Non-Audit Services and Clients' Future Operating Performance and Risk Management

ABSTRACT: We examine whether non-audit services (NAS) purchased jointly with the audit provide economic value to clients by enhancing operating performance and risk management. Our investigation is important as it contributes to the ongoing debate between critics and proponents of the joint provision of auditing and NAS. We find NAS are positively related to future operating performance, consistent with NAS providing access to human capital and other organizational resources. We further find that NAS are negatively related to future operating risk, indicating that NAS enhance client firms' risk management. We find no evidence that the improvement in operating performance subsequent to NAS is due to earnings management. Our results suggest that additional restrictions on auditor-provided NAS could result in unintended, negative consequences by limiting a client's economic choices related to services provided by their incumbent auditor.

Key words: non-audit services; operating performance; risk; audit quality

JEL Classification: M41; M49; L84

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1. Introduction

The topic of auditor-provided non-audit services (NAS) is one of the most highly studied issues affecting the audit profession (Simunic, 1984; Palmrose, 1986). While the volume of research is large, the focus has primarily been on one of two aspects of NAS that might directly influence the audit: (1) economic bonding that reduces auditor independence (a cost) or (2) knowledge spillovers that improve the quality or efficiency of the audit (a benefit). While it is certainly valid to consider the costs and benefits of NAS as they influence the audit itself, little research has addressed the benefits (or costs) of NAS in a broader sense. For example, an audit firm's expertise could provide benefits to the client that go beyond knowledge spillovers during the audit. To the extent that auditor-provided NAS are the subject of regulation, a more complete cost/benefit tradeoff should consider the effect of NAS on the client's organization as well as the effect on the audit process.[1]

Consistent with the resource-based theory of the firm, we assert that auditor-provided NAS can address client shortcomings in human capital and organizational resources. Moreover, auditors already possess uniquely rich information about the operations, governance, and risks associated with the firm which can be expanded and leveraged during the NAS process. Personnel working for audit firms receive considerable training and develop expertise that can address gaps in human capital across various functions within a client firm. With respect to shortfalls in organizational resources, we take the perspective that auditor-provided NAS

[1] With respect to the decision to purchase multiple services from a single provider, extant literature posits that obtaining additional services from a firm with which the client is familiar can lead to the selection of higher quality services because the client has more information about the provider (Gustafson and Di Marco, 1973; Gallouj, 1997). Another potential reason for a firm to purchase multiple services from a single provider is that by bundling the services together the provider can offer a discount relative to other service providers, increasing consumer surplus (Guiltinan, 1987).

enhances a firm's control function and, ultimately, could be economically-beneficial to firms in at least two positive and related outcomes: (1) improving overall performance and (2) reducing future risk. COSO (1992) defines internal controls as a process that provides reasonable assurance that firms can achieve their financial and operational objectives. Previous research supports this view and finds that good internal control benefits firms' operations (Feng et al., 2015; Cheng et al., 2013). We expand this point by arguing that NAS can enhance several components of a firm's control function, increasing the firms' realization of operational objectives and decreasing unexpected negative outcomes.

Compared to consultancies and other public accounting firms, auditors already possess relatively detailed knowledge of a firm's operations. For example, through their audit of the financial statements and internal controls, auditors gain an exhaustive understanding of the materiality of different types of transactions, a thorough awareness of a firm's controls, and a better ability to assess the quality of controls and reporting systems (De Simone et al., 2015). Auditors also possess information about the client from access to senior officers, interactions with the audit committee, and reviews of board meeting minutes. While assessing control risk and business risk are part of the financial statement audit, it is unlikely that the audit process alone fully complements a client firm's internal control function because the audit is highly-structured, compliance-driven, and somewhat commoditized (Knechel, 2007).

Moreover, an organization's discretionary choices related to assurance-, control-, and tax-related NAS represent deliberate choices beyond the mandated audit framework.[2] Accordingly,

[2] For example, Marathon Petroleum Corporation maintains a policy statement that outlines permissible audit-related, tax, and other NAS. Examples of audit-related services include due diligence related to pre-business combinations, employee benefit plan audits, and audits of pools of assets. Tax services include advice on restructuring, transfer pricing assistance, and customs audits. Lastly, the firm lists assistance with statutory and governmental filings among its permissible other services. Many of these types of services can have a direct impact on future operating performance and risk management.

auditors can leverage their preexisting and holistic expertise gained during the audit (i.e. knowledge spillovers) when providing NAS, allowing them to identify opportunities to improve the access to, timeliness, and precision of information used in managerial decisions (Ittner and Larcker, 2001),[3] provide access to human capital and expertise not available internally (Choi et al., 2013), and offer assurances that existing controls and internal reporting systems are functioning properly. For example, assurance provided by NAS with respect to acquisitions or pension plans can yield more reliable information to managers so they can better forecast future funds flows. Similarly, tax consulting can provide a greater understanding of international operations and the tax and reporting consequences of repatriating funds, allowing managers to improve international expansion decisions while decreasing the risk of failure. Additionally, improvements in risk management can flow from experience navigating unfamiliar markets, compliance consulting, more effective information collection and dissemination, and greater protection from downside risk due to enhanced internal control. Accordingly, we expect that the incremental assurance, better information, access to technical experts, assessment of risks, and improvements in control systems arising from NAS should lead to subsequent improvements in operating performance and decreases in operating risk.

