers (CEO, CFO, controller, and treasurer) to identify factors that respondents perceive to affect auditor judgment. The authors are interested in factors that may cause the auditor to be swayed in an accounting disagreement (i.e., swayed towards the client's position). Respondents indicate that auditor tenure is a relevant factor, but the purchase of NAS is *not* relevant. Moreover, contrary to conventional wisdom, respondents perceive that auditors with short tenure are more susceptible to being persuaded than auditors with long tenure.

Consistent with this latter result Ghosh et al. [2005] find a significant positive relationship between auditor tenure and the NAS fee ratio which they attribute to economic efficiency. They examine 8,918 U. S. firm years during the 2000-2002 period. Their interpretation that this relationship is consistent with economic efficiency rather than managerial opportunism draws on the

<sup>9</sup> DeBerg et al. suggest that companies changing auditor may purchase fewer NAS because (1) the companies are making efforts to control the total fees paid to CPA firms or (2) the companies are unwilling to purchase NAS from the successor until an ongoing relationship is established.

literature examining audit tenure and audit quality. Johnson et al. [2002] and Myers et al. [2003] show that abnormal accruals decrease as auditor tenure increases while Ghosh and Moon [2005] show that the earnings response coefficient increases with auditor tenure. In both cases, this implies that audit quality increases with audit tenure, suggesting that any relationship between tenure and NAS is likely to be due to economic efficiencies from the auditor's increased understanding of the firm.

The studies discussed above do *not* provide any evidence that NAS and auditor tenure, *in combination*, are associated with an impairment of independence. However, most of the research (Beck et al. [1988a; 1988b]; DeBerg [1991]) is dated: the NAS data are collected from the period surrounding ASR No. 250 (circa 1978). As mentioned earlier, the NAS environment is much different today than it was in the 1970s and 1980s (Abbott et al. [2003b]). Additional archival research on the association between NAS, auditor tenure, and auditor judgment/decisions (e.g., audit opinion) may provide important insights. For instance, DeFond et al. [2002] report that the issuance of going-concern opinions is not affected by the provision of NAS. Auditor tenure is a potential moderator variable that could be examined. Experimental/survey research also could address whether other user groups' perceptions of auditor independence (besides company officers) are affected by the combination of NAS and auditor tenure. Lastly, research in this area considers differences between recurring and nonrecurring NAS. Yet, there is no explanation as to how recurring versus nonrecurring NAS affects the relationship between the manager and auditor.

### 4.3 Earnings Management

Much recent research looks at whether NAS is related to earnings management or financial statement restatements, both potential outcomes of compromised auditor independence. Frankel et al. [2002] find evidence that firms which purchase more NAS also managing earnings more. Although the results do not support an association between NAS fees and a simple increase in earnings, they find that the magnitude of discretionary accruals and the likelihood of small positive earnings surprises are positively associated with NAS fees.

Three recent studies report results consistent with Frankel et al., but the results are due to a subset of the sample firms. Reynolds et al. [2004] find a similar significant positive association between the level of NAS fees and discretionary accruals; however, the results are driven by small-to-medium-sized high-growth companies, and in particular, companies in e-commerce, biomedical, telecommunication, and pharmaceutical industries which had initial public offerings. Larcker and Richardson [2004] use latent mixture models and find a similar positive association in their pooled sample. Importantly though, the latent mixture models indicate that a positive association between the NAS to total fee ratio and the absolute value of accruals occurs for only 8.5 percent of the sample. Furthermore, they find a significant negative association between the level of fees (audit and NAS fees) and accruals (i.e., higher fees are associated with smaller accruals). Finally, on a sample of 996 observations of S&P 500 firms from 2000 to 2002, Farag [2006] finds a relation between the

absolute value of discretionary accruals (scaled by lagged assets) and the ratio of NAS to audit fees, this relation is only significant for firms with above median persistence of earnings.

Elder et al. [2004] extend this line of research to commercial banks, an industry not included in earlier studies. Although they find a positive relation between NAS and both total and discretionary loan loss provisions, the relationship links the provision of NAS to *less* income-increasing discretion. Elder et al. also find no evidence that the amount of NAS is associated with a bank's ability to meet or beat earnings benchmarks.

