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Merger and Acquisition Financial Reporting Outcomes: An Examination of Non-Audit Fees and the Impact on Auditor Independence

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INDEPENDENCE
by
Jimmy Carmenate

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Signature Page

Dedication

I would like to dedicate this dissertation to my maternal grandmother, Marta Lopez. Thank you for teaching me to read, write, and do arithmetic before my first day in kindergarten. Thank you for continuously instilling in me the importance of higher education and teaching others.

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ABSTRACT

MERGER AND ACQUISITION FINANCIAL REPORTING OUTCOMES: AN
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For over 40 years, the issue of auditors providing both auditing and non-audit

services (NAS) to their audit-clients continues to be at the forefront of concerns to

regulators, investors, and academics. The literature primarily provides two competing

effects of NAS on financial reporting quality. The first being the compromise on auditor

independence and the other on the benefits attained from knowledge spillover. Though

these competing effects have been studied in various contexts, there has been little to no

research on the association between NAS and the outcomes from mergers and

acquisitions (M&A) to infer whether NAS lessens the threat to auditor independence and

provides value to the firm and investors.

The purpose of this study is to examine the relationship between M&A-related

NAS, and M&A financial reporting outcomes (i.e., goodwill impairments, M&A related

internal control weaknesses, M&A related financial restatements, and market reaction to

goodwill impairments) when the auditor provides NAS to an audit-client in a successful

M&A transaction.

The final sample used for this study consists of 203 completed business

combinations by U.S. publicly listed companies for the period 2007 to 2013. The results

show that M&A NAS has a positive and statistically significant association with goodwill recognized during the acquisition year. However, the likelihood of a goodwill impairment in a subsequent year is greater if the auditor provides M&A NAS. These findings indicate that M&A NAS seems to impair auditor independence because audit-clients "book" higher goodwill, yet in a subsequent year, this goodwill is reduced. It may be that auditors that provide M&A NAS are lenient and permit the M&A NAS clients to report higher (goodwill) asset values to justify the acquisition. Findings also show no relation between M&A NAS and the likelihood of M&A-related internal control weaknesses or M&A-related financial restatements. These results suggest specific financial reporting outcomes are not affected by M&A NAS. I find no evidence of an association between market reactions to announcement of goodwill impairments when the auditor provides M&A NAS. Overall, these results have practical implications for policy makers, regulators, and investors and provides additional evidence on the impact of NAS when provided as due diligence services in connection with M&A.

Keywords: mergers and acquisitions, goodwill, goodwill impairments, non-audit services, auditor independence, knowledge spillover, restatements, internal control weaknesses, market reactions

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CHAPTER 1

INTRODUCTION

This study examines how auditor provided merger and acquisition services to an

audit client are related to merger and acquisition (M&A) financial reporting outcomes.

Recent trends show global M&A are on track to exceed the global deal-making record of

2007 ($4.29 trillion), which has been prompted by companies in response to investors

starving for companies that can show growth (Mattioli & Strumpf, 2015). M&A are

highly complex transactions and represent the most significant investment for a firm. The

success or failure of M&A can have significant economic implications for the acquiring

and target firm's shareholders, creditors, employees, competitors, and the community, as

well as the economy (Lajoux & Elson, 2000).

To better manage risks related to M&A and determine an appropriate purchase

price for the target, acquiring firms perform due diligence on a wide range of issues such

as the target's current and future valuation, current and projected financial performance,

quality of financial reporting, business risks, industry risks, litigation risks, and various

economy-wide issues.[1] The due diligence process is generally performed by accountants,

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[1] Specific due diligence activities include ensuring there are no material accounting errors and that financial
reports are in conformity with generally accepted accounting principles (GAAP), restating the target firm's
financial statements for future consolidation and valuation purposes to match the acquiring firm's GAAP,
assessing tax planning and risks, sale of assets, transfer of equity and debt capital, and internal controls risk
assessments.

lawyers, investment bankers, and other specialized consultants. Failure to perform sufficient due diligence can be costly to the acquiring firm and their stakeholders.

Although there is little evidence of the influence acquiring firms' external auditors have on M&A transactions during the due diligence process, Lee, Mande, and Park (2015) find the market responds favorably (i.e., higher projected earnings forecasts) when acquiring firms are audited by industry specialist auditors, consistent with the idea that industry specialist auditors provide a higher quality of assurance over the M&A activity.

Auditors providing non-audit services (NAS) (e.g., due diligence related to M&A) to their audit-clients has been and continues to be a controversy to regulators and investors. The passing of the Sarbanes-Oxley Act of 2002 (SOX) placed severe restrictions on auditor provided NAS and prompted the Securities and Exchange Commission (SEC) to modify auditor fee disclosures (SEC, 2003). One of the new fee categories, "audit-related services" (that embodies, among other services, due diligence related to M&A; accounting consultations and audits in connection to acquisitions), allows for additional transparency to regulators and investors about the services provided by the independent auditor to the audit client. SOX also provides additional transparency regarding another category of fee disclosures, "tax fees", which allows, in part, for tax planning and tax advice services related to M&A. While SOX did not ban audit-related services or tax services, investor groups are still calling for a total ban on all NAS with the European Union most recently banning almost all NAS (EU, 2014).

The profession argues that NAS is beneficial instead of harmful, but has provided little to no evidence on the benefits of NAS to the firm or investors (Knechel & Sharma, 2012; Sharma, 2014). In his seminal study, Simunic (1984) contends that the provision of NAS by an auditor enhances their knowledge of the client, which translates to more efficient and effective audits. Decades later, some studies find that NAS does not harm the auditor's objectivity due to the provision of NAS to their audit-client (DeFond, Raghunandan & Subramanyam, 2002; Ashbaugh, LaFond, & Mayhew, 2003).

The focus of prior research is on NAS impairing auditor independence. These studies have provided mixed evidence on the effect of a firm's external auditor providing NAS in relation to auditor independence (see Church, Jenkins, McCracken, Roush, & Standley, 2015; Sharma, 2014). Schneider, Church, and Ely (2006) in their literature review of NAS and auditor independence, summarize the extant literature and find that studies take on the perception of primarily three types of stakeholders: (1) financial statement users, (2) auditors, and (3) managers.

Studies focusing on independence in appearance examine financial statement users' (e.g., investors, analysts, creditors) perceptions. The majority of these limited studies show that investors perceive NAS impairs auditor independence (e.g., Brandon, Crabtree, & Maher, 2004; Krishnan, Sami, & Yinqi, 2005). However, several corporate governance studies suggest that strong corporate governance may mitigate threats to NAS on auditor independence (Larcker & Richardson, 2004; Sharma, Sharma, & Ananthanarayanan, 2011). Therefore, one can infer that investors would perceive NAS as less of a threat to auditor independence in a firm that demonstrates strong corporate governance practices (Sharma, 2014). Hence, the question still remains why firms (audit-

clients) continue to purchase NAS from their auditor rather than from a non-auditor consultant.

Studies focusing on auditor independence in fact examine the effect of NAS on audit quality as proxied by various measures of financial reporting quality (e.g., financial restatements, discretionary accruals and earnings surprises) and auditor opinions (Sharma, 2014). These studies however provide conflicting results.

Carcello, Neal and Shipman (2014) argue that prior studies may be sensitive to the context studied. They propose a new setting that is similar in spirit to the auditor's going concern reporting setting, but with a potentially larger sample and more power; they propose examining goodwill impairments. Their results indicate a negative relationship between NAS and the likelihood of goodwill impairment. In additional tests, they find higher levels of NAS are associated with lower goodwill impairment amounts and a delay in recognizing these impairments. However, the study examined total NAS provided to the audit-client and did not identify and segregate NAS provided for M&A purposes from non-M&A purposes, nor did it examine types of NAS. This study identifies and attempts to segregate NAS for M&A purposes from non-M&A purposes, and also decomposes total NAS into its three components (audit-related NAS, tax NAS, and other NAS). The lack of testing of segregated NAS in prior studies makes it difficult to infer which type of NAS could be affecting auditor independence from those that could be enhancing knowledge spillover. Also, since auditors are permitted to perform M&A NAS under SOX to an audit-client, identifying NAS for M&A purposes and non-M&A purposes can potentially distill NAS effects into those that threaten auditor independence and those that enhance knowledge spillovers. While Carcello et al. (2014) find that total

NAS may threaten auditors' propensity to require goodwill impairments, we do not know if this threat is arising because (i) auditors provided M&A consulting thus the auditor was auditing its own work, and/or (ii) the client generates lucrative consulting revenues that coerces the auditor to overlook required impairments.

Several possibilities can be investigated in the goodwill setting that provides a potentially richer understanding of how NAS is related to the quality of financial reporting. If auditor provided NAS, in relation to an M&A, is informative and provides auditors with information they may not have, then would such knowledge spillovers be associated with better quality M&A reporting outcomes, such as more appropriate valuation and price paid for the target, and thus, lower goodwill recognition? In contrast, if the economic gains from NAS for M&A are lucrative would auditors then permit management to justify a higher price, larger goodwill, and subsequently, avoid recording an impairment loss? In addition, M&A transactions are quite complex and require significant changes to a firm's financial reporting and control systems as the two firms are combined into one. If auditor provided NAS for M&A is informative and leads to knowledge spillovers, then it is expected that the quality of internal controls and financial reporting may be much better (less M&A related internal control weaknesses and financial restatements). In contrast, if the related NAS is threatening independence, then the opposite would be expected for internal control weakness and financial restatements pertaining to M&A activity.

Prior archival research examining internal control weaknesses focus on the effectiveness of internal control disclosures and firm characteristics (e.g., firm size, performance measures, corporate governance) that affect the quality of internal controls

(Krishnan, 2005; Doyle, Ge, & McVay, 2007; Goh, 2009; Hoitash, Hoitash, & Bedard, 2009). However, these studies do not examine NAS as a possible contributing factor to potential internal control weaknesses. A recent study, in the auditor independence literature, provides evidence that tax NAS reduces the likelihood of a material control weakness (De Simone, Ege, & Stomberg, 2015). To the best of my knowledge, no prior archival study has empirically examined how NAS, within the context of M&A, affects internal controls over financial reporting quality, thus threatening or enhancing auditor independence.

Within the context of M&A, post-acquisition financial reporting quality can also be studied by examining the antecedents for financial restatements due to improper accounting of goodwill, fair value estimations used to test annual goodwill impairments, and failure to recognize timely goodwill impairments (e.g., the misreporting of the related gains or losses). Limited studies exist in the NAS literature that examine the relation between NAS and post-acquisition financial restatements. Only a few studies provide evidence that the benefits of auditor-provided tax NAS lower the probability of tax-related financial restatements (Kinney, Palmrose, & Scholz, 2004; Seetharaman, Sun, & Wang, 2011).

The goodwill setting is interesting as goodwill impairments can also predict the market reaction to post-acquisition goodwill impairments. Filip, Jeanjean and Paugam (2015) find that firms that delay goodwill impairments experience lower future stock returns. These findings suggest that goodwill impairment avoidance may be desired by management to portray better firm performance. However, the current literature is silent

on the association between auditor-provided NAS and the market reaction to goodwill impairments in the context of M&A.

Thus, the purpose of this study is to examine the relationship between M&A-related NAS and M&A financial outcomes (i.e., goodwill impairments, M&A related internal control weaknesses, M&A related financial restatements, and market reaction to goodwill impairments) when the auditor provides NAS to an audit-client in a successful M&A transaction. To my knowledge, there is no prior study that has examined the association between NAS and the outcomes from M&A to infer whether NAS provides value to the firm and investors, and lessens the threat to auditor independence.

Using a sample of 203 completed business combinations by U.S. publicly listed companies during the period of 2007 to 2013, I examine the association between M&A-related NAS and M&A financial outcomes. The results show that M&A NAS has a positive and statistically significant association with higher M&A goodwill recognition and greater propensity of post-acquisition goodwill impairments. Sensitivity analyses examining the type of NAS (i.e., audit-related, tax, and other) are supportive of these results, but only in relation to audit-related fees. There is no evidence that M&A NAS is related to M&A-related internal control weaknesses and financial restatements. There is no evidence that M&A NAS is associated with market reactions to the announcement of goodwill impairments. These findings indicate that M&A NAS appears to impair auditor independence.

This study contributes to the existing NAS and auditor independence literature as follows. First, it provides additional evidence on the impact of NAS on complex accounting transactions such as M&A financial reporting outcomes. Second, it examines

if NAS is beneficial to investors and other stakeholders within the context of M&A. The M&A context allows me to draw inferences about whether NAS generates knowledge spillovers and thus assist auditors in performing the audit or creates economic incentives and thus impairs auditor independence. The financial, operational, and managerial synergies that are the goal of M&A, and wealth transfer to stakeholders, makes this an appropriate setting to empirically test these associations and to examine whether auditor-provided NAS plays a significant role in the valuation and impairment of goodwill, existence of internal control weaknesses, financial restatements, and market reactions to goodwill impairments. In an M&A setting, there are clear implications for accounting for goodwill. Accounting for goodwill requires considerable judgment as it involves future forecasts and estimates, discount rate assumptions, and determination of expected life of an intangible asset. These and other factors are used to determine the value of net assets acquired and the amount of goodwill to recognize. Once recognized, the goodwill is subject to impairment testing, which involves a lot of subjectivity and judgment. Management and auditors can potentially work together to report goodwill at agreed values (i.e., not require impairment, estimate goodwill values to be greater than book value) because there is no real objective tangible value. Therefore, the subjectivity and highly judgmental setting of M&A is a rich context to examine if auditors' involvement in M&A due diligence through the provision of M&A consulting helps (knowledge spillovers) or hinders (independence threat) the reporting of goodwill. The results of this study are consistent with the view that auditor provided M&A NAS potentially harms auditor independence.

The results of this study have two primary implications for policy makers, regulators and investors. First, the current study provides policy makers and regulators additional evidence on the benefits and costs of NAS. Second, the results provide evidence on the benefits of NAS that could change investors' attitude towards NAS provided for due diligence services in connection with M&A. The remainder of this paper is organized as follows: Chapter 2 provides a review of the literature and develops the hypotheses. Chapter 3 discusses the research method used to test the relationship between M&A financial outcomes and NAS, data collection and the sample. Chapter 4 discusses the results of the study and additional analyses. The paper concludes with Chapter 5, which provides a discussion of results, limitations of the study, and possible directions for future research.

CHAPTER 2

LITERATURE REVIEW & HYPOTHESIS DEVELOPMENT

Non-Audit Services (NAS) and Auditor Independence

For over 40 years, the issue of auditors providing both auditing and NAS to their audit-clients continues to be at the forefront of concerns to regulators, investors, and academics. The literature primarily provides two competing effects of NAS on financial reporting quality. The first being the compromise on auditor independence and the other on the benefits attained from knowledge spillover. The first competing effect comes from the position regulators have historically taken that the joint provision of audit and NAS impairs auditor independence. This position is derived from the strong economic bonds created between the auditor and audit-client from the quasi-rents generated from NAS. This position led the Securities and Exchange Commission (SEC) to require registrants to disclose the amount and type of NAS (SEC, 2000; SEC, 2003). Further concerns prompted by the Enron financial scandal led the U.S. Congress to pass the Sarbanes-Oxley Act (SOX) in 2002, which limited the types of NAS auditors of SEC registrants can provide to their audit-clients[2], and required audit committees to be involved in the process of NAS purchases (SEC, 2000; SEC, 2003).

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[2] The prohibited NAS include: bookkeeping; financial information systems design and implementation; appraisal or valuation services, fairness opinions, or contributions-in-kind reports); actuarial services; internal audit services; management functions (including human resources); broker-dealer, investment advisor, or investment banking services; legal services and expert services unrelated to an audit.

Since the passing of SOX and subsequent changes to SEC rules on NAS, many studies have empirically examined the relationship between NAS and auditor independence. These studies have provided two streams of literature with conflicting results: (1) auditor independence in fact, and (2) auditor independence in appearance[3].

Auditor Independence in Fact

The first stream of literature on auditor independence focuses on auditor independence in fact, which examines the effect of NAS on audit quality proxied by auditor reporting and various measures of financial reporting quality (Sharma, 2014). The most direct measure of audit quality is the auditor's report on the client's financial statements, followed by financial restatements, and surrogates for earnings management. The auditor report studies examine if NAS is associated with the auditor's likelihood of issuing a going concern modified (GCM) opinion to companies in financial distress. A finding of a negative association is interpreted to mean the auditor compromised independence in exchange for the lucrative NAS. A finding of a positive association is interpreted to suggest that knowledge spillovers arising from NAS assisted the auditor issue the appropriate audit opinion. Because financial restatements and earnings management measures capture poor financial reporting, a positive association between NAS and these measures are interpreted to mean the auditor allowed management to misreport financial information, thus, suggesting a breach of auditor independence. A negative association is interpreted as evidence of knowledge spillovers assisting auditors to uphold their independence and issue the correct audit opinion. I now review the

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[3] See Church, Jenkins, McCracken, Roush, & Stanley (2015).

literature on NAS and GCM followed by those employing some proxy for financial reporting quality classified into restatement studies and earnings management studies.

going-concern modifications. In a prior study, DeFond, Raghunandan and Subramanyam (2002) empirically investigated the validity of concerns of auditor-provided NAS reducing auditor objectivity in the wake of the Enron scandal. They examined the association between NAS and auditor independence as proxied by the propensity of auditors to issue going concern opinions. Contrary to the concerns brought upon by regulators, the authors find no association between NAS fees and auditor's propensity to issue going concern opinions. Their findings suggest that reputation loss and litigation costs promote auditor independence. These market-based institutional incentives outweigh the economic dependency created by higher NAS fees. However, Robinson (2008) finds a significant and positive association between the level of tax NAS fees and the likelihood of correctly issuing a going-concern opinion. This suggests that knowledge spillover contributes to improved audit quality. In contrast, Blay and Geiger (2013) examine the potential impairment of auditor independence by examining the relationship between both current and future audits and NAS fees paid to auditors and the type of opinion rendered to financially distressed manufacturing clients. They demonstrate that higher levels of current NAS fees paid to auditors reduce the propensity of auditors issuing going concern opinion modifications.

restatements. Kinney et al. (2004) using survey data, examine the association between NAS and financial restatements. Their findings provide evidence of a positive and significant association between unspecified NAS and restatements, and a negative and significant association between tax NAS and restatements. However, these

associations only hold in larger companies. Their findings suggest that depending on the type of NAS, there can be different outcomes. Similar studies also find a negative association between auditor-provided tax NAS and restatements (Seetharaman et al., 2011; Paterson & Valencia, 2011). These findings are consistent with recurring tax NAS providing knowledge spillover that has a positive impact on audit quality. In a more recent study, Bell, Causholli, and Knechel (2015) using proprietary data from a Big 4 accounting firm, found no association between NAS and audit quality. However, they did find evidence when they divide their sample between public and privately-held companies. The results of the divided sample show there is a positive association between NAS and audit quality for public companies. In contrast, the privately-held company sample shows a decline in audit quality as fees for NAS increase.

earnings management. Huang, Mishra, and Raghunandan (2007) replicate and extend Ashbaugh, LaFond, and Mayhew (2003) to re-examine the association between NAS and financial reporting quality by examining types of NAS fees. Their results provide mixed evidence of associations between NAS fees and biased financial reporting. Knechel and Sharma (2012) examine the effect of auditor-provided NAS on the effectiveness and efficiency of audits. Using audit report lags as a proxy for audit efficiency, their results provide evidence that higher NAS fees are associated with shorter audit report lags in the pre-SOX era, but dissipate in the post-SOX era. Using discretionary accruals and financial restatements as proxies for audit effectiveness, their results indicate that higher NAS fees are positively associated with audit effectiveness. These results suggest that auditor-provided NAS benefits audit-clients without a loss in audit effectiveness. Causholli, Chambers, and Payne (2014) examine the association of

future NAS fees and the potential impairment to auditor independence using discretionary accruals and classification shifting as proxies for audit quality. Their findings show that both types of earnings management are higher for firms with comparatively lower NAS in the current year that increase in future years. They also find that this negative effect of future NAS on audit quality to be greater in firms that have greater motivations to manage earnings (i.e., meet or beat earnings forecasts and those firms that issue equity) and less likely in firms with strong corporate governance.

However, studies examining NAS and corporate governance suggest that strong corporate governance may mitigate NAS threats to auditor independence. Larcker and Richardson (2004) examine the relationship between fees paid to auditors (i.e., audit and NAS fees) and accruals quality as a measure of financial reporting quality. Their findings show a negative relationship between the level of audit and NAS fees paid to auditors and accruals quality. This negative relationship is strongest when firms have weak corporate governance. In a more recent study, Sharma, Sharma, and Ananthanarayanan (2011) examine the relationship between earnings management and the economic importance of a client to the auditor. Their findings show a positive relation between client importance and earnings management and the association is more evident in the presence of a weak audit committee. Their results suggest that an auditor's independence is threatened when there is higher economic importance of a client to an auditor which also threatens financial reporting quality.