While we argue that NAS are likely to address gaps in human capital or enhance a firm's internal control and risk management functions, there are also reasons to question whether auditor-provided NAS will result in a net economic benefit to an organization. First, NAS may be sold as part of a bundle of services with the audit engagement. Bundling is defined as effectively packaging two or more services together for a single negotiated price (Guiltinan,

[3] This point refers to the general information environment of an organization in contrast to the actual accounting system used by a client. Management advisory services can be related to either the context or quality of information (AICPA, 1992). Examples include supply chain strategies or methods for evaluating internal investments. Prior research documents a similar link between the audit and a client's investment opportunity set (Cahan et al., 2008).

1987).[4] In an auditing and NAS context, the services would be provided as a mixed-type of bundling meaning that the services can be purchased separately or together (Stremersch and Tellis, 2002). If the objective of the bundle is to *primarily* improve audit efficiency then it is less likely that NAS will lead to future improvements in operating performance or subsequent reductions in risk for the client. Second, the potential for rent-extraction by public accounting firms could reduce the net benefit of the services (Schneider, 2012; Wolinsky, 1993). Third, even if NAS are an effective mechanism for enhancing internal control, to the extent that NAS compromise the independence of the audit itself, decreased levels of core financial-statement assurance could offset any potential benefits that accrue to client firms from improved internal information and controls.

We use a sample of publicly-traded firms from the post-SOX time period (2003-2013) that purchase NAS from their auditor.[5] We focus on NAS purchased from a firm's auditor because auditors already possess a high level of knowledge so clients purchasing auditor-provided NAS are likely to obtain discernible benefits from such services. Our focus is not on the decision whether or not to purchase NAS from the auditor. Rather, we examine the costs and benefits of auditor-provided NAS given the joint production of the audit and NAS. We use models that predict the return on net operating assets controlling for the underlying, fundamental changes in operations arising from changes in size, leverage, cash, and financing (Nissim and Penman, 2001; Oler and Picconi, 2014).[6] We supplement these models with the dollar-value of NAS purchased by clients. Consistent with our expectations, we document a positive and

[4] It is unlikely that NAS and audit services are explicitly bundled together. However, there is some evidence that NAS and audit fees are related (Whisenant et al., 2003) which suggests a de facto form of service bundling.
[5] We limit our sample to the post-SOX time period to ensure consistent and reliable reporting of NAS.
[6] Focusing on operating performance allows us to abstract away from any financing effects that NAS may have. NAS have been related to increased costs of equity capital (Nam and Ronen, 2012), potentially influencing how firms rely on debt vs. equity financing.

significant relation between current period NAS and subsequent operating performance (RNOA). We also consider whether firms purchasing NAS experience improved risk management and find a negative relation between NAS and our proxy for subsequent operating risk. Further, the negative relation suggests that the observed increases in operating performance associated with NAS do not arise as a result of clients taking on more operating risk.

Because the supplemental organizational and human capital offered by NAS is unobservable, we use previous literature to identify settings where the control function of the firm is likely under the greatest stress (Doyle et al., 2007; Ashbaugh-Skaife et al., 2008; De Simone et al., 2015; Choi et al., 2013). Accordingly, we provide cross-sectional evidence confirming that constraints on organizational and human resources are likely mechanisms linking improvements in operating performance to the provision of NAS. First, we consider how improvements vary with *preexisting* risk and find that improvements in operating performance due to NAS are greater for firms with relatively greater volatility in return on net operating assets, suggesting that when organizational systems are of greater importance due to increased likelihood of failure, the increase in performance is similarly greater (Ashbaugh-Skaife et al., 2008). Second, we find that smaller firms reap the greatest operational benefits from NAS. This finding is consistent with smaller firms having, on average, relatively less sophisticated information and control systems or insufficient human capital, thus benefitting the most from the expertise and knowledge of their auditors (Doyle et al., 2007). Third, we find firms that are relatively more constrained from a human capital perspective also benefit more from their NAS purchases (Choi et al., 2013). Lastly, we find evidence that firms facing relatively greater strains on their organizational resources, in the form of higher growth in foreign operations, benefit to a greater extent from the purchase of NAS from the auditor. The evidence is consistent with

auditor-provided NAS providing economically-important supplemental human capital and organizational resources which results in improvements in operating performance (De Simone et al., 2015).