Other studies, however, fail to find evidence of a link between NAS and earnings management. Ashbaugh et al. [2003] extend the tests of Frankel et al. using two measures that adjust discretionary current accruals for company performance and find no association between NAS and earnings management.<sup>10</sup> Chung and Kallapur [2003] replicate Frankel et al., but control for industry effects and find no significant association between NAS and earnings management. In other tests, Chung and Kallapur control for industry effects, corporate governance, and auditor expertise and find no significant relation between abnormal accruals and client importance (an attribute assumed to be related to independence) as measured by the ratio of NAS fees to audit firm revenues. Finally, Antle et al. [2002] develop a simultaneous equations framework and find no evidence of a significantly positive relation with abnormal accruals in the simultaneous estimation for either U.K. or U.S. firms.

In another study, Ferguson et al. [2004] looks at the relation between NAS and both earnings management (discretionary accruals) and regulatory investigation/financial statement restatements, using the latter as proxies for earnings management. The sample used in Ferguson et al. is comprised of U.K. firms. Contrary to the more recent U.S. evidence, they find that three measures of NAS are positively related to discretionary accruals and, thus, earnings management. The results are similar using the existence of public criticism, regulatory investigation, and earnings restatements. Ferguson et al. contend that their results may be attributable to lower litigation costs in the U.K. (relative to the U.S.) – meaning less concern surrounding the auditor's provision of NAS.

Using the existence of a class action lawsuit as evidence of earnings management, Bajaj et al. [2003] find a significantly positive relation with NAS for only the most severe cases. They examine 100 U.S. firms with class action suits filed against them in 2000 and 2001, and they define the most severe to be the third of the firms with the largest stock price drops. While their results support a positive relation between earnings management and NAS, suggesting impairment of independence, they acknowledge the possibility that omitted variables drive the result. For example, it may be that firms that cover up problems are also firms that need the most NAS advice.

Raghunandan et al. [2003] examine the association between NAS and financial statement restatements in the U.S. They collect a sample of 110 firms with restatements and 3,481 without restatements, with the data collected for

<sup>10</sup> Similar to Frankel et al., they find no association between NAS and the likelihood of simple earnings increases. But they also find no relation between the NAS to total fee ratio and either income-increasing discretionary accruals or meeting analysts' forecasts, nor do they find a relation between meeting forecasts and total fees.

2000 and 2001 fiscal years. After developing benchmarks for expected NAS fees, fee ratios, and total fees, Raghunandan et al. calculate unexpected values for each measure. They do not find any significant differences between firms with and without restatements. Also using restatements in the U.S. from 2000-2001, Agrawal and Chadha [2005] find a similar result that restatements are not related to NAS.

Finally, Kinney et al. [2004] examine the relationship between NAS and restatements of previously filed financial statements, but separating out different types of NAS. Kinney et al. do not find a positive association between fees for either financial information systems design and implementation or internal audit services and restatements. This finding is noteworthy because the auditor's provision of both types of NAS has been criticized by regulators and the media as, by default, impairing independence. In addition, this is inconsistent with research discussed in the other sections of this paper that find a relation between these two types of NAS and independence impairment. However, Kinney et al. report a significant positive association between unspecified NAS fees and restatements, which is consistent with the unspecified consulting findings for lenders. Finally, they report a negative association between tax service fees and restatements, suggesting that net benefits derive from the auditor performing tax work. It should be noted, however, that this study's limitations include a survey-based sampling approach (with a potential for a significant amount of non-response bias) and a limited sample size. Furthermore, the identity of firms that have misstated earnings, but have not been detected, is unknown and can result in misclassification. The issue can be problematic if NAS fees of such companies are large.

The studies discussed above provide *some* evidence that is consistent with NAS impairing auditor independence, but the evidence is limited to particular types of firms and circumstances. Importantly, archival research demonstrates the impact of research choices in examining the association between NAS and manager behavior. Such choices include composition of sample firms (industry), research approach (cross-section versus time-series), measurement of NAS (percentage of NAS fees versus level of fees), and statistical method. In addition, archival research suggests that certain factors potentially mitigate independence concerns, including strong corporate governance, auditor expertise, and litigation environment. Future research is needed to look more closely into the role and effect of these factors on manager behavior when the auditor provides NAS. For instance, strong corporate governance may restrain the managers' behavior (i.e., curb earnings management), regardless of the amount spent on NAS. Likewise, reputational concerns associated with auditor expertise (e.g., industry specialist) may curtail earnings management, again irrespective of the amount spent on NAS.

#### 4.4 Future Research on Acquiring NAS and Managers' Behavior

The research relating to managerial decisions has reached a point where more focus is needed. This focus can most fruitfully shed light on four areas. One area in need is the ability to test across a consistent set of fairly specific

non-audit services. Research in the sections above has shown possible impairment in appearance and differences in behavior across specific non-audit services. Yet much of the research, particularly archival, is based on the mandated broad and changing service categories. At this time, a focus on specific areas can best be accomplished through analytical models and experimental research.