Auditor Independence in Appearance

The second stream of studies examine how equity market participants, (e.g., investors, analysts, and creditors) perceive the provision of NAS by a firm's auditor. The

ongoing debate relates to the auditors' economic dependence on clients from NAS fees received which impairs financial reporting quality. Prior studies using earnings response coefficients (ERC), the cost of capital (i.e., equity or debt), and bond ratings as proxies for earnings quality have provided mixed results.

ERC. Market-based studies using ERCs examine the association between the level of NAS fees and earnings quality. Krishnan, Sami, and Yinqi (2005), Gul, Tsui, and Dhaliwal (2006), and Ghosh, Kallpur, and Moon (2009) find NAS fee ratios and the level of NAS fees are negatively associated with ERCs. In a similar study, Higgs and Skantz (2006) also find evidence that abnormally high NAS are associated with lower ERCs. In summary, the findings from these studies suggest that investors perceive NAS to impair auditor independence.

cost of capital and bond ratings. Prior studies examining the association between NAS and cost of capital are concerned with investors' and market participants' perception towards an auditor's economic bond to their client and the impact on audit and financial reporting quality. Using a firm's ex ante cost of equity as a proxy for financial reporting quality, Khurana and Raman (2006) find a negative association between NAS and the cost of equity. In contrast, Hollingsworth and Li (2012) find a positive and significant relationship between NAS and the cost of equity. Fortin and Pittman (2008) find a negative association between tax NAS and the cost of debt. Their results suggest that auditor-provided tax NAS reduces borrowing costs, which stems from the benefit of knowledge spillover from successive engagements. Brandon, Crabtree, and Maher (2004) use the context of bond ratings to explore the effect of NAS. They provide evidence that

the magnitude of NAS fees paid to a firm's external auditor is negatively associated with analysts' ratings of the firm's bonds.

Knowledge Spillover and Industry Specialization

Auditors with industry specialization have been shown in prior research to provide superior knowledge and performance (Habib, 2011). This superior knowledge suggests that auditors have sufficient background knowledge to efficiently and effectively perform NAS of an auditor-client in a specialized industry. This would enable auditor industry specialists to attain and leverage the knowledge spillover from performing NAS to perform effective and efficient audits, hence increasing audit quality. Lim and Tan (2008) find an increased (reduced) propensity to issue going-concern opinions (avoid missing analysts' forecasts), and higher ERCs in firms that acquire the audit and NAS of an industry specialist auditor. However, archival studies on knowledge spillover do not provide direct actual evidence because data to test knowledge spillover requires access to audit work papers (Tepalagul & Lin, 2015).

In summary, the debate of whether NAS impairs auditor independence continues with no resolute conclusions. Many of the studies show limitations in sample selections, variable selection, and context (see Church et al., 2015; Schneider, Church, & Ely, 2006; Sharma, 2014). The literature reviews point out these and other limitations and suggest future research to address these limitations. Motivated by Habib (2012)'s meta-analysis on NAS and financial reporting quality that suggests mixed findings in prior studies may be attributable to other variables that have not been examined, and a new variable (i.e., goodwill impairments) (Carcello, Neal & Shipman, 2014), I posit that examining the

association between NAS and auditor independence using the context of M&A financial

reporting outcomes could provide new evidence to further inform this debate.

NAS and M&A Financial Reporting Outcomes

The literature on NAS and M&A financial reporting outcomes is limited. Only

recently have several studies examined the relation between NAS and impairment of

auditor independence using goodwill impairments. Goodwill arises due to the firm

acquiring another firm at a premium over and above the acquired firm's fair value. In

M&A, the due diligence process is the acquiring firm's initial review of a potential target

company to assure that the purchase of the target company will not create risks to the

acquiring firm's shareholders (Lajoux & Elson, 2000). To conduct due diligence, an

acquiring firm usually draws from internal resources and from external consultants and

advisors. In the initial phase of due diligence, the acquiring firm's management relies on

the due diligence review team (comprised of both internal and external advisors) to

perform a detailed analysis of the target firm's condition by examining accounting and

legal records, and to investigate any other potential problems of the target firm. Later, the

transactional due diligence phase of the M&A focuses on the risks that may arise from

the M&A transactions itself. Due to the complexity of this phase of the due diligence

process, an acquiring firm's management often will delegate this phase to professionals

(e.g., external accountants and outside legal counsel). From a financial perspective,

external accountants are responsible for verifying the accuracy of the target firm's

accounting information, accessing additional current information that will be useful in the

valuation of the target firm's assets and liabilities, assessing internal controls, and tax

planning. The closure of the M&A transactions is then contingent on a satisfactory due

diligence report provided by the due diligence review team to the acquiring firm's management team (Puranam, Powell, & Singh, 2006).

Post-Acquisition Goodwill Impairments

In response to financial statement users who found goodwill amortization expense as not useful in analyzing investments, the Financial Accounting Standards Board (FASB) issued Statements of Financial Accounting Standards (SFAS) No. 142. SFAS 142 eliminated goodwill amortization and requires firms to test for goodwill impairments at least annually (FASB, 2001). The enhanced disclosures about goodwill post-acquisition provides financial statement users a better understanding and expectations about the changes in goodwill, over time, enhancing the ability to assess future firm profitability and cash flows (FASB, 2001). SFAS 142 requires companies to recognize an impairment loss if the total fair value of goodwill allocated is less than its book value.

Prior studies attribute goodwill impairments to a variety of economic and other factors (Beatty & Weber, 2006). One of these factors is acquiring target firms at a higher bid price than their fair value. A major cause of goodwill write-offs is the overpriced shares of acquirer firm at the time of acquisition (Gu & Lev, 2011). Gu and Lev (2011) document a strong and positive relationship between share overpricing, subsequent acquisition intensity, and goodwill growth. They find evidence that strong corporate governance tampers these managerial incentives. Of special importance to auditors in the context of testing for goodwill impairments, their results also show that a bidder's overpricing is strongly associated with goodwill write-offs.

Hypotheses

During the transactional due diligence phase of an M&A, audit firms engaged in providing due diligence services (M&A NAS) for the acquiring firm, perform initial analyses and validation of key financial and tax transactions. One of the most significant services provided during this phase is the valuation of the target firm's assets and liabilities. Valuation can be controversial and subjective; this is reason enough for acquiring firms to seek an independent valuation specialist to perform this task. Historically, investment banks provided M&A advisory services, but there has been increased competition in the M&A advisory services market by commercial banks and Big 4 accounting firms. Changes in financial reporting standards suggest using valuation specialists that understand the specific accounting implications encountered in M&A (FASB, 2001; FASB, 2007). Independent accounting firms can best provide this specialization service through M&A NAS. Auditors providing M&A NAS may perform the following services: (1) valuation of assets and liabilities, (2) purchase price allocation, (3) initial assessments of goodwill impairments, and (4) post-acquisition integration services (PricewaterhouseCoopers, n.d.).

Arguably, acquiring firms procuring M&A NAS from their incumbent external auditor benefit both pre- and post-acquisition. Given the auditor-client relationship, auditors performing M&A NAS for their audit-client will ensure accurate valuation of the target firm, thus accurately suggesting a purchase price that will lower goodwill and thus reduce the possibility of goodwill impairment losses in the future. Management will also benefit from the knowledge spillover derived from the M&A transaction post-acquisition.

Goodwill and Post-Acquisition Goodwill Impairments

Dhaliwal, Lamoreaux, Litov, and Neyland (2015) examine the impact of shared auditors on acquisition transaction outcomes. A shared auditor is defined as an auditor who audits both the acquirer and target firm in the year preceding the announcement of a bid. The authors find evidence of significantly lower deal premiums, lower target event returns, higher bidder event returns, and higher deal completion rates favoring the acquiring firm when both the acquiring and target firms received audit services from the same auditor practice office. This evidence is only evident when the target firm is small. These findings suggest that auditors favor acquiring firms by utilizing private information about the target. These findings come at the cost of a violation of conflict of interest rules in M&As. The authors, in the auditors' defense, attribute this information leakage as unintentional through informal "water cooler" discussions within the shared auditor's practice office. Although these findings may suggest the possibility of a more accurate valuation of the acquired firm which may suggest a lower percent of goodwill booked, the study does not examine if the auditor provided both NAS and audit services to the acquirer, target or to both companies. Thus, we do not know whether the presence of knowledge spillover played a role in arriving at the value of the target or whether the auditor was pressured by the management of the acquirer firm to influence (downward bias) the fair value of the target firm through the audit of the target firm.

In a similar study, Cai, Kim, Park, and White (2015) examine M&A transactions in which both the acquiring and target firms share a common auditor. Common auditor is defined as an audit firm that provides audit services to both the acquiring and target firms. Their findings show that M&A deals with common auditors have higher

acquisition announcement returns. They also provide evidence that the common-auditor effect is more pronounced in deals with higher pre-acquisition uncertainty than those deals involving acquiring and target firms that are audited by the same local office. Although Cai et al. (2015) complement Dhaliwal et al. (2015) with respect to the role of common-auditors in M&A outcomes, their study focuses on the mechanisms through which common auditors impact M&A outcomes during the pre-M&A uncertainties. Using three mechanisms, they provide evidence that the knowledge common auditors have on both the acquiring and target firms reduces pre-M&A uncertainties and improves M&A quality. The first mechanism, the effect of direct communication with both the acquiring and targets firms, is stronger when both parties use the same common auditor local practice office. The other two mechanisms (i.e., financial statement comparability and limited ex ante misreporting) show evidence of greater financial statement comparability and less misreporting in M&A transactions involving a common auditor than those M&A transactions using different auditors.

In summary, accurate valuations that lead to better bid recommendations and the knowledge spillover that can be derived from auditors providing M&A NAS to their audit-clients, leads to my first hypothesis:

H1a: The goodwill recognized by acquiring firms in a successful acquisition is lower when their independent auditor provides M&A due diligence through NAS.

Since the elimination of goodwill amortization accounting (FASB, 2001), the over-allocation of goodwill increases post-acquisition earnings and bonuses. Shalev, Zhang, and Zhang (2013) investigate the impact of CEO compensation structures on

post-acquisition purchase price allocation. They find CEOs with compensation packages that depend on earnings-based bonuses are more likely to over-allocate acquisition purchase price to goodwill. Darrough, Guler, and Wang (2014) examine whether the recognition of goodwill impairments reduces CEO compensation. They find when firms recognize goodwill impairment losses there is a significant reduction in cash and option-based CEO compensation. Their results suggest compensation committees require CEOs to pay back for non-value adding acquisitions. The reduction in the risk-inducing component of their compensation package, further discourages CEOs from undertaking risky investments.

The financial and operational complexity of M&A demand expert due diligence and suggests that auditors may be well placed to contribute to the due diligence team. However, since management may have personal motives for acquiring a target firm, they may influence auditors to acquiesce to their firm valuation and various accounting and financial reporting requests (Gu & Lev, 2011; Shalev, Zhang, & Zhang, 2013; Paugam et al., 2015). Therefore, I hypothesize:

H1b: The goodwill recognized by acquiring firms in a successful acquisition is higher when their independent auditor provides M&A due diligence through NAS.

SFAS 142 requires goodwill of an acquired business unit to be tested for impairment annually. The fair value of the group of assets to which goodwill is allocated is used when determining goodwill impairment. The fair value refers to the amount at which the assets in the acquired business unit can be bought or sold in a current transaction between willing parties. To estimate the fair value of a group of assets, such

as those in an acquired business unit, a present value technique can be used in the absence of market prices. If such a technique is used to estimate the fair value of the group of assets, future cash flows estimates used should be consistent with the objective of measuring fair value. These cash flow estimates must include assumptions that investors/analysts would use in their estimates of fair value. Therefore, goodwill impairment recognition is prompted when there is a reduction in fair value of an acquired business unit. Following a growing body of empirical evidence that show managers delay the recognition of goodwill impairments, Filip et al. (2015) find firms carrying impaired goodwill, but choose not to recognize the impairment loss, manage cash flows upward, relative to control firms in their sample. This finding is consistent with managers' propensity to manipulate current cash flows to support their choice of not recognizing goodwill impairments. They also find that these real activities manipulation of cash flows negatively affects future performance.

Since the auditor's M&A due diligence through NAS can potentially lead to a relatively more accurate valuation and recognition of goodwill, it then follows that future impairments of the recognized goodwill would be less likely or lower. Hence, I hypothesize that:

H2a: Acquiring firms are less likely to exhibit incidence of post-acquisition goodwill impairments when their independent auditor provides M&A due diligence through NAS.

H2b: Acquiring firms exhibit lower post-acquisition goodwill impairments when their independent auditor provides M&A due diligence through NAS.

H3a: Acquiring firms are more likely to exhibit incidence of post-acquisition goodwill impairments when their independent auditor provides M&A due diligence through NAS.

H3b: Acquiring firms exhibit higher post-acquisition goodwill impairments when their independent auditor provides M&A due diligence through NAS.

M&A Related Internal Control Weaknesses

An M&A event is an appropriate setting to examine a shock to a company's internal control environment. For example, during a material acquisition, an acquiring firm may find it will take time to effectively integrate their internal control policies and procedures with the target firm. Acquiring firms emerging from an M&A have the incentive to remediate material control weaknesses derived from the transaction to appear stronger. De Simone et al. (2015) provide additional evidence that contradicts prior research results for the argument that auditor-provided NAS impairs auditor independence. Their overall findings suggest that tax NAS are important in determining a company's internal control quality. They find a negative relationship between tax NAS and the likelihood of a material internal control weakness. Tax NAS improves internal control quality by providing early warning to audit firms of transactions material to the financial statements (e.g., M&A). Their findings also suggest that companies derive the greatest benefits from tax NAS when they experience changes to their internal control environment.

Although there is no literature examining the association between NAS and internal control weaknesses in the context of an M&A, and taking into consideration the findings of De Simone et al. (2015), I hypothesize:

> H4a: Acquiring firms are less likely to exhibit incidence of post-acquisition internal control weaknesses when their independent auditor provides due diligence NAS in a successful M&A transaction.

If auditors providing M&A due diligence are influenced by management as reflected in Hypotheses 1b, 3a and 3b, I also posit that auditors may be motivated to overlook internal control integration issues and not report an internal control weakness.

> H4b: Acquiring firms are more likely to exhibit incidence of post-acquisition internal control weaknesses when their independent auditor provides due diligence NAS in a successful M&A transaction.

M&A Related Financial Restatements

Within the context of M&A, there has been little to no prior research on post-acquisition financial reporting quality. The M&A is an ideal setting to study the antecedents for financial restatements from improper accounting of goodwill, inventory valuation and asset write-downs or the misreporting of the related gains or losses (e.g., goodwill impairments). Although their study did not provide evidence of an association between NAS and M&A-related financial restatements, Kinney et al. (2004) find that the probability of a restatement increases when firms experience an acquisition in the same year of restatement. Their findings suggest that the increase in probability may be attributed to complex accounting transactions and business integration problems.

Given no prior research on the association between NAS and post-acquisition financial restatements, but two competing arguments (knowledge spillovers and economic bonding), I posit the following hypotheses:

H5a: Acquiring firms are less likely to exhibit incidence of post –acquisition financial restatements when their independent auditor provides due diligence NAS in a successful M&A transaction.

H5b: Acquiring firms are more likely to exhibit post-acquisition financial restatements when their independent auditor provides due diligence NAS in a successful M&A transaction.

M&A NAS and Market Reaction to Goodwill Impairment

The M&A setting provides the opportunity to identify the market's reaction to the announcement of M&A and post-acquisition outcomes. The recognition of goodwill impairments diminishes expectations of future cash flows, thus a company's loss of future profitability, which in turn affects future earnings and performance. Prior studies have shown the market to react negatively to the announcement of acquisitions and subsequent goodwill impairments (Hirschey & Richardson, 2003; Bens, Heltzer & Segal, 2011). Olante (2013) examines whether goodwill impairments are associated with the overpayment for the target firm at the time of purchase, rather than from subsequent decline of goodwill values. The author's findings provide evidence that goodwill impairment losses were partially the consequence of overpayment for the target firm at acquisition.

Li, Schroff, Venkataraman, and Zhang (2011) examine market participants' reactions to the announcement of a goodwill impairment loss, the nature of the

information conveyed by the goodwill impairment loss, and whether the causes of goodwill impairments are traceable to the overpayment for acquired firm pre-acquisition. Their results show both investors and financial analysts revise their forecasts downward when a goodwill impairment loss is announced. Additional analysis shows a negative correlation between goodwill impairment losses and future performance.

In a recent study, Paugam, Astolfi, and Ramond (2015) investigate the informativeness of purchase price allocations (PPA) when fair value estimation of acquired assets and liabilities are used after M&A. They examine how the allocation of abnormal levels of purchase price to goodwill (i.e. abnormal goodwill) affects stock price reactions to PPA disclosures and post-acquisition performance. Using a sample of 308 economically significant U.S. business combinations successfully completed during 2002-2011, the authors document a negative relationship between abnormal goodwill and cumulative abnormal returns. They also find a strong and negative reaction to abnormal goodwill for acquisitions previously negatively received by market participants. Lastly, their results show that the magnitude of goodwill impairments increases and future performance decreases as abnormal goodwill increases during the three years following acquisition.

The arguments leading from H1a to H3b suggest two perspectives on the relationship between the auditor's provision of NAS for M&A and accounting for goodwill. One view is that auditor's provision of NAS for M&A can lead to more informative target price setting and thus more appropriate goodwill recognition. The other view is that the lucrative NAS could influence the auditor to delay or not recognize goodwill impairments. Given there are alternative effects and absence of prior research

examining the association between NAS and the market reaction to goodwill impairment,

I posit the following hypotheses:

H6a: The market reaction to disclosure of goodwill impairment is more negative

when the auditor provides NAS to an auditor-client for M&A transactions.

H6b: The market reaction to disclosure of goodwill impairment is not negative

(or positive) when the auditor provides NAS to an audit-client for M&A

transactions.

CHAPTER 3

METHODOLOGY

Sample Selection

To analyze the relation between NAS and M&A financial reporting outcomes, I

obtain acquiring firm and target firm data for completed business combinations for the

period 2007 to 2013 involving U.S. publicly listed companies. Completed business

combination is defined as a completed and effective M&A transaction. My initial sample

includes 364 completed M&As in the SDC Platinum database over the period of 2007-

2013 (M&A data missing from the SDC Platinum database are hand collected from firm

proxy statements filed with the SEC). Consistent with prior research, I exclude 146 M&A

observations from the utilities and financial services industries (two-digit SIC codes

between 40-49 and 60-69, respectively) as these industries are highly regulated and have

unique audit and financial reporting regulations. Also, many of the mergers in the

financial industry (banks) occurred as a result of the financial crisis, which was not a

natural marriage but due to a shock to the financial system.

The data on auditors, audit fees and NAS fees are obtained from Audit Analytics.

Executive compensation data for CEOs are obtained from Execucomp. Corporate

governance data for board and committee composition, accounting and finance expertise,

board and audit committee size, and meeting data are obtained from BoardEx and

missing information is hand collected using SEC filings in the EDGAR system. Stock

returns and earnings forecast data are obtained from CRSP and I/B/E/S, respectively.[4]

Financial data are obtained from COMPUSTAT.[5]

Panel A of Table 1 provides a summary of the sample selection process. An

additional 15 observations are excluded due to missing financial data in COMPUSTAT

(n = 6), stock return data in CRSP (n = 3), and earnings forecast data in I/B/E/S (n = 6)

data. My final sample consists of 203 unique observations.[6] Panel B of Table 1 provides a

summary of the industry composition of the sample using one-digit Standard Industry

Classification (SIC) codes. A total number of six classifications are shown with 42.9

percent of the sample in the manufacturing industry. Panel C of Table 1 provides the

number of completed M&A transactions across 2007-2013, with 2007 and 2009 showing

the highest level of M&A activity at 25.1 and 44.3 percent, respectively.

<center>Research Method and Measurement of Variables</center>

Consistent with prior research on audit and financial reporting quality and NAS

(DeFond et al., 2002; Kinney et al., 2004; Krishnan et al., 2005; Larcker & Richardson,

2004; Knechel & Sharma, 2012; Blay, & Geiger, 2013), multivariate regression models

are used to examine the relation between M&A outcomes and NAS. This method is

appropriate for the dichotomous and continuous variables being examined in this study,

the existence of linear relationships, and the multiple control variables that influence

these variables, based on prior literature. The following logistic and OLS regression

equations are used and all the variables' definitions are summarized in Table 2:

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[4] Information on stock returns data that was not available in these databases was hand-collected using
www.marketwatch.com.