While improvements in operating performance are arguably beneficial to client firms, such benefits must be offset against any potential costs or negative effects that might arise. Specifically, we consider whether the positive relation between NAS and subsequent operating performance represents a loss of audit quality. We thus examine the association between NAS and subsequent earnings management, proxying for earnings management with signed discretionary accruals. If the provision of NAS leads to an impairment of auditor independence then the positive relation we find between NAS and future operating performance could be driven by income-increasing earnings management. We do not find any evidence consistent with NAS compromising audit quality in the current or subsequent periods. Further tests also reveal that NAS does not predict restatements, suggesting that increases in operating performance are not the result of income-increasing earnings management.

Overall, our results indicate that a client's decision to purchase NAS from their auditor yields benefits that extend beyond the audit production process and we do not find any evidence that the client's decision is driven by a desire (or ability) to reduce the quality of the audit by undermining the independence of the auditor. Rather, our evidence clearly shows that some clients can obtain demonstrable economic benefits by acquiring NAS from their auditor. While similar benefits might be obtainable from other service providers, the fact that these firms voluntarily choose their auditor for such services indicates that such transactions are economically beneficial to the client organization and that auditors may be able to leverage their preexisting familiarity with the firm to greater benefit. Obviously, firms that do not expect to

benefit in a similar fashion can choose to not purchase NAS from their auditors. In short, the voluntary purchase of NAS suggests an economically informed decision that benefits the client organization without damaging the auditor-client relationship or undermining audit quality.

Our findings are important for several reasons. First, standard-setters and regulators are concerned that NAS may undermine audit quality. While much of the previous research on NAS has failed to find a negative association between such services and audit quality (Ashbaugh et al., 2003; Chung and Kallapur, 2003; DeFond et al., 2002; Hay et al., 2006; Kinney et al., 2004; Paterson and Valencia, 2011), our findings indicate that client firms can benefit from the joint provision of NAS and that further restrictions on the currently permissible bundle of NAS may have unintended and undesirable consequences. Second, our study is important to academics seeking to understand the underlying costs and benefits of NAS. Previously, research has primarily focused on outcomes such as tax avoidance (Cook et al., 2008), audit efficiency (Simunic, 1984), and earnings management (Kinney et al., 2004). We offer a broader perspective in which all costs and benefits are filtered through overall firm performance. Third, our research is important to managers of firms as we document the viability of auditor-provided NAS as a mechanism to address gaps in organizational or human capital and to improve risk management.[7]

The remainder of the paper is structured as follows: First, we develop our hypotheses in Section 2 and elaborate on our research design in Section 3. We then present our main findings in Section 4 and discuss additional analysis in Section 5. Section 6 summarizes our results and conclusions.

[7] The potential for an audit firm to benefit a client in various ways beyond fundamental assurance over financial statements has been previously documented in the small and medium enterprises (SME) market where most companies are not publicly listed (Knechel et al., 2008).

2. Hypothesis development

2.1 Hypothesis 1: NAS and future performance

Since the passage of the Sarbanes-Oxley Act in 2002, aggregate auditor-provided NAS fees have totaled no less than $3.2 billion annually in spite of the increased restrictions on the provision of these services. Traditionally, accounting researchers and regulators have considered this substantial firm-level expenditure to be a potential manifestation of agency costs whereby managers attempt to compromise the independence of auditors. However, empirical evidence to support such claims remains elusive (Ashbaugh et al., 2003; Chung and Kallapur, 2003; DeFond et al., 2002; Ferguson et al., 2004; Frankel et al., 2002). Given that prior evidence concerning the costs and benefits of the joint provision of non-audit and audit services is, at best, inconclusive, we consider an alternative perspective for auditor-provided NAS and the underlying motivation for their purchase. Namely, we argue that auditor-provided NAS represent deliberate choices by management to improve firm value by enhancing the firm's control and operating activities by supplementing its organizational and human capital.

Organizations create value when they strategically acquire and utilize resources that can be leveraged to their advantage (Hitt and Ireland, 1986). Resources can be broadly classified as physical capital, organizational capital, or human capital (Barney, 1991). Physical capital includes materials, property, plant, and equipment that the firm uses in conducting its operations (Williamson, 1975). Organizational capital includes a firm's control systems, the structure of the organization, and informal interactions among divisions within the firm (Tomer, 1987). Controls are organizational features within the firm that are intended to provide a reasonable assurance that management's objectives will be achieved relating to the effectiveness and efficiency of operations, the accuracy of information, and compliance with appropriate regulations (COSO,

1992). The proper use of control systems can result in increased organizational flexibility and efficiency (Ahrens and Chapman, 2004). Prior literature suggests that external providers, such as the auditor, can address organizational control issues. Abdel-Khalik (1993) finds that auditors of private firms offset the loss of control for owner/managers that arise due to the organization's hierarchy, suggesting that assurance over a firm's operations and controls provides decision-relevant information to management. Human capital is composed of the knowledge, experience, education, and perspective of each manager or worker (Becker, 1964). Acquiring the necessary human capital is often viewed as one of the most important factors for a firms' success (Pfeffer, 1995; Jung et al., 2014).