Analytical models are needed to indicate which types of NAS are most likely to result in impairment and which types are most likely to lead to efficiencies. The difficulty of modeling NAS decisions and consequences is discussed at length by Antle et al. [2002]. Experimental research can take a set of NAS categories and systematically compare them across various contexts that research to date has shown to have a potential impact: ownership structure, experienced versus inexperienced users, mandated versus voluntary disclosure, and auditor tenure. A stream of research that makes systematic comparisons across various types of NAS will allow us to better understand where impairment in either fact or appearance occurs, with respect to which users, and how disclosure might best serve this issue. This line of research also may aid in identifying specific types of NAS that should be allowed versus prohibited. The beauty of an experimental setting is that different types of NAS can be examined, even if a specific NAS is currently prohibited.

A second area of focus is that of confounding influences. Two factors discussed above are auditor tenure and the correlation between NAS and lawsuits. The basic problem is that relations are assumed rather than shown. With respect to auditor tenure, some research assumes that longer auditor tenure leads to an impairment of independence. Other research, drawing on the literature indicating a relation between tenure and audit quality, assumes that auditor tenure implies increased efficiency. With respect to the correlation between NAS and extreme lawsuits, the assumption is that increased NAS leads to impairment and, thus, to the conditions that cause extreme lawsuits. However, as noted in the literature, the correlation could be due to a correlated omitted variable. It may be that poor performance led to both the need for greater NAS and the resulting lawsuit. In both of these cases, measures need to be included in the research design to explicitly allow for the different interpretations. Controls for audit quality or either firm performance or the reason for the lawsuit might enable clearer interpretation. Alternatively, such research might benefit from the type of simultaneous equations model used in Antle et al. [2002].

A third area needing focus is that of earnings management research, where the results suggest that impairment may occur in small subsets of firms. Research into the specific circumstances that lead to impairment and into the particular types of NAS that result in impairment would be useful. As suggested earlier, the strength of corporate governance, auditor expertise, and litigation environment may affect the relation between NAS and earnings management. Research is needed to investigate the extent to which these factors override concerns that arise when the auditor's provision of NAS increases.

Finally, results from research in the first three areas can help pinpoint the particular data items to examine in archival research. One of the big problems with archival research is the number of observations lost due to missing values for some data items. For example, Mitra and Hossain [2006] started with the

2,593 NYSE firms in the 2000 Compustat Research Insight database, but ended up with only 335 in their sample. Other studies have even more dramatic reductions. A more focused understanding of the issues for particular types of firms can help refine the data requirements, leading to loss of fewer usable observations. In addition, analyzing the types of firms lost and comparing them to the firms that analytical and experimental research indicates are vulnerable, might help us better understand the implications of the archival research. Table 3 contains a summary of the main findings in this section, as well as the areas for future research mentioned above.

## 5.0 CONCLUDING REMARKS AND FUTURE RESEARCH

Historically, the NAS controversy has revolved around concerns that auditor independence is impaired – in fact or appearance. In this paper we have reviewed a wide body of literature that focuses on independence concerns. Below, we provide further suggestions for future research – revolving largely around the need for models that indicate what to expect and a more systematic treatment to address the conflicting results and unresolved issues. These suggestions fall broadly into four categories: the size versus the type of NAS, mitigating factors, the context, and research design issues.

### 5.1 Size versus Type of NAS

One consistent finding across three stakeholder groups (users, auditors, and managers) is that NAS *can* impair independence in appearance but does not seem to impair independence in fact. However, within the research on independence in appearance, there are conflicting results as to when NAS impairs independence. In some of the research, the size of NAS is related to independence concerns. Additionally, for both the user and auditor groups, the type of NAS also affects whether or not there are independence concerns. Moreover, the evidence is conflicting as to which types of NAS cause concern. This is, in part, due to having different studies examining different types of NAS, but also due to investors, lenders, and auditors having different concerns about the different types of NAS. Symptomatic of this conflict, Jenkins and Krawczyk [2003] find that CPAs are concerned about independence when bookkeeping and legal consulting services are provided, whereas the general public is not concerned. However, the most common NAS purchased (actuarial services/pension review (Reckers and Stagliano [1981]) and tax services (Scheiner and Kiger [1982])) are frequently not included in the NAS examined in the user and auditor studies. There is little evidence concerning the types that managers are most concerned about, as most of the manager-related research does not distinguish types (Kinney et al. [2004] is an exception). So, future research should further examine which types of NAS are most problematic for financial statement users, auditors, and managers. Moreover, do they prefer the more detailed disclosure requirements of ASR 250 or the more aggregated disclosures currently required?