[5] Information on financial variables that was not available in this database was hand-collected from SEC
filings (e.g., proxy statements and annual reports).

[6] There are firms in the sample that have multiple business combinations within the sample period.
However, each business combination is treated as a unique observation to examine the post-acquisition
outcomes for each individual M&A transaction.

$$M\&A\_GWPCT = f \text{ (LN\_M\&A\_NAS + SH\_AUDITOR + SH\_AUD\_NAS}$$

$$+ \textit{Control Variables + Industry Fixed Effects + Year Fixed Effects } \varepsilon) \quad (1)$$

$$M\&A\_GWIMPAMT = f \text{ (LN\_M\&A\_NAS + SH\_AUDITOR + SH\_AUD\_NAS}$$

$$+ \textit{Control Variables + Industry Fixed Effects + Year Fixed Effects } \varepsilon) \quad (2)$$

$$M\&A\_GWIMP = f \text{ (LN\_M\&A\_NAS + SH\_AUDITOR + SH\_AUD\_NAS}$$

$$+ \textit{Control Variables + Industry Fixed Effects + Year Fixed Effects } \varepsilon) \quad (3)$$

$$MA\_ICW = f \text{ (LN\_M\&A\_NAS + SH\_AUDITOR + SH\_AUD\_NAS}$$

$$+ \textit{Control Variables + Industry Fixed Effects + Year Fixed Effects } + \varepsilon) \quad (4)$$

$$M\&A\_RESTATE = f \text{ (}f \text{ (LN\_M\&A\_NAS + SH\_AUDITOR + SH\_AUD\_NAS}$$

$$+ \textit{Control Variables + Industry Fixed Effects + Year Fixed Effects } \varepsilon) \quad (5)$$

$$AR = f \text{ (UE + IMPLOSS + LN\_M\&A\_NAS + IMPLOSS*LN\_M\&A\_NAS}$$

$$+ \varepsilon) \quad (6)$$

Dependent Variables

The dependent variable (M&A_GWPCT) is the percent of goodwill to purchase price, which represents target valuation excess price paid. This variable is a proxy for the valuation aspect of acquisition performance. Higher values are indicative of the excess price paid over the value of net assets acquired. Post-acquisition goodwill impairment amount (M&A_GWIMPAMT) is measured as the impairment amount of goodwill in the fiscal year subsequent to the fiscal year the M&A was completed divided by the acquiring firm's pre-impairment total goodwill as a proxy of post-acquisition performance. The existence of a post- acquisition goodwill impairment (M&A_GWIMP) is an indicator variable equal to 1 if the acquiring firm records a goodwill impairment during the fiscal year subsequent to the fiscal year the M&A was completed, and 0

Table 1

Sample Selection, Industry Composition, and Sample by Year

Panel A: Sample Selection	
	Observations
U.S. public companies with completed M&As in SDC Platinum 2007-2013	364
Less:	
Utilities and financial services institutions	146
Observations missing segment data in COMPUSTAT	6
Observations missing stock price information in CRSP	3
Observations missing earnings forecast information in I/B/E/S	6
Final Sample	203

Panel B: Industry Composition			
One-Digit SIC Codes	Industry Description	Observations	% of Sample
1	Consumer Nondurables	18	8.87
2	Consumer Durables	34	16.75
3	Manufacturing	87	42.86
5	Hi-Tech	22	10.84
7	Shops	31	15.27
8	Health	11	5.42
Final Sample		203	100.00

Panel C: Sample by year		
Year	Observations	% of Sample
2007	51	25.12
2008	26	12.81
2009	13	44.33
2010	33	16.26
2011	24	11.82
2012	32	15.76
2013	24	11.85
Final Sample	203	100.00

0 otherwise. M&A reported internal control weaknesses (M&A_ICW) is an indicator

variable equal to 1 if the acquiring firm reports an internal control weakness in the year of

the M&A or the year following the M&A, and 0 otherwise. Post-acquisition restatements

(M&A_RESTATE) is an indicator variable equal to 1 if the acquiring firm reports a

financial restatement in the year of the M&A or the year following the M&A, and 0

otherwise. Post-merger market reactions to acquisition goodwill impairment

announcements (AR) is measured using the acquiring firm's short window abnormal

returns at the goodwill impairment announcement date as a proxy for market reaction to

M&A NAS provided by auditor and goodwill impairments.

Independent Variables

Consistent with prior research, the independent variable of interest is the natural

logarithm of the total non-audit services fees related to the M&A (LN_M&A_NAS) paid

to the auditor performing the due diligence (e.g., Raghunandan et al., 2003; Knechel &

Sharma, 2012). To test the benefits to investors, knowledge spillover, and to provide

additional evidence for auditor independence, and extend Dhaliwal et al. (2015) and Cai

et al. (2015), SH_AUDITOR is a dichotomous variable equal to 1 if both the acquiring

and target firms received audit services from the same audit firm in the year immediately

preceding the M&A, and 0 otherwise. SH_AUD_NAS is equal to 1 if both the acquiring

and target firms received M&A NAS from the same audit firm, and 0 otherwise. To test

for the occurrence of knowledge spillover at the national audit firm-level and city-level

(Knechel, Sharma & Sharma, 2012), supplementary tests are performed by measuring

SH_AUD_NAS at the city level denoted SH_AUD_NAS_CITY. This variable equals 1 if

both the acquiring and target firms received M&A NAS from the same city office of the same audit firm, and 0 otherwise.

Control Variables and Special Measures

I include numerous control variables in my analyses to capture the effects of other determinants of M&A financial reporting outcomes. Please refer to Table 2 for a detailed description and measure for all control variables. The control variables are derived from the prior literature. The control variables are grouped into the following categories: firm performance, complexity, auditor attributes, and firm governance. The control variables described below are those that are frequently and commonly used in the M&A, audit, firm performance, and financial reporting quality literatures. As there are six equations to estimate representing a number of dependent variable constructs, the control variables are discussed for each set of equations. The three sets include the first set of three equations (Equations 1, 2, and 3) that relate to M&A performance outcomes at the firm level, the next two equations (Equations 4 and 5) relate to M&A financial reporting quality outcomes, and the last equation (Equation 6) relates to market reaction to goodwill impairment announcement.

M&A goodwill outcomes. The following control variables relate to acquiring firm audit clients' financial performance. Since prior studies find a reduction in information asymmetry when both the target and acquirer firms are in close geographic proximity (Dhaliwal et al., 2015), M&A_CITY is an indicator variable equal to 1 if both

Table 2

Definitions for Variables

Panel A: M&A goodwill outcomes		
Dependent Variables		
Variable Name	Predicted Sign	Variable Measurement
M&A_GWPCT		Percent of goodwill to purchase price;
M&A_GWIMPAMT		Impairment amount of goodwill in the fiscal year subsequent to the fiscal year the M&A was completed divided by the acquiring firm's pre-impairment total goodwill;
M&A_GWIMP		1 if the acquiring firm records a goodwill impairment during the fiscal year subsequent to the fiscal year the M&A was completed, and 0 otherwise;
Control Variables		
M&A_CITY	-	1 if both the acquiring and target firms are in the same city, and 0 otherwise;
M&A_PMT	+	1 if the acquisition was paid in cash, and 0 if paid with common stock or a combination of cash and stock;
M&A_SIZE	+	Natural logarithm of the dollar value of the acquisition;
M&A_ACQPP	+	Acquiring firm's total returns to shareholders in the fiscal year prior to the M&A;
LOSS	+	1 if the acquiring firm's earnings before extraordinary items are less than zero in the year of the M&A, and 0 otherwise;
LN_BUSSEGS	+/-	Natural logarithm of the acquiring firm's total number of business segments;
BIG4	+/-	1 if the acquiring and/or the target firm's auditor is a Big 4 audit firm, and 0 otherwise;
LN_AF	+	Natural logarithm of total audit services fees paid by acquiring firm;
CITYSPEC	-	1 if auditor has the largest percent market share based on audit fees in a two-digit SIC code at the client city-level, and 0 otherwise;
NATSPEC	-	1 if auditor has largest percent market share based on audit fees in a two-digit SIC code at the client national-level, and 0 otherwise;

Table 2

Continued

Variable Name	Predicted Sign	Variable Measurement
DUALITY	+	1 if the acquiring firm's CEO is also Chairman of the Board, and 0 otherwise;
CEO_PCT_OWN	+	Percentage of CEO stock holdings, in the acquiring firm, at the end of the year preceding the M&A;
BDSIZE	+	Total number of board members by fiscal year;
BDMEET	+/-	Total number of board meetings during the fiscal year;
BDIND	+	Percent of outside directors on the board;
INSTOWN	+	Percentage of shares held by institutional owners at end of the fiscal year;
BLOCK	+	1 if there is a cumulative ownership percentage of voting control held by outside blockholders of at least five percent ownership in the firm, and 0 otherwise;
YEAR		Year indicator variable;
INDUSTRY		Industry indicator variables based on 1-digit SIC (Standard Industry Classification) code;

Panel B: M&A financial reporting quality outcomes
Dependent Variable

Variable Name	Predicted Sign	Variable Measurement
M&A_ICW		1 if the acquiring firm reports an internal control weakness in the year of the M&A or the year following the M&A, 0 otherwise;
M&A_RESTATE		1 if the acquiring firm reports a financial restatement in the year of the M&A or the year following the M&A, and 0 otherwise;
M&A_OOPA		1 if the acquiring firm recorded out-of-period adjustments in the year of the M&A or the year following the <&A, and 0 otherwise;

Control Variables

Variable Name	Predicted Sign	Variable Measurement
LEV	-	Ratio of total debt to total assets;

Table 2

Continued

Variable Name	Predicted Sign	Variable Measurement
DISTRESS	-	Zmijewski Z-score for an acquiring firm for the year immediately preceding the year of the M&A announcement (Zmijewski Score = -4.336 - 4.513*(Net Income/Total Assets) + 5.679*(Total Liabilities/Total Assets) + 0.004*(Current Assets/Current Liabilities);
FIRMAGE	-	Number of years the acquiring firm has been publicly listed;
LITIND	-	1 if SIC code is 2833-2836, 3570-3577, 3600-3674, 5200-5961, 7370-7374, and 0 otherwise;
SIZE	+	Natural logarithm of total assets in millions of dollars;
BIG4	+/-	1 if the acquiring and/or the target firm's auditor is a Big 4 audit firm, and 0 otherwise;
LN_AF	+	Natural logarithm of total audit services fees paid by the acquiring firm;
TENURE	-	Natural logarithm of the number of consecutive years of the auditor-client relationship;
AC_ACCEXP	+	Proportion of audit committee members with accounting-related experience (e.g., certified or charted public accounting, auditor, CFO, controller, VP Finance, chief accounting officer);
AC_SUPEXP	+	Proportion of audit committee members with non-accounting financial experience but possesses supervisory experience (e.g., CEO, president, chief operating officer);
AC_SIZE	+	Total number of audit committee members by fiscal year;
AC_MEET	-	Total number of audit committee meetings per fiscal year;
NEW_CFO	-	1 if the firm appoints a new CFO one year prior to the M&A, and 0 otherwise;
NEW_CFO_M&A	-	1 if the new CFO that is hired has M&A experience in the preceding three years, and 0 otherwise;

Table 2

Continued

Variable Name	Variable Name	Variable Name
YEAR		Year indicator variable;
INDUSTRY		Industry indicator variables based on 1-digit SIC (Standard Industry Classification) code;

Panel C: Market reaction to M&A goodwill impairment		
Dependent Variable		

Variable Name	Variable Name	Variable Name
AR		Acquiring firm's short window abnormal returns (AR) at the goodwill impairment announcement date;
Control Variables		
SIZE	+	Natural logarithm of total assets in millions of dollars;
MULTISEG	+/-	1 if the acquiring firm has more than one business segment, and 0 otherwise;
YEAR		Year indicator variable;
INDUSTRY		Industry indicator variables based on 1-digit SIC (Standard Industry Classification) code;

Panel D: Independent and Alternative Test Variables		
Variable Name	Predicted Sign	Variable Measurement
LN_M&A_NAS	?	Natural logarithm of the total non-audit services fees related to the M&A.
SH_AUDITOR	?	1 if both the acquiring and target firms received audit services from the same audit firm in the year immediately preceding the M&A, and 0 otherwise;
SH_AUD_NAS	?	1 if both the acquiring and target firms received M&A NAS from the same audit firm, and 0 otherwise;
SH_AUD_NAS_CITY	?	1 if both the acquiring and target firms received M&A NAS from the same city office of the same audit firm, and 0 otherwise.

Table 2

Continued

Panel D: Independent and Alternative Test Variables		
Variable Name	Predicted Sign	Variable Measurement
LN_NAS	?	Natural logarithm of total non-audit fees where the auditor also provided due diligence services;
LN_AR_NAS	?	Natural logarithm of audit related non-audit fees;
LN_TAX_NAS	?	Natural logarithm of tax non-audit fees;
LN_OTHER_NAS	?	Natural logarithm of other non-audit fees;
UE	?	Acquiring firm's earnings per share minus the consensus earnings per share forecast, scaled by the closing price 2 days prior to the impairment announcement;
IMPLOSS	-	Acquiring firm's total impairment loss, scaled by the closing price 2 days prior to the impairment loss announcement;

 the acquiring and target firms are in the same city, and 0 otherwise. Acquisition

performance is also influenced by the form of payment used to complete the M&A

transaction (Walters et al., 2007). M&A_PMT is equal to 1 if the acquisition was paid in

cash, and 0 if paid with common stock or a combination of cash and stock. The relative

size of an acquisition has been found to influence outcomes, specifically larger

acquisitions have been found to be positively associated with acquisition performance

(Walters et al., 2007); M&A_SIZE is measured as the natural logarithm of the dollar

value of the acquisition. Walters et al. (2007) also found that firms with superior

performance prior to an acquisition tend to make more profitable acquisitions. To control

for performance prior to the M&A, M&A_ACQPP measures the acquiring firm's total

returns to shareholders in the fiscal year prior to the M&A. Prior studies have found that

the likelihood of a goodwill impairment increases for firms with a loss (Carcello et al., 2014; Hoitash et al., 2009). LOSS is an indicator variable equal to 1 if the acquiring firm's earnings before extraordinary items are less than zero in the year of the M&A, and 0 otherwise.

To control for the effects of acquiring firm complexity on M&A financial reporting outcomes, I include business segments, LN_BUSSEGS, measured as the natural logarithm of the acquiring firm's total number of business segments (Carcello et al., 2014). More complex firms generally demand more resources for a successful M&A (Cai et al., 2015; Walters et al., 2007), demand more NAS (Naiker et al., 2013), and can be associated with both favorable and less favorable M&A outcomes (Carcello et al., 2014; Walters et al., 2007). Hence, I do not predict a directional effect for LN_BUSSEGS.

The following control variables relate to auditor characteristics for the acquiring firms. BIG4 is equal 1 if the acquiring and/or the target firm's auditor is a Big 4 audit firm, and 0 otherwise. Following prior research (Carcello et al., 2014), I control for the level of audit fees. LN_AF is measured as the natural logarithm of total audit services fees paid by acquiring firm. Auditors with more industry expertise may lead to better acquisition outcomes (Cai et al., 2015). Therefore, I control for auditor city-level industry specialist (CITYSPEC), an indicator variable equal to 1 if the auditor has the largest percent market share based on audit fees in a two-digit SIC code at the client city-level, and 0 otherwise. I also control for national-level industry expertise (NATSPEC), an indicator variable equal to 1 if the auditor has the largest percent market share based on audit fees in a two-digit SIC code at the client national-level, and 0 otherwise.

To control for governance characteristics, I include various CEO, board and ownership characteristics of the acquiring firm. I include DUALITY that equals 1 if the acquiring firm's CEO is also the Chairman of the Board, and 0 otherwise. Prior studies have suggested the effectiveness of the board is enhanced when the board chairman is not the CEO (Beasley, 1996; Dhaliwal et al., 2010). Prior research suggests a negative association between acquiring CEO firm ownership and goodwill overstatements (Shalev et al., 2013). Hence, I control for this effect through CEO_PCT_OWN, which is the percentage of CEO stock holdings, in the acquiring firm, at the end of the year preceding the M&A. Board size has been found to be positively associated with financial performance (Dalton, Daily, Johnson, & Ellstrand (1999). BDSIZE is measured as total number of board members by fiscal year. Prior studies have found conflicting results on the impact of the number of board meetings held during the fiscal year. One stream of studies suggests that boards that meet more frequently are more likely to discuss remediation efforts with management and auditors. However, it has also been found that the frequency of meetings subsequent to a material weakness may simply deflect the magnitude of problems faced by the firm (Krishnan, 2005; Zhang, Zhou, & Zhou, 2007). Therefore, I do not predict a directional effect for BDMEET. BDMEET is measured as the total number of board meetings during the fiscal year. Higher proportions of independent board members are associated with acquisition success (Walters, Kroll, & Wright, 2007), which is denoted BDIND and measured as the percent of outside directors on the board. INSTOWN is measured as the percentage of shares held by institutional owners at end of the fiscal year. Blockholders also are associated with acquisition success (Walters et al., 2007). BLOCK is an indicator variable equal to 1 if there is a cumulative

ownership percentage of voting control held by outside blockholders of at least five percent ownership in the firm, and 0 otherwise.

M&A financial reporting quality outcomes. Consistent with prior research on the determinants of financial restatements (Abbott, Parker, & Peters, 2004; Bentley, Omer, & Sharp, 2013; Stanley & DeZoort, 2007), I use control variables measuring firm performance, complexity, auditor characteristics, and corporate governance. Leverage (LEV) is measured as the ratio of total debt to total assets. Financially distressed firms are more likely to have financial restatements (Stanley & DeZoort, 2007). DISTRESS is measured using the Zmijewski Z-Score for an acquiring firm for the year immediately preceding the year of the M&A announcement, where higher values represent greater financial distress. Firm age has been found to be negative and significantly associated with the likelihood of a financial restatement (Abbott et al., 2004; Bentley et al., 2013). FIRMAGE is measured as the number of years the acquiring firm has been publicly listed.

Prior studies have found that firms in litigious industries are more likely to have financial reporting irregularities (e.g., restatements) (Beasley, Carcello, & Hermanson, 1999; Bentley et al., 2013). Acquiring firms operating in a litigious industry (LITIND), is an indicator variable equal to 1 if SIC code is 2833-2836, 3570-3577, 3600-3674, 5200-5961, 7370-7374, and 0 otherwise (Francis, Philbrick, & Schipper, 1994). Firm size has also been found to be positively and significantly associated with restatements (Bentley et al., 2013). Firm size (SIZE) is measured as the natural logarithm of total assets in millions of dollars.

Prior research has shown that several auditor characteristics influence financial reporting quality (Rice et al., 2012; Standley et al., 2012). Firms audited by Big 4 auditor firms are less likely to have internal control weaknesses. BIG4 is an indicator variable equal to 1 if the acquiring and/or target firm's auditor is a Big 4 audit firm, and 0 otherwise. LN_AF is measured as the natural logarithm of total audit services fees paid by the acquiring firm. Auditor tenure has also been found to be significantly and negatively associated with the likelihood of a financial restatement (Stanley & DeZoort, 2007). TENURE is measured as the natural logarithm of the number of consecutive years of the auditor-client relationship.