The success of any organization depends on its ability to marshal and utilize appropriate resources given its objectives and strategic plans. Fundamental to achieving success is the need for controls to facilitate effective decision making and resource management. Previous research finds that insufficient or ineffective controls negatively affect firm performance. For example, internal control weaknesses relating to inventory have been linked to failures in inventory management, i.e., lower inventory turnover and greater inventory impairments (Feng et al., 2015). Entity-level internal control weaknesses result in inefficient corporate investment, i.e., wasteful overinvestment when resources are abundant and costly underinvestment (i.e., failure to exploit profitable investment opportunities) when facing constraints (Cheng et al., 2013). Similar to organizational capital, shortfalls in human capital harm operating performance (Jung et al., 2014). The inability to maintain adequate human capital is a common cause of poor internal control, and improvements in human capital have been linked to better internal control (Choi et al., 2013). Consequently, all organizations seek to acquire and develop the best organizational and human capital, consistent with the resource-based view of the firm (Conner, 1991).

We argue that NAS can enhance a firm's internal operations and controls by providing access to organizational and human capital that might not otherwise be available to a firm or cost effective to acquire internally. Previous research finds that NAS improves the efficiency of the audit by reducing the time delay between the fiscal year end and the issuance of the audit reports (Knechel and Payne, 2001; Knechel and Sharma, 2012). This finding is consistent with Simunic's (1984) argument that NAS can result in knowledge spillovers where information gained during the non-audit service is used during the audit. We argue that such information gained by the auditors during the audit and NAS is similarly likely to benefit the firm purchasing NAS more directly.

First, prior research suggests that preexisting relationships with auditors are beneficial to the firms across a number of dimensions. Cai et al. (forthcoming) and Dhaliwal et al. (forthcoming) find that shared auditors in merger transactions reduce uncertainty in the acquisition process, improve the allocation of capital, and result in greater announcement returns. While firms regularly employ investment banks on M&A transactions, the knowledge uniquely possessed by a shared, incumbent auditor results in economically significant improvements in M&A performance. Second, previous papers verify that expanding the scope of services purchased from an auditor aid the firm. Kinney et al. (2004) and Seetharaman et al. (2011) find that NAS are negatively related to restatements, consistent with knowledge spillovers from NAS enhancing financial reporting systems. Most directly related to the control function of the firm, De Simone et al. (2015) find that tax NAS are negatively related to internal control weaknesses. Harris and Zhou (2014) extend De Simone et al. (2015) and find that tax NAS are negatively related to non-tax related internal control weaknesses. Thus, previous research suggests that

auditors already possess client-specific knowledge which can enhance the organizational capital of a firm.

Given previous research linking controls to performance (Feng et al., 2015) and NAS to controls (Kinney et al., 2004; Seetharaman et al., 2011; De Simone et al., 2015; Harris and Zhou, 2014), we extend the prior literature by arguing that NAS could also be associated with subsequent improvements in operating performance in three ways: (1) improving the flow and quality of information used in managerial decisions, (2) providing access to technical and tacit knowledge not available internally, and (3) offering assurance over control and reporting systems. NAS services are broadly classified as audit-related, tax, and other. Each type can be linked to organizational or human capital. Audit-related services are assurance and associated services not specifically required by auditing standards such as due diligence pertaining to a merger or acquisition, audits of employee benefit plans, or process quality reviews (ISO, 1992; SEC, 2000).[8] Also, assurances provided about pension plans and acquisitions should allow managers to form better estimates of future financial needs and payoffs, allowing managers to better allocate resources within the firm and minimize unnecessary resource slack. Such services facilitate improved accuracy and reliability of the information produced by internal reporting systems which, in turn, will lead to better management decisions (Ittner and Larcker, 2001). Tax services include tax compliance or planning but do not include assurance work done in conjunction with the audit (Kinney et al., 2004) and can improve the efficiency and execution of a firm's tax strategy. For example, tax consulting can allow firms to better structure and source their supply chain in a manner that minimizes taxes (e.g., via transfer prices), potentially freeing

[8] Note that if the employee benefit plan is large enough there is a statutory requirement that it be audited. Per the U.S. Department of Labor, a plan with fewer than 100 participants can receive a small pension plan audit waiver. If a plan is subject to a mandatory audit requirement, however, such an audit does not have to be conducted by the same auditor.

up resources for investment that would have otherwise been remitted to taxing authorities. Lastly, other services are any services which are not classified as audit-related or tax (SEC, 2000). Examples of other services include consulting that improves information reporting, accuracy, and security; and risk and compliance services.[9]

NAS not only provide firms with resource flexibility in order to address operational challenges, they can also improve a firm's risk management. Risk management is important because it facilitates a firm achieving its strategic objectives (COSO, 2004). Firms must evaluate the risk and return on their investment options in order to ensure that they allocate capital efficiently across lines of business (Nocco and Stulz, 2006; McShane et al., 2011). Consistent with expectations, Baxter et al. (2013) find that high quality enterprise risk management is positively related to future operating performance. NAS addressing a firm's risks should similarly result in subsequent increases in a firm's operating performance.