Another distinction made in some, but not all, of the extant literature is between recurring and non-recurring NAS, however the implications are un-



Table 3  
Summary for Acquiring NAS and Managers' Behavior

Panel A: Summary of Main Findings	Studies	Main Finding
Palmrose [1998]; Francis & Pollard [1979]; Barkess & Simmet [1994]	Reckers & Stagliano [1981] Scheiner & Kiger [1982] Francis & Pollard [1979] Parkash & Veneble [1993] Firth [1997]; Mitra & Hossain [2006]	The majority of NAS purchases are from the incumbent auditor and this proportion has increased over time.  Actuarial services/pensions are the most common NAS. Tax services are the most common NAS. Non-recurring NAS are the most common type of NAS. More dispersed ownership is associated with fewer NAS. Large director and "largest" shareholdings are associated with fewer NAS.
Scheiner [1984] Iyer et al. [2003]; Hackebrack [2004]; Gaynor et al. [2005]	Omar et al. [2006]	Early US disclosures do not affect NAS purchase. UK and recent US disclosures are related to reduced NAS from incumbent.  Relation of tax service disclosures depends on length of time of relation between the firm and the auditor.
Beek et al. [1988a and 1988b]	Deberg et al. [1991]; Iyer & Rama [2004] DeFond et al. [2002] Ghosh et al. [2005]; Johnson et al. [2002];	Analytically knowledge spillovers from recurring NAS reduce the bond between auditor and firm but this is not supported empirically.  No relation between auditor tenure and NAS No relation between going-concern opinions and NAS. NAS is positively related to audit tenure because it is positively related to audit quality.

Table 3 (Continued)  
Summary for Acquiring NAS and Managers' Behavior

Panel A: Summary of Main Findings	Studies	Main Finding
	Myers et al. [2003]; Ghosh & Moon [2005]	
	Frankel et al. [2002]; Ferguson et al. [2002]	NAS is positively associated with earnings management.
	Larcker & Richardson [2004]; Farag [2006]; Reynolds et al. [2004]; Bajaj et al. [2003]	NAS is positively associated with earnings management but only for a subset of firms.
	Elder et al. [2004]	NAS is related to income increasing management.
	Ashbaugh et al. [2003]; Antle et al. [2002]; Chung & Kallapur [2003]	NAS is not related to earnings management in light of various controls: company performance, industry, simultaneous equations.
	Raghunandan et al. [2003]; Agrawal & Chadha [2005]	NAS is not related to restatements.
	Kinney et al. [2004]	Relation to restatements depends upon the type of service – unrelated to information systems and internal control services but related to unspecified NAS services.

Table 3 (Continued)  
Summary for Acquiring NAS and Managers' Behavior

Panel B: Future Research Questions

- What can analytical models tell us about which types of NAS are most likely to result in impairment and which types are most likely to lead to efficiencies?
- How do confounding factors such as auditor tenure and lawsuits affect the results?
- Under what circumstances would NAS cause the type of impairment in subsets of firms that would lead to earnings management?
- How can results of the questions above refine the relevant firms and data for a study so that fewer firms will be lost due to unusable data?

clear. Theoretical work suggests more independence problems for non-recurring NAS (Beck et al. [1988a]) while empirical work finds both a greater independence problem for recurring (Abbott et al. [2004]; Beck et al. [1988b]) and no relation (DeBerg et al. [1991]). The importance of the size of the relationship, the type of NAS, and whether it is recurring or non-recurring can muddy the waters of any results found when studies look at only one or two of these without taking into account the other(s). Models that examine how size, type, and frequency interact with both the perception of impaired independence and the incentives to impair independence across all three categories of agents would greatly enhance the ability of research to systematically study NAS independence concerns empirically.