Consistent with prior research, I include the following control variables related to audit committee characteristics. Prior research has shown that audit committees with members who have accounting or financial expertise are positively associated with financial reporting quality (Abbott et al., 2004; DeFond et al., 2005; Hoitash et al., 2009; Naiker & Sharma, 2009; Dhaliwal, Naiker, & Navissi, 2010). Following this literature, I use control variables for accounting and financial expertise. AC_ACCEXP is measured as the proportion of audit committee members with accounting-related experience (e.g., certified or chartered public accountant, auditor, chief financial officer (CFO), controller, VP Finance, chief accounting officer). AC_SUPEXP is measured as the proportion of audit committee members with non-accounting financial experience but possess supervisory experience (e.g., CEO, president, chief operating officer), where their role includes supervising individuals with accounting expertise. In addition, I control for the total number of audit committee members by fiscal year (AC_SIZE). Prior research has shown the number of audit committee members affect audit committee effectiveness

(Dhaliwal et al., 2010). It has also been found that the frequency of audit committee meetings is an important indicator of audit committee effectiveness (Sharma, Naiker, & Lee, 2009) and is negatively and significantly associated with restatements (Abbott et al., 2004). Hence, I control for the total number of audit committee meetings per fiscal year (AC_MEET).

market reaction to goodwill impairments. I adapt regression models from Bens et al. (2011) and Li et al. (2011) to test market reactions to goodwill impairments:

$$AR_i = \beta_0 + \beta_1 UE_i + \beta_2 IMPLOSS_i + \beta_3 LN\_M\&A\_NAS_i$$

$$+ \beta_4 LN\_M\&A\_NAS*IMPLOSS_i + \varepsilon_i \tag{7}$$

Abnormal returns (AR) is the 3-day abnormal returns for the firm computed for days -1, 0, and 1, where 0 is the day of the impairment announcement t using the market model. Abnormal returns are calculated using the (adjusted) market model. The regression to estimate the abnormal returns is run using daily returns for the acquiring firm and the equally weighted market index over an estimation period of 120 days ending on day -2 relative to the impairment announcement date. Similar to Li et al. (2011), I require a minimum of 50 days of returns data for accurate estimates of the market beta. The unexpected earnings (UE) is the acquiring firm's earnings per share minus the consensus earnings per share forecast, where I construct the consensus using the mean forecasts issued over a period of 30 days preceding the earnings announcement, scaled by the closing price 2 days prior to the impairment announcement. Unexpected earnings are included as an independent variable since prior studies have shown that approximately 87 percent of impairment announcements are made within the three-day earnings announcement window (Li et al., 2011). Impairment loss (IMPLOSS) is measured as the

acquiring firm's total impairment loss scaled by the closing price 2 days prior to the impairment loss announcement. M&A NAS (LN_M&A_NAS) is the natural logarithm of total non-audit services fees related to the M&A. To test H6a and H6b, the interaction term in the equation (6) between LN_M&A_NAS and IMPLOSS allows me to draw inferences as to whether the auditor-provided M&A NAS affects market reaction to goodwill impairments.

Firm complexities may make it difficult to allocate goodwill to reporting units (Chen, Krishnan, & Sami, 2014), hence I control for firm size (SIZE), measured as the natural logarithm of total assets in millions of dollars. I also control for multiple business segments (MULTISEG), an indicator variable equal to 1 if the acquiring firm has more than one business segment, and 0 otherwise. Although reporting segments may be distinct from business segments, the existence of multiple segments is reflective of complex organizations, thus making the determination of goodwill impairments and its allocation across reporting units more complex.

special measures. Following prior research (Francis, Reichelt, & Wang, 2005; Huang, Liu, Raghunandan, & Rama, 2007; Fung, Gul, & Krishnan, 2012), I use audit fees to build the auditor industry specialization variables that are used in my study. The city-level industry specialization variable (CITYSPEC) is constructed by computing each audit firm's audit fee share in each two-digit standard industry code (SIC) group in each city, and then rank the audit firms based on their city-level industry share for each year. Using a modified approach to Francis et al. (2005), I define cities and counties using the core based statistical areas (CBSA) as defined by the U.S. Census Bureau.[7] Consistent

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[7] The Office of Management and Budget (OMB) released new standards, based on the 2010 U.S. Census, on July 15, 2015. The new standard collectively refers to both metropolitan statistical areas (MSA) and

with prior studies (Ferguson, Francis, & Stokes, 2003; Francis, Stokes, & Anderson, 1999; Francis et al., 2005), I also assume that the audit firm local office is located in the same city as the client's headquarters. The city code assigned to the sample observations are based on the client's corporate headquarter's location as reported in Audit Analytics. The national-level auditor industry specialization (NATSPEC) variable is constructed similarly to the city-level variable, but is computed based on just the audit firm's share in each two-digit SIC code for each year. These variables allow me to control for how the proportion of clients audited by a firm at the city- and national-level (i.e., industry specialization effect) influences M&A outcomes when an auditor provides M&A NAS to an audit-client.

To control for industry effects, indicator variables for each one-digit SIC are used. To control for fiscal year effects, indicator variables for each fiscal year are used.

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micropolitan areas as CBSA. Prior models used MSA only when determining city-level specialists. Available at https://www.census.gov/geo/reference/gtc/gtc_cbsa.html.

CHAPTER 4

DATA ANALYSIS AND FINDINGS

Descriptive Statistics

Panel A of Table 3 reports the descriptive statistics for dependent variables.

Acquiring companies (M&A Goodwill) in the sample recorded a mean (median)

$2,116.569 ($708.821) million in goodwill from M&A transactions with a mean (median)

of 65.9 (67.2) percent goodwill to purchase price (MA_GWPCT); with average (M&A

Purchase Price) totaling $3,094.854 million. Of the acquiring companies in the sample,

20.2 percent recorded a goodwill impairment (M&A_GWIMP) in the year following the

M&A, with reductions in (Goodwill Impairment) averaging $182.469 million. From a

M&A financial reporting quality perspective, 4.4 percent of the acquiring companies in

the sample reported internal control weaknesses (MA_ICW) in the year of M&A or the

year following the M&A and 19.7 percent reported a financial restatement

(MA_RESTATE) in the year of M&A or the year following the M&A. Abnormal returns

(AR) mean (median) were 0.5 (0.1) percent at the goodwill impairment announcement

date for acquiring firms in the sample.

Panel B of Table 3 presents the descriptive statistics for the primary and

alternative test variables. Acquiring companies in the sample purchased a mean (median)

total M&A-related non-audit service fees of $1.345 ($0.187) million.

Table 3

Descriptive Statistics

Panel A: Dependent Variables

Variable	N	Mean	SD	p(25)	Median	p(75)
M&A Goodwill ($ millions)	203	2,116.569	5,096.440	258.555	708.821	1,869.993
M&A_GWPCT	203	0.659	0.179	0.553	0.672	0.774
M&A Purchase Price ($ millions)	203	3,094.854	7,152.019	432.219	1,016.112	2,853.862
M&A_GWIMP	203	0.202	0.402	0.000	0.000	0.000
Goodwill Impairment ($millions)	203	-182.469	-822.034	0.000	0.000	0.000
M&A_GWIMPAMT	203	0.065	0.196	0.000	0.000	0.000
M&A_ICW	203	0.044	0.206	0.000	0.000	0.000
M&A_RESTATE	203	0.197	0.399	0.000	0.000	0.000
AR	203	0.005	0.043	-0.013	0.001	0.023

Panel B: Primary and Alternative Test Variables

Variable	N	Mean	SD	p(25)	Median	p(75)
M&A NAS Fees ($ millions)	203	1.345	3.597	0.000	0.187	0.951
LN_M&A&NAS	203	0.464	0.693	0.000	0.172	0.668
SH_AUDITOR	203	0.281	0.450	0.000	0.000	1.000
SH_AUD_NAS	203	0.079	0.270	0.000	0.000	0.000
SH_AUD_NAS_CITY	203	0.015	0.121	0.000	0.000	0.000

Note. See Table 2 for variable definitions

Table 3

Continued

Panel B: Primary and Alternative Test Variables						
Variable	N	Mean	SD	p(25)	Median	p(75)
Total Non-Audit Fees ($ millions)	203	2.830	5.506	0.396	1.005	2.540
LN_NAS	203	0.915	0.786	0.333	0.696	1.264
Audit-related NAS Fees ($ millions)	203	1.329	3.390	0.109	0.330	0.979
LN_AR_NAS	203	0.515	0.637	0.103	0.285	0.683
Tax NAS Fees ($ millions)	203	1.375	2.446	0.111	0.503	1.348
LN_TAX_NAS	203	0.597	0.639	0.106	0.407	0.854
Other NAS Fees ($ millions)	203	0.126	0.481	0.000	0.000	0.013
LN_OTHER_NAS	203	0.078	0.236	0.000	0.000	0.013
UE	203	-0.012	0.061	-0.009	0.000	0.003
IMPLOSS	203	8.301	46.977	0.000	0.000	0.000
Panel C: Control Variables						
Variable	N	Mean	SD	p(25)	Median	p(75)
M&A_CITY	203	0.103	0.305	0.000	0.000	0.000
M&A_PMT	203	0.596	0.492	0.000	1.000	1.000
Purchase Price ($ millions)	203	3,094.854	7,152.019	432.219	1,016.112	2,853.862
M&A_SIZE	203	6.962	1.482	6.069	6.924	7.956
M&A_ACQPP	203	0.191	0.645	-0.070	0.110	0.328
LOSS	203	0.148	0.356	0.000	0.000	0.000
Business Segments	203	4.532	2.652	3.000	4.000	6.000
LN_BUSSEGS	203	1.302	0.708	1.099	1.386	1.792

Note. See Table 2 for variable definitions

Table 3

Continued

Panel C: Control Variables						
Variable	N	Mean	SD	p(25)	Median	p(75)
BIG4	203	0.970	0.170	1.000	1.000	1.000
Audit Fees ($ millions)	203	8.280	9.977	2.287	4.402	11.153
LN_AF	203	1.835	0.849	1.190	1.687	2.498
CITYSPEC	203	0.291	0.455	0.000	0.000	1.000
NATSPEC	203	0.025	0.155	0.000	0.000	0.000
DUALITY	203	0.601	0.491	0.000	1.000	1.000
CEO_PCT_OWN	203	2.519	7.880	0.179	0.530	1.368
BDSIZE	203	9.990	2.249	8.000	10.000	11.000
BDMEET	203	9.366	4.422	7.000	9.000	11.000
BDIND	203	0.736	0.165	0.636	0.778	0.875
INSTOWN	203	0.722	0.356	0.631	0.766	0.866
BLOCK	203	0.951	0.217	1.000	1.000	1.000

Panel D: Control Variables						
Variable		Mean	SD	p(25)	Median	p(75)
LEV	203	0.254	0.168	0.143	0.231	0.358
DISTRESS	203	-1.093	1.046	-1.859	-1.078	-0.417
FIRMAGE	203	32.522	19.767	15.000	26.000	52.000
LITIND	203	0.271	0.446	0.000	0.000	1.000
Total Assets ($ millions)	203	25,950.820	58,409.920	2,641.060	8,913.917	26,833.700

Note. See Table 2 for variable definitions

Table 3

Continued

Panel D: Control Variables						
Variable	N	Mean	SD	p(25)	Median	p(75)
SIZE	203	9.035	1.550	7.879	9.095	10.197
TENURE	203	2.331	0.875	1.792	2.303	2.996
AC_ACCEXP	203	0.348	0.227	0.200	0.333	0.500
AC_SUPEXP	203	0.770	0.220	0.667	0.800	1.000
ACSIZE	203	4.099	0.965	3.000	4.000	5.000
ACMEET	203	8.985	3.076	7.000	9.000	11.000
NEW_CFO	203	0.271	0.446	0.000	0.000	1.000
NEW_CFO_M&A	203	0.113	0.318	0.000	0.000	0.000
Panel E: Control Variables						
Variable	N	Mean	SD	p(25)	Median	p(75)
Total Assets ($ millions)	203	25,950.820	58,409.920	2,641.060	8,913.917	26,833.700
SIZE	203	9.035	1.550	7.879	9.095	10.197
MULTISEG	203	0.828	0.379	1.000	1.000	1.000

Note. See Table 2 for variable definitions.

An average of 28.1 percent of the acquiring and target companies in the sample received audit services from the same firm (SH_AUDITOR) in the year immediately preceding the M&A. Acquiring and target companies in the sample receiving M&A NAS from the same audit firm (SH_AUD_NAS) averaged 7.9 percent and 1.5 percent of the acquiring and target firms that received M&A NAS from the same city office of the same audit firm (SH_AUD_NAS_CITY). Total non-audit services fees averaged (median) $2.830 ($1.005) million for the acquiring companies in the sample. Breaking out the total non-audit fees into the components of NAS fees, acquiring companies purchased on average $1.329 million, $1.375 million, and $0.126 million for audit-related NAS, Tax NAS, and Other NAS fees respectively. The mean unexpected earnings (UE) relative to the consensus forecast (scaled by price closing price 2 days prior to impairment announcement loss) is negative at -1.2 percent and the mean total impairment loss (IMPLOSS), scaled by closing price 2 days prior to impairment announcement loss, is $8.301 million.

Panel C of Table 3 reports descriptive statistics for the M&A goodwill outcomes control variables. Acquiring and target firms whose headquarters are in the same city (M&A_CITY), accounted for 10.3 percent of the sample. The mean (median) transactions paid in cash (M&A_PMT) account for 59.6 percent of the sample with the mean (median) purchase price of $3,094.854 ($1,016.112) million. Firms in the sample had mean (median) total returns to shareholders (M&A_ACQPP) of 19.1 (11.0) percent in the year prior to the M&A. An average of 14.8 percent of the acquiring firms in the sample experienced a loss (LOSS) in the year of the M&A. The acquiring firms in

the sample were complex with an average of 4.532 (Business Segments). The control variable statistics report that 97.0 percent of the acquiring and/or target firms receive audit services from Big 4 audit firms (BIG4). Acquiring firms purchased audit services (Total audit fees) averaging $8.280 million. The acquiring firm auditors in the sample are 29.1 percent city-level industry specialists (CITYSPEC) and 2.5 percent are national-level industry specialists (NATSPEC). Control variables for governance and ownership characteristics report 60.1 percent of the acquiring firms had CEO duality (DUALITY) (i.e., CEO as Chairman of the Board), the mean (median) acquiring firm CEO percent stock ownership (CEO_PCT_OWN) at the end of the year preceding the M&A year was 2.5 (0.5) percent of their respective company's common stock, mean (median) board size (BDSIZE) was 9.990 (10.000), the mean (median) number of board meetings (BDEET) held in the fiscal year is 9.366 (9.000), 73.6 of the directors on the board were independent (BDIND), institutional owners (INSTOWN) accounted for 72.2 percent, and 95.1 percent of the acquiring firms had cumulative ownership of voting control by outside blockholders (BLOCK) who hold at least 5 percent ownership in the firm.

Panel D of Table 3 reports descriptive statistics for the M&A financial reporting quality outcomes control variables. The acquiring companies in the sample were highly leveraged (LEV) (25.4 percent). Financial distress (DISTRESS) is measured using Zmijewski's (1984) probit model, where higher values represent greater financial distress. Acquiring companies in the sample show low financial distress with mean (median) values of -1.093 (-1.078). Acquiring companies in the sample have been publicly listed (FIRMAGE) a mean (median) of 32.522 (26.000) years, 27.1 percent operate in litigious industries (LITIND), have mean (median) total assets of $25,950.820

($8,913.917) million, and have average auditor-client relationships (TENURE) of 2.331 years.

To capture the financial expertise of the audit committee, the type of financial expertise is categorized as accounting and supervisory expertise. AC_ACCEXP represents the proportion of audit committee members with accounting-related experience, such as, certified or chartered public accountant, auditor, CFO, controller, VP Finance, or chief accounting officer, while AC_SUPEXP represents the proportion of audit committee members with non-accounting financial experience as CEO, president, or chief operating officer. The mean (median) percentage of audit committee members with accounting expertise (AC_ACCEXP) is 34.8 (33.3) percent and the mean (median) percentage of audit committee member with supervisory expertise (AC_SUPEXP) is 77.0 (80.0) percent. Acquiring companies in the sample have audit committees with a mean (median) of 4.099 (4.000) members (AC_SIZE) and had a mean (median) of 8.985 (9.000) meetings (AC_MEET) per fiscal year. Acquiring companies in the sample show that 27.1 percent hired a new CFO (NEW_CFO) in the year prior to the M&A and 11.3 percent of the new CFOs hired have M&A experience (NEW_CFO_M&A) in the preceding three years.

Panel E of Table 3 reports the descriptive statistics for market reaction to M&A goodwill impairments control variables. To control for firm complexity, mean (median) acquiring firm total assets is $25,950.82 ($8,913.917) million and 82.8 percent of firms in the sample have multiple business segments (MULTISEG).

Table 4 provides Pearson correlation matrices to test for multicollinearity between the independent variables and regression models for Hypotheses 1a through 6b[8]. For my test variables, the magnitude of the correlation coefficients does not preclude the inclusion of the independent variables in the regression models because the correlations are below the 0.80 limit (Kennedy, 2008) with the exception of SIZE to LN_AF (0.882) and MULTISEG to LN_BUSSEGS (0.841). This is further confirmed by the examination of the variance inflation factors (VIF) to assess the magnitude of multicollinearity. The VIF factors ranged from 1.17 to 5.82, well below the acceptable limit of 10 (Kennedy, 2008)[9].

<center>Multivariate Analysis</center>

Results of Hypotheses 1a and 1b

Table 5 tests whether the acquiring firms in a successful acquisition recognized lower (H1a) or higher (H1b) goodwill when their incumbent auditor provides M&A due diligence through NAS. I run my test using OLS regression with robust standard errors double clustered by year (2007-2013) and industry (one-digit SIC code) to control for year and industry effects because the observations were clustered by year and industry. The positive and significant coefficient on LN_M&A_NAS (p=0.034) indicates that acquiring firms recognize higher goodwill when their auditors provide M&A due diligence through NAS with regression explanatory power adjusted $R^2 = 0.0588$, thus supporting H1b.

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[8] A Spearman correlation matrix was also run (not tabulated), which produced similar results to the Pearson correlation matrices.
[9] The main regression models for H4a to H5b were used to obtain the VIFs.

Table 4

Pearson Correlations

	LN_M&A_NAS	M&A_CITY	M&A_PMT	M&A_SIZE	M&A_ACQPP	LOSS	LN_BUSSEGS
LN_M&A_NAS	1.000						
M&A_CITY	-0.036	1.000					
M&A_PMT	0.107	**-0.248**	1.000				
M&A_SIZE	**0.246**	0.067	**-0.216**	1.000			
M&A_ACQPP	**-0.251**	0.044	-0.028	**-0.233**	1.000		
LOSS	-0.032	0.132	-0.082	-0.033	**0.232**	1.000	
LN_BUSSEGS	**0.277**	-0.119	0.095	**0.234**	0.049	-0.038	1.000
BIG4	0.061	0.059	-0.084	**0.188**	-0.063	-0.009	0.022
LN_AF	**0.562**	-0.090	0.107	**0.461**	-0.104	**-0.180**	**0.512**
CITYSPEC	-0.077	-0.004	0.041	0.035	-0.023	-0.053	0.052
NATSPEC	0.047	-0.054	-0.064	0.105	-0.030	0.023	0.084
DUALITY	**0.141**	-0.054	-0.015	0.069	-0.025	-0.058	0.011
CEO_PCT_OWN	-0.084	-0.047	0.007	**-0.211**	**0.142**	-0.001	**0.140**
BDSIZE	**0.300**	-0.006	0.010	**0.392**	-0.099	-0.116	**0.359**
BDMEET	0.112	-0.023	-0.041	**0.163**	0.075	**0.197**	0.058
BDIND	**0.212**	-0.001	0.006	**0.139**	0.126	-0.040	0.010
INSTOWN	-0.063	-0.068	0.038	-0.113	-0.124	-0.107	-0.109
BLOCK	-0.023	0.003	-0.002	-0.043	0.036	0.031	-0.018
LEV	-0.012	-0.091	0.064	-0.013	0.121	**0.166**	0.085
DISTRESS	**0.166**	-0.126	0.132	0.057	0.053	**0.295**	**0.231**
FIRMAGE	**0.429**	-0.083	0.113	**0.222**	-0.090	**-0.179**	**0.396**
LITIND	**0.194**	-0.062	0.005	-0.006	0.088	**0.183**	-0.121

Note. Correlations significant at the two-tailed 0.05 level are in bold figures. See Table 2 for variable definitions.

Table 4

Continued

	LN_M&A_NAS	M&A_CITY	M&A_PMT	M&A_SIZE	M&A_ACQPP	LOSS	LN_BUSSEGS
SIZE	**0.475**	-0.050	0.057	**0.614**	-0.118	**-0.238**	**0.409**
TENURE	**0.182**	**-0.152**	0.045	0.033	**-0.158**	**-0.201**	**0.180**
AC_ACCEXP	-0.004	-0.050	0.098	**-0.162**	0.096	**0.199**	-0.017
AC_SUPEXP	**0.160**	-0.084	-0.594	0.093	-0.038	**-0.198**	0.081
ACSIZE	**0.198**	0.049	-0.083	**0.200**	-0.102	-0.086	**0.282**
ACMEET	0.096	-0.014	0.120	0.010	0.007	**0.160**	0.118
UE	0.062	**-0.145**	**0.202**	0.024	**-0.233**	**-0.400**	0.036
IMPLOSS	0.117	0.007	**-0.140**	0.106	0.047	0.058	0.105
MULTISEG	**0.192**	-0.102	0.076	**0.169**	0.059	0.043	**0.841**

Note. Correlations significant at the two-tailed 0.05 level are in bold figures. See Table 2 for variable definitions.