While the potential for NAS to supplement organizational and human capital suggests a positive relation between NAS and subsequent operating performance, there are at least three reasons why such an association may not occur. First, NAS could be bundled with the audit primarily to gain efficiencies in the audit. If audit efficiency is a motivation for purchase, NAS would seemingly focus on improving financial reporting quality or ensuring regulatory compliance. Neither of these two outcomes would necessarily lead to an improvement in operating performance for the client.[10] Second, the sale of NAS can be the result of rent extraction by the audit firm due to a lack of bargaining power for the client or significant

[9] While SOX has imposed restrictions on the types of NAS that can be provided to public companies, there are still several types of permissible services that may be purchased to address clients' needs subject to audit committee approval. SOX prohibits audit firms from providing bookkeeping, financial information systems design and implementation, appraisal or valuation, actuarial, internal audit outsourcing, management function or human resource, broker or dealer, legal, or expert services to their audit clients (Messier et al., 2014).

[10] Note that we are not arguing that a firm could not reap benefits related to audit or financial reporting quality as well as operating performance. However, it is not necessary that NAS yield all of these benefits simultaneously.

information asymmetry between the audit firm and the client (Chen et al., 2010). Third, the provision of NAS can result in an impairment of auditor independence which reduces audit quality (Simunic, 1984).[11] In these scenarios, it is unlikely that the services provided would have been demanded by fully informed stakeholders but are instead purchased by the manager for self-serving motivations.

The fact that a company could choose to purchase NAS from any of a number of suppliers suggests that they perceive a net economic value in acquiring those services from their auditor despite the unique potential costs of purchasing them from the independent auditor. Previous research confirms this argument and finds that shared auditors benefit firms in complex merger and acquisitions (Cai et al., forthcoming; Dhaliwal et al., forthcoming). Moreover, Halperin and Lai (2015) find that firms buying NAS are less likely to change auditors, suggesting purchasing NAS from a preexisting service provider is beneficial. In addition, for public accounting firms to maintain their NAS practices over the long term, they must provide value to their clients (Klein and Leffler, 1981). It is possible that such "value" arises from impairment of the auditor's independence. However, given the lack of evidence indicating that NAS is associated with a loss of audit quality, we expect that auditor-provided NAS provides other economic benefits to a client, leading to our first hypothesis:[12]

H1: There is a positive relationship between auditor-provided NAS and subsequent firm performance.

[11] The level of audit quality can have a significant impact on an organization's cost of capital because high quality financial reporting is associated with lower cost of debt (Pittman and Fortin, 2004) and improved investment efficiency (Biddle and Hilary, 2006).

[12] Following the implementation of SOX, firms changed the level and types of NAS that they obtained from their auditors (Gaynor et al., 2006; Abbott et al., 2011). Such shifts in the demand for NAS could mitigate any association if valuable services were statutorily prohibited or those charged with governance (i.e., the audit committee) opt not to purchase NAS due to a perceived impairment of independence

2.2 Hypothesis 2: NAS and risk

Risk management has been formally established as an important element of management's responsibilities since the Foreign Corrupt Practices Act of 1977. The concept of risk management was greatly broadened by COSO in 1992 by establishing a framework for evaluating internal control. The 1992 COSO framework was subsequently extended to reflect a much more comprehensive approach to enterprise risk management (COSO, 2004). Following the framework of COSO, managers and auditors have placed a greater emphasis on a broad understanding of business risk (Knechel, 2007). Risk management has also moved to the forefront of the agenda for audit committees (KPMG Audit Committee Institute, 2012). The change in focus toward risk management among corporate officers and directors has led to substantial changes in auditing practice (IFAC, 2009; PCAOB, 2010). It has also served as an impetus for the further development of NAS that focus on identifying and addressing risk.[13]

Services focusing on risk management are a significant component of NAS marketed to audit clients (EY, 2013; KPMG, 2012) and such services can help a firm to mitigate future risk. NAS can improve risk management by helping a firm to improve the quality of information for decision making, aid a firm in avoiding risky investments, and provide insight into the potential for downside outcomes (including the tax consequences) of expansion decisions. For example, firms that engage in complex transactions such as mergers and acquisitions are likely to benefit from due diligence work performed by the advisory practice of their current auditor.[14] Although

[13] For example, in their 2012 Global Annual Review, PwC discussed the importance of providing assistance with risk management for several clients. The audit firm emphasized that risk management will continue to be an important consideration for its clients going forward and that it will continue to work to serve client needs in this area.