## **5.2 Mitigating Factors**

In addition to finding that NAS impairs independence in appearance but does not impair independence in fact, the evidence suggests that, although users may perceive independence as being impaired, they do not behave as if it is impaired. The research on asset prices generally suggests that they are not affected by provision of NAS (for example, Dopuch and King [1991]; Ashbaugh et al. [2003]). Yet, investors' increased willingness to sue (Church and Zhang [2005]), the negative association between companies' earnings response coefficient (Krishnan et al. [2005]), and the association between active audit committees and lower NAS fees (Abbott et al. [2003a]; Abbott et al. [2004]) suggest that, even if individual users do not act as if NAS impairs independence, they do act as if they see provision of NAS as a justification for the appearance of impaired independence. Therefore, the question may not be so much whether NAS impairs independence as what needs to be done to reassure users that independence is not impaired in the presence of NAS. To this end, the extant literature suggests several potentially mitigating factors. Although the manager-related literature does not address differences associated with use of separate personnel for NAS and audit services, use of separate personnel consistently mitigates concerns for investors, lenders, and auditors. The type of corporate governance in place may also affect user perceptions. A strong audit committee mitigates concerns in both the user and auditor literature while the distribution of ownership mitigates concerns in the manager literature (although the direction is unclear). Finally, the results of whether long or short audit tenure interacts with provision of NAS to affect independence are unclear. However, consistent results in that area may also provide insights into how to decrease independence concerns.

## **5.3 Context**

The research reviewed here also suggests that conflicting results may be due to different contexts. Gul [1987] shows that different cognitive styles are associated with different independence concerns in professional accountants, suggesting that some of the conflicting results across the three categories might be due to the different cognitive styles required of or associated with investors, lenders, auditors, and managers. Reynolds et al. [2004] also find that

results differ for firms in particular industries who have just issued IPOs, suggesting that either industry or the issuance of an IPO may affect how users perceive NAS' effect on independence. Different litigation environments may also have an impact as the threat of litigation drives much of the concern by both managers and auditors over the appearance of independence. Therefore, studies in countries with a decreased litigation threat (such as the U.K. (Ferguson et al. [2004])), may find less concern for independence or more evidence of impaired independence than in the U.S. where the threat is typically considered to be the highest. Further, other differences in institutional and business environments across countries may affect the way NAS is perceived due to differences in what is considered acceptable or expected behavior (Quick and Warming-Rasmussen [2005]).

#### 5.4 Research Design Issues

Finally, the literature reviewed here suggests that design issues may affect the consistency of findings. All of the research is potentially sensitive to the inability to control for confounding effects such as spillover effects, which inhibit consistent interpretation of some of the extant studies (e.g., Beck et al. [1988a]; Dopuch and King [1991]).

An advantage of archival research is that, by using data from the business world, it incorporates all the richness of a capital market and its participants' actual behavior; however, a general weakness of archival studies is that the richness of the environment frequently makes it difficult, if not impossible, to pinpoint specific characteristics or situations. One particular problem relates to the inconsistent identification of NAS fees across companies and over time. For instance, companies often categorize some audit-related fees, such as audits of pension plan assets, as NAS. Measurement also gets noisy because, as of 2003, the SEC expanded the audit fee category to include "fees for services that normally would be provided by the accountant in connection with statutory and regulatory filings or engagements" (SEC [2003]). Thus, NAS/audit fee ratios obtained from data after 2002 may not be consistent with the way such ratios had been obtained from data before 2003. In addition, results of archival research can be sensitive to the method used: proxies for the scope of NAS, latent mixture models, time series versus cross-sectional designs, and the fact that the results may reflect only the marginal investor. For instance, Lee and Mande [2005], who use the natural log of NAS fees to proxy for the scope of NAS, obtain results different from Abbott et al. [2003a], who use the NAS fee ratio. And, finally, the need for a complete set of data can frequently drop the number of firms studied from the tens of thousands to thousands or even hundreds, making the results less generalizable.

These problems of noisy data are not found in the behavioral/experimental research studies, as these studies test theories by controlling the research environment through simplification or elimination of confounding factors. Hence, an experimental study can consistently define the audit and NAS fee categories and carefully regulate the information that is made available to study participants. Of course, experimental studies are limited by the need for a controlled environment without the complications in a real setting and the rela-

tively small number of observations drawn from populations that may not be random. In addition, experimental studies may be affected by the specific wording used, whether the context is sensitive to use of a within or between subjects design, and the difference between a real setting (with real wealth effects) and a hypothetical setting.

Overall, the extant literature suggests that provision of NAS by the incumbent auditor can result in independence concerns. However, these concerns do not seem to be mirrored by impairment in fact and are not consistent across studies. The differences in how NAS is measured, the types of mitigating factors included, the context within which NAS is assessed, and various design issues all contribute to an inability to consistently interpret the extant results. Creation of models to address these issues and to allow for a systematic treatment of the way NAS interacts with auditor independence will greatly enhance our understanding of whether provision of NAS by the incumbent auditor impairs independence in appearance and/or in fact as well as what we can do to mitigate any such problem.

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