Table 4

Continued

	BIG4	LN_AF	CITYSPEC	NATSPEC	DUALITY	CEO_PCT_OWN	BDSIZE
LN_M&A_NAS							
M&A_CITY							
M&A_PMT							
M&A_SIZE							
M&A_ACQPP							
LOSS							
LN_BUSSEGS							
BIG4	1.000						
LN_AF	**0.162**	1.000					
CITYSPEC	0.048	0.111	1.000				
NATSPEC	0.028	0.102	**0.178**	1.000			
DUALITY	-0.083	**0.164**	0.012	-0.065	1.000		
CEO_PCT_OWN	**0.209**	**-0.145**	0.010	-0.011	0.055	1.000	
BDSIZE	**0.155**	**0.607**	0.124	0.128	0.086	**-0.143**	1.000
BDMEET	-0.046	0.054	0.017	0.067	0.031	-0.079	-0.076
BDIND	0.092	**0.239**	-0.028	-0.117	0.022	0.019	0.116
INSTOWN	-0.079	-0.119	0.049	**0.299**	**0.154**	0.043	-0.121
BLOCK	-0.040	-0.012	0.045	0.036	-0.093	0.031	-0.031
LEV	0.019	**-0.168**	-0.016	0.103	0.024	-0.041	-0.066
DISTRESS	0.078	0.073	0.040	-0.025	0.023	-0.057	0.053
FIRMAGE	0.021	**0.620**	-0.041	0.002	**0.178**	**-0.176**	**0.440**
LITIND	0.041	0.094	-0.024	-0.097	-0.001	0.074	0.047

Note. Correlations significant at the two-tailed 0.05 level are in bold figures. See Table 2 for variable definitions.

Table 4

Continued

	BIG4	LN_AF	CITYSPEC	NATSPEC	DUALITY	CEO_PCT_OWN	BDSIZE
SIZE	**0.223**	**0.882**	0.101	0.072	**0.202**	**-0.193**	**0.593**
TENURE	**0.194**	**0.345**	0.074	0.053	-0.004	**-0.157**	**0.262**
AC_ACCEXP	**0.211**	-0.091	-0.021	0.004	0.039	-0.018	**-0.158**
AC_SUPEXP	0.131	**0.212**	0.028	0.029	0.028	-0.064	**0.162**
ACSIZE	**0.169**	**0.281**	0.025	**0.149**	0.052	**-0.185**	**0.436**
ACMEET	0.113	**0.191**	-0.089	-0.124	0.022	-0.038	0.061
UE	0.019	**0.177**	0.086	0.028	0.111	**-0.162**	**0.151**
IMPLOSS	0.031	0.076	-0.050	0.050	0.005	-0.001	**0.188**
MULTISEG	-0.003	**0.341**	0.034	0.073	-0.026	**-0.145**	**0.196**

Note. Correlations significant at the two-tailed 0.05 level are in bold figures. See Table 2 for variable definitions.

Table 4

Continued

	BDMEET	BDIND	INSTOWN	BLOCK	LEV	DISTRESS	FIRMAGE
LN_M&A_NAS							
M&A_CITY							
M&A_PMT							
M&A_SIZE							
M&A_ACQPP							
LOSS							
LN_BUSSEGS							
BIG4							
LN_AF							
CITYSPEC							
NATSPEC							
DUALITY							
CEO_PCT_OWN							
BDSIZE							
BDMEET	1.000						
BDIND	0.056	1.000					
INSTOWN	0.116	-0.055	1.000				
BLOCK	0.085	-0.021	0.003	1.000			
LEV	0.057	-0.036	-0.007	0.014	1.000		
DISTRESS	0.048	0.106	**-0.173**	-0.002	**0.683**	1.000	
FIRMAGE	-0.022	**0.225**	-0.062	-0.114	**-0.253**	-0.002	1.000
LITIND	0.096	0.086	-0.049	0.036	**-0.189**	-0.053	-0.028

Note. Correlations significant at the two-tailed 0.05 level are in bold figures. See Table 2 for variable definitions.

Table 4

Continued

	BDMEET	BDIND	INSTOWN	BLOCK	LEV	DISTRESS	FIRMAGE
SIZE	0.059	**0.215**	-0.131	-0.029	**-0.168**	0.006	**0.560**
TENURE	-0.012	0.108	0.007	0.032	**-0.189**	0.038	**0.434**
AC_ACCEXP	-0.004	0.064	0.109	0.015	0.116	**0.199**	-0.115
AC_SUPEXP	-0.019	0.086	0.106	-0.060	**-0.227**	-0.079	**0.205**
ACSIZE	-0.062	0.135	-0.031	-0.071	-0.090	0.060	**0.289**
ACMEET	0.118	0.095	0.001	0.014	-0.075	0.006	0.085
UE	0.086	-0.054	**0.185**	0.053	-0.026	-0.062	0.113
IMPLOSS	0.049	-0.079	-0.057	0.039	-0.005	-0.056	-0.096
MULTISEG	0.085	0.024	-0.071	-0.044	**0.166**	**0.312**	**0.303**

Note. Correlations significant at the two-tailed 0.05 level are in bold figures. See Table 2 for variable definitions.

Table 4

Continued

	LITIND	SIZE	TENURE	AC_ACCEXP	AC_SUPEXP	AC_SIZE	AC_MEET
LN_M&A_NAS							
M&A_CITY							
M&A_PMT							
M&A_SIZE							
M&A_ACQPP							
LOSS							
LN_BUSSEGS							
BIG4							
LN_AF							
CITYSPEC							
NATSPEC							
DUALITY							
CEO_PCT_OWN							
BDSIZE							
BDMEET							
BDIND							
INSTOWN							
BLOCK							
LEV							
DISTRESS							
FIRMAGE							
LITIND	1.000						

Note. Correlations significant at the two-tailed 0.05 level are in bold figures. See Table 2 for variable definitions.

Table 4

Continued

	LITIND	SIZE	TENURE	AC_ACCEXP	AC_SUPEXP	AC_SIZE	AC_MEET
SIZE	0.131	1.000					
TENURE	0.015	**0.288**	1.000				
AC_ACCEXP	0.039	-0.137	**0.147**	1.000			
AC_SUPEXP	0.022	**0.198**	**0.211**	-0.098	1.000		
ACSIZE	-0.005	**0.300**	**0.186**	-0.112	**0.179**	1.000	
ACMEET	**0.256**	**0.194**	-0.053	**0.169**	**-0.196**	-0.018	1.000
UE	**-0.191**	**0.183**	**0.155**	**-0.153**	0.120	-0.023	-0.054
IMPLOSS	-0.015	0.070	-0.101	-0.096	0.025	-0.020	-0.054
MULTISEG	-0.133	**0.248**	0.137	0.040	0.006	**0.209**	0.134

Note. Correlations significant at the two-tailed 0.05 level are in bold figures. See Table 2 for variable definitions.

Table 4

Continued

	UE	IMPLOSS	MULTISEG
LN_M&A_NAS			
M&A_CITY			
M&A_PMT			
M&A_SIZE			
M&A_ACQPP			
LOSS			
LN_BUSSEGS			
BIG4			
LN_AF			
CITYSPEC			
NATSPEC			
DUALITY			
CEO_PCT_OWN			
BDSIZE			
BDMEET			
BDIND			
INSTOWN			
BLOCK			
LEV			
DISTRESS			
FIRMAGE			
LITIND			

Note. Correlations significant at the two-tailed 0.05 level are in bold figures. See Table 2 for variable definitions.

Table 4

Continued

	UE	IMPLOSS	MULTISEG
SIZE			
TENURE			
AC_ACCEXP			
AC_SUPEXP			
ACSIZE			
ACMEET			
UE	1.000		
IMPLOSS	0.031	1.000	
MULTISEG	0.010	0.013	1.000

Note. Correlations significant at the two-tailed 0.05 level are in bold figures. See Table 2 for variable definitions.

Table 5

Regression results of MA_GWPCT on LN_M&A NAS.

Variable	Expected Sign	Coefficient	t-stat	p-value
Intercept		0.334	3.942	0.000***
LN_M&A_NAS	?	0.042	2.205	0.034**
M&A_CITY	-	0.007	0.413	0.341
M&A_PMT	+	0.073	2.88	0.004***
M&A_SIZE	+	0.028	3.732	0.000***
M&A_ACQPP	+	0.018	4.255	0.000***
LOSS	+	-0.007	-0.158	0.438
LNBUSSEGS	+/-	-0.034	-1.407	0.168
BIG4	+/-	0.088	1.901	0.065*
LN_AF	+	-0.037	-3.806	0.001***
CITYSPEC	-	-0.019	-1.206	0.118
NATSPEC	-	-0.088	-0.938	0.178
DUALITY	+	-0.005	-0.339	0.368
CEO_PCT_OWN	+	-0.001	-1.202	0.119
BDMEET	+/-	-0.002	-0.674	0.505
BDIND	+	-0.055	-0.59	0.280
BLOCK	+	0.155	1.973	0.028**
INSTOWN	+	0.016	0.551	0.362

N	203	
Adjusted R^2	0.0588	
F-statistic	6.07***	

Note: The p-values are one-tailed for variables with an expected sign and two-tailed otherwise.
  (***), (**), (*) denote significance at the 0.01, 0.05, and 0.10 levels, respectively, based on
  industry and year double clustered robust standard errors
  See Table 2 for variables definitions.

With respect to the control variables, the coefficients loaded as expected, corroborating with those of prior studies. The positive and significant coefficient on M&A_PMT (p=0.004) suggests that when acquiring firms pay cash for their acquisitions, the acquiring firm recognizes higher goodwill in an M&A transaction. The positive and significant coefficient on M&A_SIZE (p<0.001) suggests that when acquiring firms pay higher acquisition prices, the acquiring firm recognizes higher goodwill in an M&A transaction. The positive and significant coefficient on M&A_ACQPP (p<0.001) suggests that when acquiring firms have higher pre-acquisition returns, the acquiring firm recognizes higher goodwill in an M&A transaction. The positive and marginally significant coefficient on BIG4 (p=0.065) suggests that when acquiring firms are audited by BIG 4 audit firms, the acquiring firm recognizes higher goodwill in an M&A transaction. However, findings document total audit fees (LN_AF), which originally was predicted to have a positive directional sign, gave a negatively and significant coefficient (p=0.001) suggesting that when acquiring firms pay higher audit fees, the acquiring firm may not recognize higher goodwill in an M&A transaction. Contrary to the findings for LN_M&A_NAS, this suggests that firms paying higher audit fees may not recognize higher goodwill and recognize lower goodwill to purchase price in an M&A transaction. The positive and significant coefficient on BLOCK (p=0.028) suggests that when acquiring firms have a high percentage of block holders, the acquiring firm recognizes higher goodwill in an M&A transaction. The remaining control variables are not statistically significant.

Results of Hypotheses 2a and 3a

Table 6 presents the logistic regression results, double clustered by year (2007-2013) and industry (one-digit SIC code) to control for year and industry effect because

Table 6

Regression results of MA_GWIMP on LN_M&A_NAS.

Variable	Expected Sign	Coefficient	t-stat	p-value
Intercept		-2.087	-2.110	0.035**
LN_M&A_NAS	?	0.351	1.885	0.059*
M&A_CITY	-	0.813	4.612	0.000***
M&A_PMT	+	0.311	0.931	0.176
M&A_SIZE	+	-0.059	-0.500	0.309
M&A_ACQPP	+	0.125	0.309	0.379
LOSS	+	0.633	1.055	0.146
LN_AF	+	-0.026	-0.076	0.470
CITYSPEC	-	-0.119	-0.370	0.356
NATSPEC	-	2.602	2.517	0.006***
DUALITY	+	-0.097	-0.208	0.418
CEO_PCT_OWN	+	0.026	2.777	0.003***
BDSIZE	+/-	0.059	0.505	0.614
BDMEET	+	0.054	1.479	0.070*
BLOCK	+	-0.252	-0.305	0.380
INSTOWN	-	-0.668	-2.436	0.008***
N		203		
Pseudo R^2		0.0824		
Wald Chi^2		88.47***		

Note: The p-values are one-tailed for variables with an expected sign and two-tailed otherwise.
(***), (**), (*) denote significance at the 0.01, 0.05, and 0.10 levels, respectively, based on industry and year double clustered robust standard errors.
See Table 2 for variables definitions.

the observations were clustered by year and industry, to test whether acquiring firms are less (H2a) or more (H3a) likely to record post-acquisition goodwill impairments when their independent auditor provides M&A due diligence through NAS. Coefficients for year and industry effects were included in the regression model, but not reported for brevity. The main regression model is statistically significant with explanatory power pseudo R^2=0.0824. Results show a positive and marginally significant coefficient of LN_M&A_NAS on M&A_GWIMP (p=0.059), thus supporting H3a, but not H2a. This finding supports the argument that acquiring firm's management may influence their auditors to acquiesce to their firm valuation and various accounting and financial requests as the results in Table 5 suggest. The findings in Table 6 suggest that firms procuring M&A NAS from their auditors are less likely to valuate target companies purchase price more accurately, thus increasing the probability of a post-acquisition goodwill impairment. Collectively, findings support the viewpoint that acquiring firm's management may influence their auditors to acquiesce to their firm valuation and various accounting financial requests.

Results on the control variables generally loaded as expected and are consistent with prior research. However, M&A_CITY was predicted to have a negative directional sign, but the results show a positive and significant coefficient in the M&A_GWIMP regression (p<0.001). This indicates that acquiring and target firms that are in the same city are more likely to experience an occurrence of goodwill impairment following the M&A. The positive and significant coefficient on NATSPEC (p=0.006), opposite the predicted directional sign indicates that acquiring firms audited by national-level industry specialists are more likely to experience an occurrence of goodwill impairment following

the M&A. The positive and significant coefficient on CEO_PCT_OWN (p<0.003),

suggests that acquiring firms whose CEO's hold a large percentage of stock holdings in

the firm are more likely to experience goodwill impairments following the M&A.

The positive and marginally significant coefficient on BDMEET (p=0.070)

indicates that the higher the number of board meetings in a fiscal year held by acquiring

firms, the more likely the acquiring firm experiences an occurrence of a goodwill

impairment following the M&A. The negative and significant coefficient on INSTOWN

(p=0.008) suggests that when acquiring firms have a higher percentage of institutional

owners, the less likely the acquiring firm experiences the occurrence of a goodwill

impairment in the year following an M&A. The remaining control variables are not

statistically significant.

Results of Hypotheses 2b and 3b

Table 7 presents the OLS regression results with robust standard errors double

clustered by year (2007-2013) and industry (one-digit SIC code) to control for year and

industry effects. This regression model tests whether acquiring firms exhibit lower (H2b)

or higher (H3b) post-acquisition goodwill impairments when their independent auditor

provides M&A due diligence through NAS. The main regression model is statistically

significant with explanatory power of adjusted R^2=0.1279. Results show that

LN_M&A_NAS is not statistically significantly related to M&A_GWIMPAMT

(p=0.523), thus neither H2b nor H3b are supported.

The results of the control variables are similar to those from prior research. The

positive and marginally significant coefficient on BIG4 (p=0.054) suggests that when

acquiring firms are audited by BIG 4 audit firms, the acquiring firms may have a

Table 7

Regression results of MA_GWIMPAMT on LN_M&A_NAS.

Variable	Expected Sign	Coefficient	t-stat	p-value
Intercept		-0.206	-1.335	0.190
LN_M&A_NAS	?	-0.007	-0.646	0.523
M&A_CITY	-	0.151	1.013	0.159
M&A_PMT	+	-0.002	-0.05	0.481
M&A_SIZE	+	0.005	0.544	0.295
M&A_ACQPP	+	0.039	0.796	0.216
LOSS	+	0.065	1.115	0.136
LNBUSSEGS	+/-	0.026	1.06	0.296
BIG4	+/-	0.079	1.989	0.054**
LN_AF	+	-0.028	-0.696	0.246
CITYSPEC	-	0.002	0.08	0.468
NATSPEC	-	0.223	1.018	0.158
DUALITY	+	-0.031	-0.893	0.189
CEO_PCT_OWN	+	0.004	2.049	0.024**
BDSIZE	+	0.01	1.009	0.160
BDMEET	+/-	0.004	0.896	0.188
BLOCK	+	0.039	0.913	0.184
INSTOWN	+	-0.028	-0.7	0.245
N		203		
Adjusted R^2		0.1279		
F-statistic		3.82***		

Note: The p-values are one-tailed for variables with an expected sign and two-tailed otherwise.
(***), (**), (*) denote significance at the 0.01, 0.05, and 0.10 levels, respectively, based on industry and year double clustered robust standard errors
See Table 2 for variables definitions.

reduction or impairment amount to goodwill subsequent to a M&A. The positive and

significant coefficient on CEO_PCT_OWN (p=0.024) suggests that when acquiring

firms' CEOs own a high percentage of stock ownership in the acquiring firm in the year

prior to the M&A, the acquiring firm may have a reduction or impairment amount of

goodwill subsequent to an M&A. The remaining control variables are not statistically

significant.

Results of Hypotheses 4a and 4b

Table 8 presents results of whether acquiring firms are less (H4a) or more (H4b)

likely to exhibit incidence of post-acquisition internal control weaknesses when their

independent auditor provides due diligence NAS in a successful merger and acquisition

transaction. I run a logistic regression with robust standard errors double clustered by

year (2007-2013) and industry (one-digit SIC code) to control for year and industry

effects. The main regression model is statistically significant with explanatory power

pseudo R^2=0.1456. Results show that LN_M&A_NAS is not statistically significantly

related to M&A_ICW (p=0.761), thus neither H4a nor H4b are supported.

The results for the control variables corroborate with prior research. The negative

and significant coefficient on LEV (p>0.001) suggests that when acquiring firms are

highly leveraged, the acquiring firms are less likely to experience internal control

weaknesses in the year of M&A or the year following M&A. Contrary to the predicted

sign for distressed firms, the positive and significant coefficient on DISTRESS (p<0.001)

suggests that when acquiring firms are financially distressed, they are more likely to

experience internal control weaknesses in the year of M&A or the year following M&A.

The negative and significant coefficient on FIRMAGE (p=0.046) suggests that the longer

Table 8

Regression results of M&A_ICW on LN_M&A_NAS.

Variable	Expected Sign	Coefficient	t-stat	p-value
Intercept		5.479	2.129	0.033**
LN_M&A_NAS	?	-0.275	-0.304	0.761
LEV	-	-5.293	-5.665	0.000***
DISTRESS	-	0.699	3.591	0.000***
FIRMAGE	-	-0.014	-1.686	0.046**
LITIND	-	-1.473	-1.756	0.040**
SIZE	+	-0.472	-2.853	0.002***
LN_AF	+	-0.945	-0.703	0.482
TENURE	-	0.459	1.334	0.091**
AC_SUPEXP	+	-0.119	-0.055	0.478
AC_SIZE	+	-0.299	-1.321	0.094**
AC_MEET	-	-0.083	-0.561	0.288
N		203		
Pseudo R^2		0.1456		
Wald Chi^2		51.91***		

Note: The p-values are one-tailed for variables with an expected sign and two-tailed otherwise.
(***), (**), (*) denote significance at the 0.01, 0.05, and 0.10 levels, respectively, based on industry and year double clustered robust standard errors.
See Table 2 for variables definitions.

an acquiring firm has been publicly listed, the acquiring firm is less likely to experience an internal control weakness in the year of M&A or the year following M&A. The negative and significant coefficient on LITIND (p=0.040) suggests that when acquiring firms operate in a litigious industry, the acquiring firms are less likely to experience an occurrence of internal control weaknesses in the year of M&A or the year following M&A. Contrary to the predicted sign, the negative and significant coefficient on SIZE (p=0.002) suggests that larger acquiring firms are less likely to experience an occurrence of internal control weaknesses in the year of M&A or the year following M&A. Again, contrary to the predicted sign, the positive and marginally significant coefficient on TENURE (p=0.091) suggests that the longer the auditor-client relationship between the auditor and the acquiring firm, the more likely the acquiring firm will experience an occurrence of internal control weakness in the year of M&A or the year following M&A. The negative and marginally significant coefficient on AC_SIZE (p=0.094) suggests that the number of members on an acquiring firm's audit committee in a fiscal year is negatively associated with the likelihood of an acquiring firm experiencing an occurrence of an internal control weakness in the year of M&A or the year following M&A. The remaining control variables are not statistically significant.

Results of Hypotheses 5a and 5b

Table 9 presents results of whether acquiring firms are less (H5a) or more (H5b) likely to exhibit incidence of post –acquisition financial restatements when their independent auditor provides due diligence NAS in a successful M&A transaction. I run a logistic regression with robust standard errors double clustered by year (2007-2013) and industry (one-digit SIC code) to control for year and industry effects. The main

Table 9

Regression results of M&A_RESTATE on LN_M&A_NAS.