[14] The assurance provided by NAS with regard to mergers and acquisitions (typically through audit-related fees) are particularly relevant in this setting as empirical evidence indicates that most acquisitions suffer from a winner's curse where the acquiring firm experiences a loss in value after completing the transaction (Harford, 1999; Gilberto and Varaiya, 1989; Moeller et al., 2004).

countervailing conditions that have been previously mentioned might undermine the impact of NAS on risk management (e.g., focus on audit efficiency, rent extraction, independence impairment), given that specific types of NAS are sold to explicitly improve a firm's risk management, and that managers and board members are increasingly concerned with reducing risk, it is likely that NAS will be negatively related to future firm risk. This perspective leads to our second hypothesis:

> *H2: There is a negative relationship between auditor-provided NAS and subsequent firm risk.*

3. Research design

3.1 Subsequent performance model

To test our first hypothesis, we specify a model of future operating performance consistent with prior literature (Nissim and Penman, 2001; Oler and Picconi, 2014) and supplement it with measures of NAS fees and audit fees. We estimate the following OLS regression, clustering standard errors by firm and including year and industry fixed effects (Fama French 48) (Petersen, 2009):

$$RNOA_{t+1} = \beta_0 + \beta_1 NAS_t + \beta_2 CASH_t + \beta_3 NWC_t + \beta_4 SALESGROW_t + \beta_5 LEV_t + \beta_6 SIZE_t + \beta_7 RNOA_t + \beta_8 AUD\_FEES_t + Year\ fixed\ effects + Industry\ fixed\ effects + e \quad (1)$$

The dependent variable is return on net operating asset ($RNOA_{t+1}$) and is measured as operating income after depreciation and amortization (OIADP) at year t+1 scaled by net operating assets.[15] We define net operating assets as the difference between operating assets and operating

[15] Because Table 1 indicates that tax fees are a material component of NAS purchases, it is important to note that operating income after depreciation and amortization (OIADP) is measured on a pretax basis. An association between NAS and subsequent operating performance therefore cannot be attributed to increases in tax avoidance.

liabilities.[16] The advantage of using return on net operating assets is that we can analyze the relation between NAS and performance without the confounding effects of financing, such as leverage or the cost of equity (Nam and Ronen, 2012).

We measure investment in NAS in two ways. To compute our first measure we obtain total non-audit fees which includes all non-statutory fees paid to the independent auditor (*NON_AUDIT_FEES*) from *Audit Analytics*. We then scale *NON_AUDIT_FEES* by the absolute value of operating income after depreciation and amortization to arrive at our variable of interest (*TOTNAS*).[17] We scale by operating income to facilitate its interpretation of the portion of firm level resources invested in non-audit services. For our second measure, we obtain the residual (*ε_TOTNAS*) from the following regression, estimated by industry-year:

$$TOTNAS_t = \beta_0 + \beta_1 CASH_t + \beta_2 NWC_t + \beta_3 SALESGROW_t + \beta_4 LEV_t + \beta_5 SIZE_t + \beta_6 RNOA_t + \beta_7 AUD\_FEES_t + Year\ fixed\ effects + Industry\ fixed\ effects + e \quad (2)$$

Equation (2) allows us to measure the abnormal investment in NAS given the underlying determinants of a firm's operating performance. Orthogonalizing NAS on the variables in Equation (2) allows us to capture the portion of NAS investment which is not influenced by other potentially confounding variables such as (1) prior period performance, as historically profitable firms might have greater resources to purchase NAS, (2) size, as auditors typically charge higher fees for larger clients, and (3) industry or year specific shocks, such as firms requiring more

[16] Following Nissim and Penman (2001), we measure operating assets as total assets (AT) less short term investments (IVA). Operating liabilities are total assets less interest bearing debt (DLTT, DLC), common equity (CEQ), preferred stock (PSTK), and minority interest (MIB).

[17] Unlike prior auditing literature (with the exception of Ferguson et al., 2004), we scale non-audit fees rather than take the natural log. Using the natural log of audit fees does not account for differences in client size which might confound results as size is an important determinant of performance (Barber and Lyon, 1996) and auditor pricing (Hay et al., 2006). Our results are robust to scaling NAS by the absolute value of operating cash flows (*TOTNAS2*). Namely, we continue to find positive and significant coefficients on *TOTNAS2* and ε_*TOTNAS 2* (p<0.05) when estimating Equation (1) and negative and significant coefficients on *TOTNAS2* and ε_*TOTNAS 2* (p<0.01) when estimating Equation (3).

costly tax services due to industry-specific regulations. Consistent with Hypothesis H1, we expect a positive and significant coefficient for *TOTNAS* or ε_TOTNAS ($\beta_1 > 0$). We also include the natural log of *AUDIT_FEES* in Equation (1) in order to accommodate any potential cross-determination of audit and non-audit fees (Simunic, 1984; Whisenant et al., 2003) as well as to control for enhancements in controls or risk-reduction associated with a financial statement audit (Simunic, 1980).

Our other control variables for the performance analysis are identified from prior literature (Nissim and Penman, 2001; Oler and Picconi, 2014). We include contemporaneous operating performance ($RNOA_t$) to control for persistence of profitability and mean reversion over time (Barber and Lyon, 1996). Further, we include measures of a firm's cash (*CASH*), as Harford et al. (2008) find insufficient cash can impair performance. We also include net working capital (*NWC*), as these assets likely realize as additional sales or cash flows in future periods. We control for growth (*SALESGROW*) as growing firms are more likely to continue growth trends. Finally, we control for leverage (*LEV*), and size (*SIZE*) to control for other determinants of future profitability (Harford et al., 2008; Oler and Picconi, 2014). Variables are formally defined in Appendix A.

3.2 Subsequent risk model

In order to test our second hypothesis, we specify the following model:

$$STDRNOA_{t+5} = \gamma_0 + \gamma_1 TOTNAS_t + \gamma_2 RISK_t + \gamma_k CONTROLS_j + e \quad (3)$$

Our proxy of future operating risk is the future five-year volatility of return on net operating assets (*STDRNOA*) (Chen et al., 2007; Jin et al., 2013; Choy et al., 2014).[18] If the purchase of

[18] We verify our results are robust to using the standard deviation of operating cash flows, another common proxy for operating risk (McGuire et al., 2012; Minton and Schrand, 1999). We continue to find negative and significant coefficients on *TOTNAS* and ε_TOTNAS ($p<0.01$).

NAS yields increases in the future return on net operating assets because of increases in future levels of risk, *TOTNAS* would be positive and significant ($\gamma_1 > 0$). In contrast, prior empirical evidence finds that enhanced internal controls are associated with improved risk management (Jin et al., 2013). Accordingly, we expect a negative and significant coefficient for *TOTNAS* ($\gamma_1 < 0$).

We include contemporaneous levels of risk (*RISK*) to ensure *TOTNAS* is not simply capturing firms with preexisting high or low levels of operating risk. Additionally, we supplement Equation (3) with the same control variables as in Equation (1) to determine whether the subsequent increases in operating performance related to NAS are related to subsequent increases in risk for a given level of performance. Again, we cluster standard errors by firm and include year and industry fixed effects (Fama French 48) (Petersen, 2009).

3.3 Sample selection and descriptive statistics

We initially draw our sample from the intersection of *Compustat's* Annual File, *Audit Analytics*, for the years 2003-2013 (87,852 observations). We begin in 2003 to ensure consistent reporting of NAS fees as well as a consistent set of NAS permitted under SOX. We end in 2013 because of the requirement of one year of subsequent operating performance. We remove utilities and financial firms because these firms operate in a highly regulated environment (67,659 observations). We then exclude any firm-year without the necessary data to estimate Equation (1) or with denominators (net operating assets, sales) that are less than one million to avoid small denominator problems (37,020). Lastly, we require at least ten observations per industry year to accurately calculate *ε_TOTNAS*. Our final sample consists 36,856 firm-year observations, of which 31,984 have non-zero NAS. We winsorize all continuous variables by year at the 1 percent level.

Table 1 contains descriptive statistics of our sample. Consistent with mean reversion of performance, we find that subsequent *RNOA* is negative (Fairfield and Yohn, 2001; Soliman, 2008). Audit fees average $1.7 million while total non-audit fees average $498 thousand. Tax fees are the largest type of non-audit fees, followed closely by audit-related fees with other fees being the smallest. Table 2 contains the correlation matrix for the variables in our models. While there is a negative and statistically significant Spearman correlation between *TOTNAS* and future return on net operating assets inconsistent with Hypothesis H1, the correlation test statistic does not control for important correlated omitted variables. Moreover, we find insignificant Pearson and Spearman correlations between subsequent operating performance and *ε_TOTNAS*.

<<<<< Insert Tables 1 and 2 about here >>>>>

4. Main analysis

4.1 Hypothesis 1: Subsequent performance

We report the results for our multivariate test of Hypothesis H1 relating to subsequent operating performance using one-tailed p-values in Table 3. The dependent variable in all columns is $RNOA_{t+1}$. Although not the focus of this study, we observe that *AUD_FEES* is negative and significant in all columns ($p < 0.01$). Consistent with H1, the coefficients for *TOTNAS* (0.131, $p < 0.05$) and *ε_TOTNAS* (0.130, $p < 0.05$) are positive and significant in Columns (1) and (2) respectively, suggesting that NAS are related to higher levels of subsequent operating performance.[19] To assess the economic significance of this relation, we estimate the

[19] Prior research finds that NAS are negatively related to material weaknesses (De Simone et al., 2015) and that material weaknesses are negatively related to performance (Feng et al., 2015). We verify our results are incremental to previous studies by re-estimating Equations (1) and (2) over a subsample that excludes firm-years which *Audit Analytics* identifies as having an internal control weakness in the current (t) or following year (t+1). As this subsample lacks internal control weaknesses, results cannot be attributed to the remediation of internal control weaknesses. In untabulated analysis, we continue to find positive and significant coefficients for *TOTNAS* and ε_*TOTNAS* ($p<0.05$) in Equation (1) and negative and significant coefficients in Equation (3) ($p < 0.01$)

change in operating performance from changing NAS by its interquartile range. Firms at the upper quartile of *TOTNAS* or *ε_TOTNAS* have 10.7% and 15.4% higher future operating performance than do firms at the lower quartile, respectively.[20]