Variable	Expected Sign	Coefficient	t-stat	p-value
Intercept		-4.566	-3.266	0.001***
LN_M&A_NAS	?	-0.212	-0.969	0.333
LEV	-	3.443	2.353	0.010***
DISTRESS	-	-0.334	-2.043	0.021**
FIRMAGE	-	0.014	0.729	0.233
LITIND	-	0.068	0.135	0.447
SIZE	+	0.002	0.008	0.497
LN_AF	+	-0.278	-0.654	0.257
TENURE	-	0.342	1.783	0.038**
AC_ACCEXP	+	0.473	0.664	0.254
AC_SUPEXP	+	-0.800	-1.605	0.055*
AC_SIZE	+	0.066	0.216	0.415
AC_MEET	-	0.145	2.526	0.006***

N		203		
Pseudo R^2		0.0754		
Wald Chi^2		44.30***		

Note: The p-values are one-tailed for variables with an expected sign and two-tailed otherwise.
(***), (**), (*) denote significance at the 0.01, 0.05, and 0.10 levels, respectively, based on industry and year double clustered robust standard errors
See Table 2 for variables definitions.

regression model is statistically significant with explanatory power pseudo R^2=0.0754. Results show that LN_M&A_NAS is not statistically significantly related to M&A_RESTATE (p=0.333), thus neither H5a nor H5b are supported.

The results for the control variables corroborate with prior research. Contrary to the predicted value, the positive and significant coefficient on LEV (p=0.010) suggests that when acquiring firms are highly leveraged, they are more likely to experience a financial restatement in the year of M&A or the year following M&A. The negative and significant coefficient on DISTRESS (p=0.021) suggests that when acquiring firms are financially distressed, they are less likely to experience a financial restatement in the year of M&A or the year following M&A. The positive and significant coefficient on TENURE (p=0.038) suggests that the longer the auditor-client relationship between the auditor and the acquiring firm, the more likely the acquiring firm will experience a financial restatement in the year of M&A or the year following M&A. The negative and marginally significant coefficient on AC_SUPEXP (p=0.055) suggests that when an acquiring firm has a higher proportion of audit committee members with non-accounting financial experience, the acquiring firm is less likely to experience a financial restatement in the year of M&A or the year following M&A. The positive and significant coefficient on AC_MEET (p=0.006) suggests that the higher the frequency of meetings held by an acquiring firm's audit committee in a fiscal year, the more likely the acquiring firm will have a financial restatement in the year of M&A or the year following the M&A. The remaining control variables are not statistically significant.

Results of Hypotheses 6a and 6b

Table 10 presents the OLS regression results with robust standard errors double

clustered by year (2007-2013) and industry (one-digit SIC code) to control for year and

industry effects. This regression model tests whether market reactions to disclosure of

goodwill impairment is more negative (H6a) when the auditor provides NAS to an

auditor-client for M&A transactions or the market reaction to disclosure of goodwill

impairment is not negative (or positive) when the auditor provides NAS to an audit-client

for M&A transactions (H6b). Coefficients for year and industry effects were included in

the regression model, but not reported for brevity. The main regression model is

statistically significant with reasonable explanatory power adjusted R^2=0.0014 for a

market model. The results show that there is no statistical relationship with market

reaction (IMPLOSS*LN_M&A_NAS) (p=0.588) to goodwill impairment announcements

when the acquiring firms' auditors provided M&A NAS. All control variables are not

statistically significant.

Table 10

Regression results of the effect of the interaction of IMPLOSS and LN_M&A_NAS on Abnormal Returns.

Variable	Expected Sign	Coefficient	t-stat	p-value
Intercept		0.026	1.062	0.296
UE	?	-0.066	-0.960	0.343
IMPLOSS	-	0.000	0.118	0.454
LN_M&A_NAS	?	-0.001	-0.267	0.791
IMPLOSS*LN_M&A_NAS	?	0.000	0.546	0.588
SIZE	+	-0.003	-1.273	0.106
MULTISEG	+/-	0.010	0.970	0.338
N		203		
Adjusted R^2		0.0014		
F-Statistic		6.15***		

Note: The p-values are one-tailed for variables with an expected sign and two-tailed otherwise.
(***), (**), (*) denote significance at the 0.01, 0.05, and 0.10 levels, respectively.
See Table 2 for variables definitions.

Supplemental Analyses

The preliminary findings of this study require the need for additional statistical analyses to support or confirm findings. Due to the changes in SEC fees disclosure requirements over time, I perform additional sensitivity tests on the measurement of NAS fees (Knechel & Sharma, 2012). LN_NAS, LN_AR_NAS, LN_TAX_NAS, and LN_OTHER_NAS are measured as the natural logarithm of total NAS fees where the auditor also provided due diligence services, the natural logarithm of audit related NAS fees, the natural logarithm of tax NAS fees, and the natural logarithm of other NAS fees, respectively.

I also perform additional sensitivity analysis on the hypotheses related to M&A financial reporting quality outcomes by introducing an additional control variable. Prior studies find that the appointment of a new CFO can improve financial reporting (Goh, 2009). Hence, NEW_CFO is defined as an indicator variable equal to 1 if the firm appoints a new CFO one year prior to the M&A, and 0 otherwise. Also, I consider a CFO variable relating to his/her prior experience with M&A if there is sufficient information disclosed about the CFO in proxy statements. If the new CFO that is hired has M&A experience in the preceding three years, a new variable, NEW_CFO_M&A is coded as 1, and 0 otherwise.

I perform sensitivity tests on financial reporting outcomes by substituting the dependent variable in Model 5 with out-of-period adjustments (M&A_OOPA). Out-of-period adjustments are classified as prior period immaterial financial misstatements that are corrected in the current period and disclosed, but no restatements are made to prior financial statements. Whereby restatements must be formally reported by SEC filings,

OOPAs only need to be disclosed in the notes to the financial statements, allowing

management with an opportunity to hide potential restatements. Prior research has found

that out-of-period adjustments may be used in lieu of financial restatements (Tan and

Young, 2015). M&A_OOPA is equal to 1 if the acquiring firm recorded out-of-period

adjustments in the year of M&A or the year following the M&A, and 0 otherwise.

Sensitivity Tests on the Measurement of NAS Fees by Type

Due to the changes in SEC fees disclosure requirements over time, inspection of

proxy statements reveal firms disclose their NAS fees by type.[10] Additional sensitivity

tests on the measurement of NAS fees (Knechel & Sharma, 2012) are performed.

Tables 11 presents the regression results of M&A_GWPCT on type of NAS, by

substituting LN_M&A_NAS with total NAS and the individual components of NAS by

type. Results show a positive and significant coefficient on LN_NAS (p=0.055) and

LN_AR_NAS (p=0.016)[11]. LN_TAX_NAS and LN_OTHER_NAS are not significantly

related to MA_GWPCT (p=0.147 and p=0.857 respectively). With respect to the control

variables, the results are similar results with the main model for H1a and H1b.

Tables 12 presents the logistic regression results of M&A_GWIMP on type of

NAS, by substituting LN_M&A_NAS in the main model for H2a and H3a with the total

NAS and the individual components of NAS by type. The results show that

LN_AR_NAS, LN_TAX_NAS, and LN_OTHER_NAS are not statistically related to the

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[10] M&A NAS appeared predominantly mixed with other audit-related NAS, but also appeared in tax and other NAS in proxy statement disclosures.
[11] The higher statistical significance could possibly be as a result of the majority of M&A NAS being reported under audit-related NAS.

Table 11

Regression Results of M&A_GWPCT on LN_NAS, LN_AR_NAS, LN_TAX_NAS, and LN_OTHER_NAS.

Variable	Expected Sign	Model LN_NAS			Model LN_AR_NAS		
		Coef.	t-stat	p-value	Coef.	t-stat	p-value
Intercept		0.335	3.81	0.001***	0.343	4.213	0.000***
LN_NAS	?	0.035	1.979	0.055*			
LN_AR_NAS	?				0.055	2.541	0.016**
M&A_CITY	-	0.011	0.538	0.297	0.014	0.743	0.231
M&A_PMT	+	0.074	2.772	0.005***	0.071	2.958	0.003***
M&A_SIZE	+	0.028	3.578	0.001***	0.027	3.319	0.001***
M&A_ACQPP	+	0.017	5.966	0.000***	0.018	3.860	0.000***
LOSS	+	-0.006	-0.143	0.444	-0.003	-0.064	0.475
LN_BUSSEGS	+/-	-0.034	-1.372	0.179	-0.034	-1.397	0.171
BIG4	+/-	0.085	1.887	0.067*	0.087	1.981	0.055*
LN_AF	+	-0.037	-2.903	0.003***	-0.044	-5.900	0.000***
CITYSPEC	-	-0.018	-1.248	0.110	-0.022	-1.630	0.056**
NATSPEC	-	-0.082	-0.885	0.191	-0.068	-0.675	0.252
DUALITY	+	-0.006	-0.410	0.342	-0.004	-0.251	0.402
CEO_PCT_OWN	-	-0.001	-1.235	0.113	-0.001	-1.191	0.121
BDMEET	+/-	-0.002	-0.598	0.553	-0.002	-0.791	0.434
BDIND	+	-0.055	-0.594	0.278	-0.051	-0.573	0.285
BLOCK	+	0.156	1.961	0.029**	0.156	2.023	0.026**
INSTOWN	+	0.016	0.563	0.289	0.016	0.531	0.300
Observations		203			203		
Adjusted R^2		0.0582			0.0618		
F-statistic		6.06***			5.62***		

Note: The p-values are one-tailed for variables with an expected sign and two-tailed otherwise. (***), (**), (*) denote significance at the 0.01, 0.05, and 0.10 levels, respectively, based on industry and year double clustered robust standard errors
See Table 2 for variables definitions.

Table 11

Continued

		Model LN_TAX_NAS			Model LN_OTHER_NAS		
Variable	Expected Sign	Coef.	t-stat	p-value	Coef.	t-stat	p-value
Intercept		0.327	3.631	0.001***	0.307	3.258	0.002***
LN_TAX_NAS	?	0.035	1.481	0.147			
LN_OTHER_NAS	?				-0.009	-0.182	0.857
M&A_CITY	-	0.012	0.479	0.318	0.011	0.367	0.358
M&A_PMT	+	0.077	2.685	0.006***	0.077	2.679	0.006***
M&A_SIZE	+	0.029	3.387	0.001***	0.028	2.937	0.003***
LOSS	+	-0.002	-0.048	0.481	-0.003	-0.074	0.471
LN_BUSSEGS	+/-	-0.033	-1.374	0.178	-0.032	-1.437	0.159
BIG4	+/-	0.081	1.815	0.078*	0.086	1.741	0.090*
LN_AF	+	-0.037	-1.936	0.031**	-0.017	-1.424	0.082*
CITYSPEC	-	-0.021	-1.201	0.119	-0.028	-1.729	0.046**
NATSPEC	-	-0.079	-0.916	0.183	-0.077	-0.820	0.209
DUALITY	+	-0.002	-0.115	0.455	-0.001	-0.055	0.478
CEO_PCT_OWN	-	-0.001	-0.807	0.213	-0.001	-0.889	0.190
BDMEET	+/-	-0.001	-0.484	0.632	-0.001	-0.436	0.665
BDIND	+	-0.043	-0.460	0.324	-0.042	-0.461	0.324
BLOCK	+	0.148	2.000	0.027**	0.154	1.900	0.033**
INSTOWN	+	0.011	0.373	0.356	0.012	0.401	0.346
Observations		203			203		
Adjusted R^2		0.0481			0.0406		
F-statistic		5.02***			4.67***		

Note: The p-values are one-tailed for variables with an expected sign and two-tailed otherwise.
(***), (**), (*) denote significance at the 0.01, 0.05, and 0.10 levels, respectively, based on industry and year double clustered robust standard errors
See Table 2 for variables definitions.

Table 12

Regression Results of M&A_GWIMP on LN_AR_NAS, LN_TAX_NAS, and LN_OTHER_NAS.

Variable	Expected Sign	Model LN_AR_NAS			Model LN_TAX_NAS		
		Coef.	t-stat	p-value	Coef.	t-stat	p-value
Intercept		-3.055	-2.118	0.034**	-3.147	-2.122	0.034**
LN_AR_NAS	?	0.330	1.082	0.279			
LN_TAX_NAS	?				0.247	0.514	0.607
M&A_CITY	-	0.855	4.256	0.000***	0.850	5.111	0.000***
M&A_PMT	+	0.306	0.870	0.192	0.347	0.930	0.176
M&A_SIZE	+	-0.069	-0.674	0.250	-0.066	-0.572	0.284
M&A_ACQPP	+	0.083	0.217	0.414	0.099	0.294	0.385
LOSS	+	0.685	1.132	0.129	0.688	1.123	0.131
LN_AF	+	-0.096	-0.248	0.402	-0.058	-0.175	0.431
CITYSPEC	-	-0.156	-0.411	0.341	-0.122	-0.356	0.361
NATSPEC	-	2.910	2.601	0.005***	2.830	2.325	0.010***
DUALITY	+	-0.072	-0.157	0.438	-0.067	-0.145	0.443
CEO_PCT_OWN	-	0.025	3.305	0.001***	0.026	3.872	0.000***
BDSIZE	+	0.068	0.563	0.287	0.068	0.578	0.282
BDMEET	+/-	0.053	1.476	0.140	0.057	1.685	0.092*
BDIND	+	1.403	1.009	0.157	1.446	1.034	0.151
BLOCK	+	-0.239	-0.289	0.387	-0.298	-0.379	0.353
INSTOWN	+	-0.664	-2.916	0.002***	-0.699	-3.331	0.001***
Observations		203			203		
Pseudo R^2		0.0861			0.0839		
Wald Chi^2		88.68***			93.07***		

Note: The p-values are one-tailed for variables with an expected sign and two-tailed otherwise.
      (***), (**), (*) denote significance at the 0.01, 0.05, and 0.10 levels, respectively, based on industry and year double clustered robust standard errors
      See Table 2 for variables definitions.

Table 12

Continued

	Model LN_OTHER_NAS			
Variable	Expected Sign	Coef.	t-stat	p-value
Intercept		-3.346	-2.095	0.036**
LN_OTHER_NAS	?	-0.523	-0.650	0.516
M&A_CITY	-	0.910	2.962	0.002***
M&A_PMT	+	0.370	1.032	0.151
M&A_SIZE	+	-0.060	-0.468	0.320
M&A_ACQPP	+	0.111	0.321	0.374
LOSS	+	0.692	1.123	0.131
LN_AF	+	0.129	0.580	0.281
CITYSPEC	-	-0.194	-0.531	0.298
NATSPEC	-	2.872	2.856	0.002***
DUALITY	+	-0.057	-0.126	0.450
CEO_PCT_OWN	-	0.025	3.082	0.001***
BDSIZE	+	0.058	0.518	0.303
BDMEET	+/-	0.056	1.517	0.129
BDIND	+	1.479	1.077	0.141
BLOCK	+	-0.240	-0.293	0.385
INSTOWN	+	-0.678	-3.387	0.001***

Observations	203
Pseudo R^2	0.0838
Wald Chi^2	82.97***

Note: The p-values are one-tailed for variables with an expected sign and two-tailed otherwise.
(***), (**), (*) denote significance at the 0.01, 0.05, and 0.10 levels, respectively, based on industry and year double clustered robust standard errors
See Table 2 for variables definitions.

occurrence of a goodwill impairment in the year subsequent to the M&A (p=0.279, p=0.607, and p=0.516 respectively). The results for the logistic regression model using LN_NAS is omitted due to missing standard errors.[12] Control variable results are similar to the main model for hypotheses H2a and H3a.

Table 13 presents the results regression results of M&A_GWIMPAMT on type of NAS, by substituting LN_M&A_NAS in the main model for H2b and H3b with total NAS and the individual components of NAS by type. The results show that LN_AR_NAS, LN_TAX_NAS, and LN_OTHER_NAS are not statistically related to acquiring firms exhibiting lower or higher post-acquisition goodwill impairments (p=0.329, p=0.579, and p=0.887, respectively). The results for the OLS regression model using LN_NAS is omitted due to missing standard errors.[13] Control variable results are similar to the main model for hypotheses H2b and H3b.

Table 14 presents the logistic regression results of M&A_RESTATE on type of NAS, by substituting LN_M&ANAS in the main model for H5a and H5b with total NAS and the individual components of NAS by type. The results show that LN_NAS, LN_AR_NAS, and LN_TAX_NAS are not statistically related to post-acquisition financial restatements (p=0.408, p=0.172, and p=0.193 respectively). The results for the logistic regression model using LN_OTHER_NAS are omitted due to missing standard

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[12] Occasionally, when double clustering, there can be a loss of degrees of freedom, particularly when there are fewer pseudo-observations than regressors. Therefore, STATA may not be able to calculate reliable standard errors (See Cameron et al (2015) and STATA forum discussions at http://www.statalist.org/forums/forum/general-stata-discussion/general/240792-missing-standard-errors-when-running-2d-cluster-with-fixed-effects).

[13] See footnote 12

Table 13

Regression Results of M&A_GWIMPAMT on LN_AR_NAS, LN_TAX_NAS, and LN_OTHER_NAS.

Variable	Expected Sign	Model LN__AR_NAS			Model LN_TAX_NAS		
		Coef.	t-stat	p-value	Coef.	t-stat	p-value
Intercept		-0.216	-1.311	0.198	-0.209	-1.368	0.180
LN_AR_NAS	?	-0.027	-0.990	0.329			
LN_TAX_NAS	?				-0.020	-0.560	0.579
M&A_CITY	-	0.148	1.011	0.160	0.149	1.010	0.160
M&A_PMT	+	0.000	0.001	0.500	-0.003	-0.067	0.474
M&A_SIZE	+	0.005	0.555	0.292	0.005	0.549	0.294
M&A_ACQPP	+	0.039	0.832	0.206	0.038	0.763	0.226
LOSS	+	0.064	1.107	0.138	0.064	1.127	0.134
LN_BUSSEGS	+/-	0.027	1.058	0.297	0.027	1.080	0.287
BIG4	+/-	0.079	1.991	0.054*	0.082	2.045	0.048**
LN_AF	+	-0.018	-0.575	0.285	-0.020	-0.508	0.308
CITYSPEC	-	0.001	0.037	0.486	0.000	-0.001	0.500
NATSPEC	-	0.216	1.011	0.160	0.222	1.040	0.153
DUALITY	+	-0.030	-0.887	0.191	-0.031	-0.887	0.191
CEO_PCT_OWN	-	0.004	1.935	0.031**	0.004	1.979	0.028**
BDSIZE	+	0.010	1.031	0.155	0.009	0.942	0.176
BDMEET	+/-	0.004	0.927	0.360	0.003	0.870	0.390
BLOCK	+	0.039	0.949	0.175	0.043	1.026	0.156
INSTOWN	+	-0.030	-0.752	0.229	-0.027	-0.643	0.262
Observations		203			203		
Adjusted R^2		0.1318			0.1295		
F-statistic		3.97***			4.11***		

Note: The p-values are one-tailed for variables with an expected sign and two-tailed otherwise.
   (***), (**), (*) denote significance at the 0.01, 0.05, and 0.10 levels, respectively, based on
   industry and year double clustered robust standard errors
   See Table 2 for variables definitions.

Table 13

Continued

		Model LN_OTHER_NAS		
Variable	Expected Sign	Coef.	t-stat	p-value
Intercept		-0.202	-1.364	0.181
LN_OTHER_NAS	?	0.004	0.143	0.887
M&A_CITY	-	0.149	1.020	0.157
M&A_PMT	+	-0.003	-0.069	0.473
M&A_SIZE	+	0.005	0.571	0.286
M&A_ACQPP	+	0.038	0.781	0.220
LOSS	+	0.064	1.106	0.138
LN_BUSSEGS	+/-	0.026	1.030	0.310
BIG4	+/-	0.079	1.975	0.056*
LN_AF	+	-0.032	-0.812	0.211
CITYSPEC	-	0.004	0.135	0.447
NATSPEC	-	0.221	1.010	0.160
DUALITY	+	-0.032	-0.903	0.187
CEO_PCT_OWN	-	0.004	2.115	0.041**
BDSIZE	+	0.01	0.992	0.164
BDMEET	+/-	0.003	0.900	0.374
BLOCK	+	0.039	0.916	0.183
INSTOWN	+	-0.027	-0.655	0.259

Observations	203
Adjusted R^2	0.1275
F-statistic	3.06***

Note: The p-values are one-tailed for variables with an expected sign and two-tailed otherwise.
(***), (**), (*) denote significance at the 0.01, 0.05, and 0.10 levels, respectively, based on industry and year double clustered robust standard errors
See Table 2 for variables definitions.

Table 14

Regression Results of M&A_RESTATE on LN_NAS, LN_AR_NAS, and LN_TAX_NAS.

Variable	Expected Sign	Model LN_NAS			Model LN_AR_NAS		
		Coef.	t-stat	p-value	Coef.	t-stat	p-value
Intercept		-4.496	-2.766	0.006***	-4.719	-3.759	0.000***
LN_NAS	?	0.145	0.827	0.408			
LN_AR_NAS	?				-0.596	-1.366	0.172
LEV	-	3.353	2.001	0.023**	3.341	2.414	0.008***
DISTRESS	-	-0.360	-2.247	0.013**	-0.301	-2.103	0.018**
FIRMAGE	-	0.012	0.654	0.257	0.014	0.756	0.225
LITIND	-	-0.020	-0.040	0.484	0.079	0.152	0.440
SIZE	+	0.021	0.077	0.469	0.011	0.036	0.486
LN_AF	+	-0.457	-0.934	0.175	-0.144	-0.285	0.388
TENURE	-	0.365	1.929	0.027**	0.355	1.853	0.032**
AC_ACCEXP	+	0.401	0.549	0.292	0.415	0.610	0.271
AC_SUPEXP	+	-0.869	-1.813	0.035**	-0.708	-1.333	0.092*
AC_SIZE	+	0.061	0.189	0.425	0.055	0.178	0.429
AC_MEET	-	0.146	2.742	0.003***	0.148	2.538	0.006***
Observations		203			203		
Pseudo R^2		0.0745			0.0818		
Wald Chi^2		46.84***			53.90***		

Note: The p-values are one-tailed for variables with an expected sign and two-tailed otherwise.
(***), (**), (*) denote significance at the 0.01, 0.05, and 0.10 levels, respectively, based on industry and year double clustered robust standard errors
See Table 2 for variables definitions.

Table 14

Continued

	Expected				
		Model LN_TAX_NAS			
Variable	Sign	Coef.	t-stat	p-value	
Intercept		-4.466	-2.716	0.007***	
LN_TAX_NAS	?	0.374	1.302	0.193	
LEV	-	3.439	2.131	0.017**	
DISTRESS	-	-0.356	-2.215	0.014**	
FIRMAGE	-	0.013	0.709	0.239	
LITIND	-	-0.031	-0.063	0.475	
SIZE	+	0.031	0.101	0.460	
LN_AF	+	-0.603	-0.840	0.201	
TENURE	-	0.350	1.836	0.033**	
AC_ACCEXP	+	0.340	0.494	0.311	
AC_SUPEXP	+	-0.852	-1.642	0.050**	
AC_SIZE	+	0.054	0.169	0.433	
AC_MEET	-	0.150	2.622	0.009***	

Observations	203
Pseudo R^2	0.0773
Wald Chi^2	45.71***

Note: The p-values are one-tailed for variables with an expected sign and two-tailed otherwise.
(***), (**), (*) denote significance at the 0.01, 0.05, and 0.10 levels, respectively, based on
industry and year double clustered robust standard errors
See Table 2 for variables definitions.

errors.[14] Control variable results are similar to the main model for hypotheses H5a and H5b.

Shared Auditors

To test the benefits to investors, knowledge spillover, and to provide additional evidence for auditor independence, and extend Dhaliwal et al. (2015) and Cai et al. (2015), LN_M&A_NAS in the main models is substituted by SH_AUDITOR, a dichotomous variable equal to 1 if both the acquiring and target firms received audit services from the same audit firm in the year immediately preceding the M&A, and 0 otherwise and SH_AUD_NAS is equal to 1 if both the acquiring and target firms received M&A NAS from the same audit firm, and 0 otherwise. To test for the occurrence of knowledge spillover at the national audit firm-level and city-level (Knechel, Sharma & Sharma, 2012), supplementary tests are performed by measuring SH_AUD_NAS at the city level denoted SH_AUD_NAS_CITY. This variable is equal to 1 if both the acquiring and target firms received M&A NAS from the same city office of the same audit firm, and 0 otherwise.

Table 15 presents the regression results of M&A_GWPCT on SH_AUDITOR, SH_AUD_NAS and SH_AUD_NAS_CITY respectively. The results show that SH-AUDITOR, SH_AUD_NAS, and SH_AUD_NAS_CITY are not statistically related to the level of recognition of goodwill (M&A_GWPCT) (p=0.505, p=0.273, and p=0.391 respectively).

The following results are for the control variables in the models that examine acquiring and target firms with shared auditors (SH_AUDITOR), shared auditors for

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[14] See footnote 12

Table 15

Regression Results of M&A_GWPCT on SH_AUDITOR, SH_AUD_NAS, and SH_AUD_NAS_CITY.

Variable	Expected Sign	Coef.	t-stat	p-value	Coef.	t-stat	p-value
		Model SH_AUDITOR			Model SH_AUD_NAS		
Intercept		0.313	3.373	0.002***	0.323	3.448	0.001***
SH_AUDITOR	?	0.013	0.674	0.505			
SH_AUD_NAS	?				0.054	1.114	0.273
M&A_CITY	-	0.010	0.463	0.323	0.010	0.444	0.330
M&A_PMT	+	0.076	2.956	0.003***	0.075	3.160	0.002***
M&A_SIZE	+	0.027	2.781	0.005***	0.026	3.022	0.003***
M&A_ACQPP	+				0.019	8.990	0.000***
LOSS	+	-0.003	-0.079	0.469	0.001	0.024	0.491
LN_BUSSEGS	+/-	-0.032	-1.399	0.170	-0.033	-1.503	0.141
BIG4	+/-	0.082	1.812	0.078*	0.083	1.726	0.093*
LN_AF	+	-0.017	-1.472	0.075*	-0.014	-1.222	0.115
CITYSPEC	-	-0.028	-1.725	0.047	-0.029	-1.617	0.058*
NATSPEC	-	-0.084	-0.844	0.202	-0.085	-0.908	0.185
DUALITY	+	0.000	-0.013	0.495	0.003	0.181	0.429
CEO_PCT_OWN	-	-0.001	-0.963	0.171	-0.001	-0.874	0.194
BDMEET	+/-	-0.001	-0.435	0.666	-0.001	-0.527	0.602
BDIND	+	-0.043	-0.468	0.322	-0.049	-0.520	0.303
BLOCK	+	0.154	1.868	0.035**	0.150	1.809	0.040**
INSTOWN	+	0.014	0.493	0.313	0.012	0.458	0.325
Observations		203			203		
Adjusted R^2		0.0416			0.0469		
F-statistic		4.85***			5.23***		

Note: The p-values are one-tailed for variables with an expected sign and two-tailed otherwise.
(***), (**), (*) denote significance at the 0.01, 0.05, and 0.10 levels, respectively, based on industry and year double clustered robust standard errors
See Table 2 for variables definitions.

Table 15

Continued

		Model SH_AUD_NAS_CITY		
Variable	Expected Sign	Coef.	t-stat	p-value
Intercept		0.312	3.270	0.002***
SH_AUD_NAS_CITY	?	0.094	0.868	0.391
M&A_CITY	-	0.001	0.057	0.478
M&A_PMT	+	0.075	2.827	0.004***
M&A_SIZE	+	0.027	2.955	0.003***
M&A_ACQPP	+	0.020	3.821	0.001***
LOSS	+	-0.001	-0.016	0.494
LN_BUSSEGS	+/-	-0.033	-1.501	0.142
BIG4	+/-	0.085	1.718	0.094*
LN_AF	+	-0.017	-1.343	0.094*
CITYSPEC	-	-0.031	-1.968	0.029**
NATSPEC	-	-0.081	-0.820	0.209
DUALITY	+	-0.001	-0.034	0.487
CEO_PCT_OWN	-	-0.001	-0.911	0.184
BDMEET	+/-	-0.001	-0.451	0.655
BDIND	+	-0.044	-0.477	0.318
BLOCK	+	0.152	1.843	0.037**
INSTOWN	+	0.016	0.523	0.302
Observations		203		
Adjusted R^2		0.0444		
F-statistic		4.51***		

Note: The p-values are one-tailed for variables with an expected sign and two-tailed otherwise.
(***), (**), (*) denote significance at the 0.01, 0.05, and 0.10 levels, respectively, based on industry and year double clustered robust standard errors
See Table 2 for variables definitions.

NAS (SH_AUD_NAS), and shared auditors for NAS from the same city office

(SH_AUD_NAS_CITY). A positive and significant coefficient on M&A_PMT (p=0.003,

p=0.002 and p=004, respectively) suggests that when acquiring firms pay for an

acquisition in cash, acquiring firms recognize higher goodwill in an M&A transaction. A

positive and significant coefficient on M&A_SIZE (p=0.005, p=0.003, and p=0.003

respectively) suggests that when acquiring firms pay a higher price for an acquisition,

acquiring firms recognize higher goodwill in an M&A transaction. The positive and

significant coefficient on M&A_ACQPP (results omitted,[15] p<0.001, and p=0.001

respectively) suggests that when acquiring firms show higher pre-acquisition returns to

their shareholders, acquiring firms recognize higher goodwill in an M&A transaction. A

positive and marginally significant coefficient on BIG4 (p=0.078, p=0.093, and p=0.094

respectively) suggests that when acquiring firms are audited by Big 4 auditors, acquiring

firms recognize higher goodwill in an M&A transaction. A negative and marginally

significant coefficient on LN_AF in the models examining shared auditors

(SH_AUDITOR) and shared auditors for NAS (SH_AUD_NAS) (p=0.075 and p=0.094

respectively), indicates that when acquiring firms pay higher audit fees, acquiring firms

recognize higher goodwill in an M&A transaction. A negative and statistically significant

coefficient on CITYSPEC in the models examining shared auditors (SH_AUDITOR) and

shared auditors for NAS (SH_AUD_NAS) (p=0.058, and p=0.029 respectively) suggests

that when acquiring firms are audited by city-level industry specialist auditors, acquiring

firms may not recognize higher goodwill in an M&A transaction. A positive and

significant coefficient on BLOCK (p=0.035, p=0.040, and p=0.037 respectively) suggests

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[15] See footnote 12 for an explanation of why results are omitted for the model related to SH_AUDITOR.

that when acquiring firms have a high percentage of blockholders, acquiring firms recognize higher goodwill in an M&A transaction.

Table 16 presents the regression results of M&A_GWIMP on SH_AUDITOR, SH_AUD_NAS and SH_AUD_NAS_CITY respectively. The results show that SH-AUDITOR, and SH_AUD_NAS are not statistically related to the occurrence of a post-acquisition goodwill impairment (p=0.516 and p=0.111 respectively). The results for the logistic regression model using SH_AUD_NAS_CITY is omitted due to missing standard errors.[16]

The following results are for the control variables in the models that examine acquiring and target firms with shared auditors (SH_AUDITOR) and shared auditors for NAS (SH_AUD_NAS). A negative and statistically significant coefficient (opposite directional sign than predicted) on M&A_CITY (p=0.036 and p=0.024, respectively) suggests that when acquiring and target firms are in the same city, acquiring firms are more likely to experience the occurrence of a post-acquisition goodwill impairment. A positive and significant coefficient on LN_BUSSEGS (p=0.023 and p=0.023, respectively), suggests that when acquiring firms have a higher number of business segments, acquiring firms are more likely to experience a post-acquisition goodwill impairment. A positive and statistically significant coefficient on NATSEPC (directional sign opposite to predicted) (p=0.023 and p=0.007, respectively) suggests that when acquiring firms are audited by national-level industry specialist auditors, acquiring firms are more likely to experience a post-acquisition goodwill impairment. A positive and highly significant coefficient on CEO_PCT_OWN (p<0.001 and p<0.001 respectively),

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[16] See footnote 12.

Table 16

Regression Results of M&A_GWIMP on SH_AUDITOR and SH_AUD_NAS.

Variable	Expected Sign	Model SH_AUDITOR			Model SH_AUD_NAS		
		Coef.	t-stat	p-value	Coef.	t-stat	p-value
Intercept		-3.256	-2.733	0.006***	-3.358	-3.398	0.001***
SH_AUDITOR	?	0.176	0.650	0.516			
SH_AUD_NAS	?				-0.767	-1.594	0.111
M&A_CITY	-	0.916	1.805	0.036**	0.940	1.975	0.024**
M&A_PMT	+	0.383	0.809	0.210	0.415	0.860	0.195
M&A_SIZE	+	-0.029	-0.306	0.380	-0.002	-0.022	0.491
M&A_ACQPP	+	0.029	0.087	0.466	0.034	0.096	0.462
LOSS	+	0.785	1.286	0.100	0.720	1.189	0.118
LN_BUSSEGS	+/-	0.641	2.008	0.023**	0.642	1.993	0.023**
LN_AF	+	-0.070	-0.172	0.432	-0.125	-0.304	0.381
CITYSPEC	-	-0.044	-0.150	0.440	-0.013	-0.056	0.478
NATSPEC	-	2.762	1.997	0.023**	3.044	2.479	0.007***
CEO_PCT_OWN	-	0.028	4.067	0.000***	0.027	3.814	0.000***
BDIND	+	1.564	1.112	0.133	1.640	1.183	0.119
BLOCK	+	-0.135	-0.154	0.439	-0.074	-0.084	0.467
INSTOWN	+	-0.666	-2.052	0.020**	-0.711	-2.383	0.009***
Observations		203			203		
Pseudo R^2		0.969			0.1005		
Wald Chi^2		42.56***			39.58***		

Note: The p-values are one-tailed for variables with an expected sign and two-tailed otherwise.
(***), (**), (*) denote significance at the 0.01, 0.05, and 0.10 levels, respectively, based on industry and year double clustered robust standard errors
See Table 2 for variables definitions.

suggests that when acquiring firms' CEOs have a high percent of stock ownership in the acquiring firm in the year prior to the M&A, the acquiring firm is more likely to experience a post-acquisition goodwill impairment A negative and statistically significant coefficient on INSTOWN (directional sign opposite to predicted) ($p=0.020$ and $p=0.009$, respectively) suggests that when an acquiring firm has a high percentage of institutional owners, the acquiring firm is less likely to experience a post-acquisition goodwill impairment.

Table 17 presents the regression results of M&A_GWIMPAMT on SH_AUDITOR, SH_AUD_NAS and SH_AUD_NAS_CITY respectively. The results show that SH_AUDITOR, SH_AUD_NAS, and SH_AUD_NAS_CITY are not statistically related to the reduction or impairment amount of goodwill ($p=0.129$ $p=0.182$, and $p=0.257$ respectively).

The following results are for the control variables in the models that examine acquiring and target firms with shared auditors (SH_AUDITOR), shared auditors for NAS (SH_AUD_NAS), and shared auditors for NAS from the same city office (SH_AUD_NAS_CITY). A positive and significant coefficient on BIG4 ($p=0.030$, $p=0.054$ and $p=0.067$, respectively), suggests that when acquiring firms are audited by BIG 4 auditors, the acquiring firms experience a reduction or impairment amount to goodwill subsequent to an M&A transaction. A positive and significant coefficient on CEO_PCT_OWN ($p=0.014$, $p=0.022$, and $p=0.024$, respectively), suggests that when acquiring firms' CEOs own a high percent of stock in the acquiring firm in the year prior to the M&A, these firms experience a reduction or impairment amount to goodwill subsequent to an M&A transaction.

Table 17

Regression Results of M&A_GWIMPAMT on SH_AUDITOR, SH_AUD_NAS, and SH_AUD_NAS_CITY.

Variable	Expected Sign	Model SH_AUDITOR			Model SH_AUD_NAS		
		Coef.	t-stat	p-value	Coef.	t-stat	p-value
Intercept		-0.217	-1.244	0.222	-0.223	-1.253	0.218
SH_AUDITOR	?	-0.033	-1.555	0.129			
SH_AUD_NAS	?				-0.056	-1.361	0.182
M&A_CITY	-	0.150	1.014	0.159	0.151	1.029	0.155
M&A_PMT	+	-0.001	-0.026	0.490	0.000	-0.004	0.499
M&A_SIZE	+	0.007	0.608	0.274	0.007	0.675	0.252
M&A_ACQPP	+	0.040	0.781	0.220	0.038	0.742	0.232
LOSS	+	0.064	1.116	0.136	0.060	1.033	0.155
LN_BUSSEGS	+/-	0.025	1.032	0.309	0.027	1.081	0.287
BIG4	+/-	0.088	2.257	0.030**	0.082	1.991	0.054*
LN_AF	+	-0.035	-0.793	0.217	-0.037	-0.839	0.204
CITYSPEC	-	0.005	0.181	0.429	0.005	0.216	0.415
NATSPEC	-	0.235	1.046	0.152	0.228	1.027	0.156
DUALITY	+	-0.034	-0.991	0.164	-0.036	-1.038	0.153
CEO_PCT_OWN	-	0.004	2.303	0.014**	0.004	2.102	0.022**
BDSIZE	+	0.011	0.988	0.165	0.011	0.984	0.166
BDMEET	+/-	0.004	0.878	0.386	0.004	0.959	0.344
BDIND	+	0.002	0.061	0.476	0.006	0.166	0.435
BLOCK	+	0.039	0.868	0.196	0.044	0.907	0.186
INSTOWN	+	-0.032	-0.719	0.239	-0.028	-0.701	0.244
Observations		203			203		
Adjusted R²		0.1284			0.1286		
F-statistic		3.19***			3.34***		

Note: The p-values are one-tailed for variables with an expected sign and two-tailed otherwise.
(***), (**), (*) denote significance at the 0.01, 0.05, and 0.10 levels, respectively, based on industry and year double clustered robust standard errors
See Table 2 for variables definitions.

Table 17

Continued

	Expected		Model SH_AUD_NAS_CITY	
Variable	Sign	Coef.	t-stat	p-value
Intercept		-0.200	-1.236	0.225
SH_AUD_NAS_CITY	?	-0.141	-1.151	0.257
M&A_CITY	-	0.164	1.072	0.146
M&A_PMT	+	0.000	0.007	0.497
M&A_SIZE	+	0.006	0.613	0.272
M&A_ACQPP	+	0.037	0.720	0.238
LOSS	+	0.060	1.011	0.160
LN_BUSSEGS	+/-	0.027	0.976	0.336
BIG4	+/-	0.081	1.887	0.067*
LN_AF	+	-0.033	-0.793	0.217
CITYSPEC	-	0.008	0.279	0.391
NATSPEC	-	0.225	0.999	0.162
DUALITY	+	-0.033	-0.937	0.178
CEO_PCT_OWN	-	0.004	2.056	0.024**
BDSIZE	+	0.009	0.874	0.194
BDMEET	+/-	0.004	0.883	0.383
BDIND	+	0.000	0.016	0.494
BLOCK	+	0.042	0.870	0.195
INSTOWN	+	-0.033	-0.760	0.226

Observations	203
Adjusted R^2	0.1301
F-statistic	3.60***

Note: The p-values are one-tailed for variables with an expected sign and two-tailed otherwise. (***), (**), (*) denote significance at the 0.01, 0.05, and 0.10 levels, respectively, based on industry and year double clustered robust standard errors. See Table 2 for variables definitions.

Table 18 presents the logistic regression results, double clustered by year (2007-2013) and industry (one-digit SIC code) to control for year and industry effect because the observations were clustered by year and industry of M&A_ICW on SH_AUDITOR and SH_AUD_NAS respectively. The results show that SH_AUDITOR and SH_AUD_NAS are not statistically related to the occurrence of an acquisition-related internal control weakness (p=0.899 and p=0.296 respectively). The results of the logistic regression model using SH_AUD_NAS_CITY is omitted due to missing standard errors.[17]

The following results are for the control variables in the models that examine acquiring and target firms with shared auditors (SH_AUDITOR) and shared auditors for NAS (SH_AUD_NAS). A negative and significant coefficient on LEV (p<0.001 and p<0.001, respectively), suggests that when acquiring firms are highly leveraged, acquiring firms are less likely to experience an occurrence of an M&A-related internal control weakness. The positive and significant coefficient on DISTRESS (p=0.001 and p<0.001 respectively), suggests that when acquiring firms are financially distressed, acquiring firms are more likely to experience an M&A-related internal control weakness. The negative and significant coefficient on FIRMAGE (p=0.006 and 0.075 respectively) suggests that the longer an acquiring firm has been publicly listed, the less likely the acquiring firm will experience an M&A-related internal control weakness. The negative and significant coefficient on LITIND (p=0.054 and 0.036 respectively) suggests that when acquiring firms operate in a litigious industry, acquiring firms are less likely to

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[17] See footnote 12.

Table 18

Regression Results of M&A_ICW on SH_AUDITOR and SH_AUD_NAS.

Variable	Expected Sign	Model SH_AUDITOR			Model SH_AUD_NAS		
		Coef.	t-stat	p-value	Coef.	t-stat	p-value
Intercept		5.623	2.244	0.025**	5.715	1.928	0.054*
SH_AUDITOR	?	-0.155	-0.126	0.899			
SH_AUD_NAS	?				1.173	1.046	0.296
LEV	-	-5.457	-4.136	0.000***	-5.111	-10.066	0.000***
DISTRESS	-	0.700	3.253	0.001***	0.643	16.352	0.000***
FIRMAGE	-	-0.015	-2.522	0.006***	-0.013	-1.439	0.075*
LITIND	-	-1.462	-1.611	0.054*	-1.402	-1.803	0.036**
SIZE	+	-0.484	-3.533	0.000***	-0.542	-3.996	0.000***
BIG4	-	-0.903	-0.650	0.516	-0.989	-0.752	0.452
TENURE	+	0.447	1.433	0.076*	0.431	1.110	0.134
AC_SUPEXP	+	-0.103	-0.046	0.482	-0.275	-0.124	0.451
AC_SIZE	+	-0.306	-1.363	0.087*	-0.256	-1.123	0.131
AC_MEET	-	-0.084	-0.579	0.282	-0.082	-0.573	0.284
Observations		203			203		
Pseudo R^2		0.1449			0.1639		
Wald Chi^2		55.80***			52.62***		

Note: The p-values are one-tailed for variables with an expected sign and two-tailed otherwise.
(***), (**), (*) denote significance at the 0.01, 0.05, and 0.10 levels, respectively, based on industry and year double clustered robust standard errors
See Table 2 for variables definitions.

experience an M&A-related internal control weakness. The negative and significant coefficient on SIZE (p<0.001 and p<0.001, respectively) suggests that larger acquiring firms are less likely to experience M&A-related internal control weakness.

In the models that examine acquiring and targets firms with shared auditors (SH_AUDITOR), the positive and marginally significant coefficient on TENURE (p=0.076) suggests that the longer the auditor-client relationship between the auditor and the acquiring firm, the more likely the acquiring firm will experience an occurrence of an M&A-related internal control weakness. The negative (opposite sign predicted) and marginally significant on AC_SIZE (p=0.087) suggests that acquiring firms with large audit committees are less likely to experience an occurrence of an M&A-related internal control weakness.

Table 19 presents the logistic regression results, double clustered by year (2007-2013) and industry (one-digit SIC code) to control for year and industry effect because the observations were clustered by year and industry, of M&A_RESTATE on SH_AUDITOR, SH_AUD_NAS and SH_AUD_NAS_CITY respectively. The results show that a negative and significant coefficient on SH-AUDITOR (p<0.001) indicates that acquiring and target firms that receive audit services from the same audit firm in the year immediately preceding the M&A (SH_AUDITOR) are less likely to experience M&A-related financial restatements. The positive and significant coefficient on SH_AUD_NAS_CITY (p<0.001) indicates that when both acquiring and target firms receive M&S NAS from the same city office of the same audit firm (SH_AUD_NAS_CITY) are more likely to experience M&A-related financial restatements. However, SH_AUD_NAS is not statistically related to the occurrence to

Table 19

*Regression Results of M&A_RESTATE on SH_AUDITOR, SH_AUD_NAS, and
SH_AUD_NAS_CITY.*

Variable	Expected Sign	Model SH_AUDITOR			Model SH_AUD_NAS		
		Coef.	t-stat	p-value	Coef.	t-stat	p-value
Intercept		-4.801	-3.369	0.001***	-4.510	-3.082	0.002***
SH_AUDITOR	?	-0.557	-3.638	0.000***			
SH_AUD_NAS	?				0.569	0.866	0.386
LEV	-	3.317	1.987	0.024**	3.620	2.397	0.009***
DISTRESS	-	-0.360	-1.978	0.024**	-0.378	-2.556	0.006***
FIRMAGE	-	0.010	0.594	0.277	0.013	0.811	0.209
LITIND	-	0.001	0.001	0.500	0.086	0.184	0.427
SIZE	+	0.070	0.281	0.390	-0.025	-0.096	0.462
LNAF	+	-0.432	-0.868	0.193	-0.305	-0.571	0.284
TENURE	-	0.353	1.784	0.037**	0.349	1.884	0.030**
AC_ACCEXP	+	0.494	0.632	0.264	0.348	0.426	0.335
AC_SUPEXP	+	-0.763	-2.102	0.018**	-0.848	-1.835	0.033**
AC_SIZE	+	0.054	0.172	0.432	0.066	0.211	0.417
AC_MEET	-	0.151	2.746	0.002***	0.152	2.752	0.003***
Observations		203			203		
Pseudo R^2		0.0815			0.0772		
Wald Chi^2		46.99***			42.98***		

Note: The p-values are one-tailed for variables with an expected sign and two-tailed otherwise.
(***), (**), (*) denote significance at the 0.01, 0.05, and 0.10 levels, respectively, based on
industry and year double clustered robust standard errors
See Table 2 for variables definitions.

Table 19

Continued

	Model SH_AUD_NAS_CITY			
Variable	Expected Sign	Coef.	t-stat	p-value
Intercept		-5.117	-3.686	0.000***
SH_AUD_NAS_CITY	?	2.847	11.442	0.000***
LEV	-	3.488	2.193	0.014**
DISTRESS	-	-0.355	-2.056	0.020**
FIRMAGE	-	0.016	0.951	0.171
LINTIND	-	0.117	0.244	0.404
SIZE	+	0.032	0.111	0.456
LN_AF	+	-0.459	-0.850	0.198
TENURE	-	0.431	2.554	0.006***
AC_ACCEXP	+	0.596	0.856	0.196
AC_SUPEXP	+	-0.841	-1.761	0.039**
AC_SIZE	+	0.073	0.233	0.408
AC_MEET	-	0.151	3.146	0.001***

Observations	203
Pseudo R^2	0.0975
Wald Chi^2	46.15***

Note: The p-values are one-tailed for variables with an expected sign and two-tailed otherwise.
    (***), (**), (*) denote significance at the 0.01, 0.05, and 0.10 levels, respectively, based on
    industry and year double clustered robust standard errors
    See Table 2 for variables definitions.

M&A-related financial restatements when both the acquiring and target firms receive M&A NAS from the same audit firm (SH_AUD_NAS) (p=0.386).

The following results are for the control variables in the models that examine acquiring and target firms with shared auditors (SH_AUDITOR), shared auditors for NAS (SH_AUD_NAS), and shared auditors for NAS from the same city office (SH_AUD_NAS_CITY). A positive and significant coefficient on LEV (p=0.024, p=0.009, and 0.014 respectively) suggests that when acquiring firms are highly leveraged, acquiring firms are more likely to experience M&A-related financial restatement. The negative and significant coefficient on DISTRESS (p=0.024, p=0.006, and p=0.020 respectively) suggests that when acquiring firms are financially distressed, the acquiring firm is less likely to experience an occurrence of M&A-related financial restatements. The positive and significant coefficient on TENURE (p=0.037, p=0.030, and p=0.006, respectively) suggests that acquiring firms with longer client-auditor relationships are more likely to experience M&A-related financial restatements. The negative and significant coefficient on AC_SUPEXP (p=0.018, p=0.033, and p=0.039, respectively) suggests that when acquiring firms have a higher proportion of audit committee members with non-accounting financial experience, the acquiring firm is less likely to experience M&A-related financial restatements. The positive and significant coefficient on AC_MEET (p=0.002, p=0.003, and p=0.001 respectively) suggests that when acquiring firms hold more audit committee meeting in a fiscal year, the acquiring firm is more likely to experience an M&A-related financial restatements.

New CFO

To test whether the appointment of new CFO in the year prior to a M&A (Goh, 2009), or whether a new CFO with prior M&A experience improves financial reporting quality, two additional control variables are added to the M&A financial reporting quality outcomes model. A negative and significant coefficient on NEW_CFO and NEW_CFO_MA would indicate that acquiring firms that hire a new CFO or a new CFO with prior M&A experience are less likely to experience a post-acquisition financial restatement.

Table 20 presents the regression results with these additional control variables to Model (4). The results show that LN_M&A_NAS is still not statistically related to M&A_ICW when controlled for new CFO or new CFO with prior M&A experience (p=0.702 and p=0.731 respectively). The results of the control variable NEW_CFO shows a positive and statistically significant coefficient (p=0.046) suggesting that acquiring firms that appoint a new CFO in the year preceding a M&A are more likely to experience an occurrence of M&A-related internal control weaknesses. The positive and highly significant coefficient on NEW_CFO_M&A (p=0.004) suggests that acquiring firms that hire a new CFO with prior M&A experience are more likely to experience an occurrence of M&A-related internal control weaknesses.

Table 21 presents the regression results with these additional control variables to Model (5). The results show that LN_M&A_NAS is still not statistically related to M&A_RESTATE when controlled for new CFO (NEW_CFO) (p=0.393). The results of the control variable NEW_CFO shows no statistical significance (p=0.417). The results of the logistic regression model using new CFO with prior M&A experience

Table 20

Regression Results of M&A_ICW on LN_M&A_NAS with NEW_CFO and NEW_CFO_M&A.

Variable	Expected Sign	Model NEW_CFO			Model NEW_CFO_M&A		
		Coef.	t-stat	p-value	Coef.	t-stat	p-value
Intercept		5.668	2.244	0.025**	5.825	2.437	0.015**
LN_M&A_NAS	?	-0.347	-0.382	0.702	-0.329	-0.344	0.731
LEV	-	-5.754	-4.350	0.000***	-5.848	-3.922	0.000***
DISTRESS	-	0.812	6.575	0.000***	0.826	2.931	0.002***
FIRMAGE	-	-0.009	-1.191	0.117	-0.012	-0.997	0.160
LITIND	-	-1.428	-1.508	0.066*	-1.433	-1.454	0.073*
SIZE	+	-0.477	-2.632	0.004***	-0.448	-2.578	0.005***
BIG4	-	-0.763	-0.633	0.527	-1.103	-0.903	0.367
TENURE	+	0.449	1.171	0.121	0.393	0.829	0.204
AC_SUPEXP	+	-0.486	-0.236	0.407	-0.179	-0.078	0.469
AC_SIZE	+	-0.294	-1.108	0.134	-0.305	-1.230	0.110
AC_MEET	-	-0.119	-0.824	0.205	-0.100	-0.627	0.265
NEW_CFO	-	1.003	1.690	0.046**			
NEW_CFO_M&A	-				1.086	2.667	0.004***
Observations		203			203		
Pseudo R^2		0.1677			0.1617		
Wald Chi^2		65.08***			50.03***		

Note: The p-values are one-tailed for variables with an expected sign and two-tailed otherwise.
(***), (**), (*) denote significance at the 0.01, 0.05, and 0.10 levels, respectively, based on industry and year double clustered robust standard errors
See Table 2 for variables definitions.

Table 21

Regression Results of M&A_RESTATE on LN_M&A_NAS with NEW_CFO.

		Model		
		NEW_CFO		
Variable	Expected Sign	Coef.	t-stat	p-value
Intercept		-4.527	-3.191	0.001***
LN_M&A_NAS	?	-0.206	-0.854	0.393
LEV	-	3.446	2.329	0.010***
DISTRESS	-	-0.336	-2.061	0.020**
FIRMAGE	-	0.014	0.734	0.232
LITIND	-	0.068	0.134	0.447
SIZE	+	-0.002	-0.007	0.498
LN_AF	+	-0.276	-0.657	0.256
TENURE	-	0.346	1.910	0.028**
AC_ACCEXP	+	0.477	0.673	0.251
AC_SUPEXP	+	-0.795	-1.556	0.060**
AC_SIZE	+	0.062	0.198	0.422
AC_MEET	-	0.146	2.987	0.002***
NEW_CFO	-	-0.092	-0.210	0.417
Observations		203		
Pseudo R^2		0.0756		
Wald Chi^2		44.37***		

Note: The p-values are one-tailed for variables with an expected sign and two-tailed otherwise.
(***), (**), (*) denote significance at the 0.01, 0.05, and 0.10 levels, respectively, based on industry and year double clustered robust standard errors
See Table 2 for variables definitions.

(NEW_CFO_MA) are omitted due to missing standard errors.[18]

Out-of-period Adjustments

Table 22 presents the regression results substituting out-of-period adjustments (M&A_OOPA) as the dependent variable in Model 5. I ran a logistic regression with robust standard errors double clustered by year (2007-2013) and industry (one-digit SIC code) to control for year and industry effects. The main regression model is statistically significant with explanatory power of pseudo R^2=0.2014. Results show that LN_M&A_NAS is not statistically significantly related to M&A_OOPA (p=0.781).

The control variables, however, gave different results than the main Model 5. The positive and highly significant coefficient on DISTRESS (p=0.002) suggests that highly distressed acquiring firms are more likely to record an out-of-period adjustment. The positive and significant coefficient on FIRMAGE (p=0.013) suggests that the longer firms have been publicly listed the more likely they will record an out-of-period adjustment. The negative and significant coefficient on SIZE (p=0.010) suggests that larger acquiring firms are less likely to record an out-of-period adjustment. The positive and significant coefficient on LN_AF (p=0.007) suggests that the more an acquiring firm pays in audit fees the more likely they will record an out-of-period adjustment. The positive and significant coefficient on AC_SUPEXP (p=0.034) suggests that the more members of the acquiring firm's audit committee that have accounting supervisory expertise, the more likely the firm will record an out-of-period adjustment. All remaining control variables are not statistically significant.

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[18] See footnote 12.

Table 22

Regression results of M&A_OOPA on LN_M&A_NAS.

Variable	Expected Sign	Coef.	t-stat	p-value
Intercept		4.217	1.156	0.248
LN_M&A_NAS	?	-0.174	-0.279	0.781
LEV	-	-2.071	-1.032	0.151
DISTRESS	-	0.637	2.895	0.002***
FIRMAGE	-	0.024	2.231	0.013**
SIZE	+	-1.539	-2.317	0.010***
LN_AF	+	2.051	2.49	0.007***
TENURE	-	-0.024	-0.059	0.477
AC_ACCEXP	+	0.581	0.341	0.367
AC_SUPEXP	+	2.156	1.828	0.034**
AC_SIZE	+	0.066	0.142	0.444
AC_MEET	-	0.148	1.075	0.141
N		203		
Pseudo R^2		0.2014		
Wald Chi^2		40.04***		

Note: The p-values are one-tailed for variables with an expected sign and two-tailed otherwise.
(***), (**), (*) denote significance at the 0.01, 0.05, and 0.10 levels, respectively, based on industry and year double clustered robust standard errors
See Table 2 for variables definitions.

CHAPTER 5

CONCLUSIONS AND LIMITATIONS

Conclusions

The intent of this study is to provide a greater understanding of the impact of

NAS on complex accounting transactions such as M&A financial reporting outcomes. It

provides insights on whether NAS is harmful or beneficial to investors and other

stakeholders within the context of M&A. The M&A context allows me to draw

inferences about whether NAS generates knowledge spillovers and thus assists auditors

in performing the audit or creates economic incentives and thus harms auditor

independence. The results of this study provide additional explanations for the

inconclusive association in the literature between NAS and auditor independence.

Using a sample of U.S. public companies with completed acquisitions with public

target companies, I examine whether the relationship between M&A NAS and M&A

financial reporting outcomes (i.e., goodwill impairments, M&A related internal control

weaknesses, M&A related financial restatements, and market reaction to goodwill

impairments) plays a statistically significant role in the likelihood and magnitude of these

outcomes impacting auditor independence and knowledge spillover. If auditors behave

less independently, because of the economic incentives from NAS, it will result in

companies showing a higher percentage of goodwill to purchase price, more and higher

goodwill impairments, more M&A-related internal control weaknesses or financial

restatements, and unfavorable market reactions to M&A announcements. On the other hand, auditors deriving knowledge spillover from M&A NAS, should result in better target company valuations, thus lower goodwill to purchase price percentages, less or lower goodwill impairments, less occurrences of M&A-related internal control weaknesses and financial restatements, and more favorable market reactions to M&A announcements.

The results indicate a positive relation between M&A NAS and (i) the percentage of goodwill to purchase price, and (ii) likelihood of a goodwill impairment in the subsequent year of M&A. Taken together, these results suggest that acquiring firms that pay higher amounts in M&A NAS to their auditors may be overvaluing their target acquisitions resulting in higher impairment amounts. Further tests show no relation between M&A NAS and the likelihood of M&A-related internal control weaknesses or M&A-related financial restatements. These results suggest specific financial reporting outcomes are not affected by M&A NAS. Test on market reaction to announcement of goodwill impairment losses, provides no evidence of the existence to such a relation between M&A NAS and market reactions.

Sensitivity analyses were performed to further investigate the impact of NAS by substituting LN_NAS and its components (i.e., LN_AR_NAS, LN_TAX_NAS, and LN_OTHER_NAS) for LN_M&A NAS to confirm the primary findings. The results show that LN_NAS and LN_AR_NAS have a positive and statistically significant association to M&A_GWPCT. The reason LN_TAX_NAS and LN_OTHER_NAS show no relation to M&A_GWPCT can be attributed to firms reporting M&A NAS predominantly as a component of audit-related NAS. Applying the same substitution of

NAS and its components to Models 2, 3, 4, and 5, the results show that NAS and its components are not statistically related to M&A_GWIMP, M&A_GWIMPAMT, M&A_ICW, and M&A_RESTATE. These tests confirm the study's primary findings.

Extending Dhaliwal et al. (2015) and Cai et al. (2015), supplemental analyses were performed by substituting the main test variable LN_M&A_NAS with SH_AUDITOR, SH_AUD_NAS, and SH_AUD_NAS_CITY, to provide additional evidence of benefits to investors, knowledge spillover, and impact to auditor independence. The results show that there is no relationship between SH_AUDITOR, SH_AUD_NAS, and SH_AUD_NAS_CITY and the dependent variables M&A_GWPCT, M&A_GWIMP, M&A_GWIMPAMT, and M&A_ICW. These results suggest that acquiring and target firms that share the same auditor, share the same auditor for NAS, and share the same auditor from the same city office for NAS do not contribute to knowledge spillover nor impact auditor independence.

However, supplemental tests on M&A_RESTATE show a negative and significant relationship with SH_AUDITOR. This result suggests that acquiring and targets firms that share auditors are less likely to experience financial restatements, thus providing support for the knowledge spillover argument. The results show no statistically significant relationship between M&A_RESTATE and SH_AUD_NAS. The tests on SH_AUD-NAS CITY on M&A_RESTATE show a significant and positive association between acquiring and target firms experiencing financial restatements when both use the same auditor firm from the same city office for NAS. This contributes to the economic incentives argument whereby auditors may be influenced by management, thus impairing auditor independence.

Additional supplemental analyses further investigate if the appointment of a new CFO or a new CFO with M&A experience improves M&A-related financial reporting quality. The results show no change in the relationship between LN_M&A_NAS on M&A_ICW or M&A_RESTATE when controlled for NEW_CFO or NEW_CFO_M&A. Additional supplemental tests using out-of-period adjustments (OOPA) as an alternative dependent variable to test financial reporting quality shows no relationship between LN_M&A_NAS and OOPAs.

In summary, the results of this study provide some evidence that in a complex setting, auditors providing M&A consulting to their audit clients have the potential to impair the auditor's independence. However, this impairment seems to be limited to accounts that require more subjectivity and judgment such as goodwill valuation and impairment than to material errors or internal control weaknesses.

Limitations

Performing this study required the consideration of several potential limitations. First, the sample used for this study is limited to U.S. publicly listed companies from U.S. database sources, therefore the results obtained may not be generalizable to private companies in the U.S. nor to companies domiciled in foreign countries. Second, the majority of the data used for this study comes from several archival databases, with missing or incomplete data, thus reducing the final sample. Third, audit and nonaudit fees data for completed M&A transactions were not available or incomplete in the archival databases used, therefore this information needed to be hand collected; this also reduced the final sample size. Fourth, the sample includes several of the same firms over the

sample period (2007-2013) and are not independent. To control for non-independence in data, the standard error needed to be adjusted across firms and years using clustering.

This study has practical implications for policy makers, regulators and investors and provides additional evidence on the impact of NAS and auditor independence when provided as due diligence services in connection with an M&A. The findings provide support for the current SOX restrictions on NAS and could also provide further support for increased/additional restrictions or a ban on all NAS. It could also promote regulation needed on auditor-provided NAS in the M&A setting.

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