<<<<< Insert Table 3 about here >>>>>

4.2 Hypothesis 2: Subsequent operating risk

Table 4 presents the results for Equation (3) using one-tailed p-values to test Hypothesis 2. The dependent variable for all columns is $STDRNOA_{t+5}$. Consistent with our expectations, the coefficients for *TOTNAS* (-0.092, $p < 0.01$) and *ε_TOTNAS* (-0.101, $p < 0$ .01) are negative and significant in Columns (1) and (2), respectively, suggesting that NAS are related to lower levels of future operating risk. Our results are consistent with Hypothesis H2 that auditor-provided NAS are negatively related to future operating risk. Further, the analysis suggests that the positive relation between NAS and subsequent operating performance is not a function of increased risk taking. In fact, our results are consistent with prior evidence on enhanced internal controls improving risk management (Jin et al., 2013) and therefore corroborate our argument that NAS enhance a firms' internal control.

<<<<< Insert Table 4 about here >>>>>

4.3 Cross sectional tests

We next verify that the relations between NAS and performance are attributable to organizational and human capital rather than an alternative explanation. Unfortunately, most mechanisms through which NAS can enhance a firm's control function are unobservable. For

[20] We compute economic significance between the interquartile ranges by taking the difference between the upper and lower quartiles for each of our variables of interest, multiplying it by the coefficient from Equation (1) for the respective NAS measure, and then multiplying that product by the mean performance in sample. For *TOTNAS* and *ε_TOTNAS*, the calculations are {[(0.010 – 0.001) * 0.131] / 0.011} and {[(0.000 + 0.013) * 0.130] / 0.011}, respectively.

example, we cannot directly observe the extent to which NAS improves the internal information quality on which managers based their decisions. We identify settings from prior literature where a firm's control function is likely under the greatest stress and thus has greater need for enhancement via NAS (Doyle et al., 2007; Ashbaugh-Skaife et al., 2008; De Simone et al., 2015; Choi et al., 2013). Such cross-sectional variation in the consequences of NAS provides evidence that organizational and human capital are two mechanisms through which NAS can increase operating performance.

4.3.1 Test of size

While we explicitly control for client size in our primary analysis, we now consider the possibility that the effect that NAS has on operating performance is related to firm-size (Hay et al., 2006). Specifically, smaller firms face greater constraints when attempting to attract or retain high quality human capital. Moreover, if NAS enhances a firm's internal controls through better internal reporting systems and improved assurances over information, then the relation between NAS and subsequent performance should be greater among firms with fewer resources to invest in internal systems. Accordingly, we use size as a proxy inversely related with firms' resources, whether human or organizational capital, consistent with prior literature (Ashbaugh-Skaife et al., 2008; Doyle et al., 2007). We split our sample into two subsamples using an indicator, *SMALL*, which equals one for firms in the bottom quintile of asset size for a given industry and year, and zero otherwise. We re-estimate Equation (1) and present the results in Table 5.

<<<<< Insert Table 5 about here >>>>>

We find that smaller firms benefit more from the purchase of NAS as the coefficients on *TOTNAS* (0.420, $p < 0.05$) and ε_TOTNAS (0.550, $p < 0.01$) are positive and significant in Columns (1) and (2), respectively. With respect to the not small subsample, we find fail to find

evidence consistent with Hypothesis H1 as *TOTNAS* (-0.174, $p > 0.10$) and *ε_TOTNAS* (-0.143, $p > 0.10$) are negative and insignificant given our directional prediction. Overall, the evidence supports our expectation that smaller firms benefit to a relatively larger extent from the provision of NAS, likely because of their more limited resources.

4.3.2 Test of human capital

Human capital is a critical component of internal controls and accounting systems in general (Choi et al., 2013; COSO, 1992; Ge and McVay, 2005). All else equal, firms suffering short falls in human capital have more to gain from access to their auditor's expertise through NAS. To measure human capital constraints, we rely on prior literature (Jung et al., 2014) and use the residual from a regression of employee growth on sales growth, estimated by industry-year. We designate firms in the bottom quintile of the residual (*EMP*), namely those firms whose human capital growth has not kept pace with the expansion of its activities, as facing human capital constraints. We then re-estimate Equation (1) across two subsamples, low employee growth and not low employee growth.

Table 6 presents our results. We find evidence consistent with our expectation as the coefficients on *TOTNAS* (0.634, $p<0.01$) and *ε_TOTNAS* (0.673, $p<0.01$) are positive and significant in Columns (1) and (2), respectively. We fail to find any evidence of a relation between NAS and future operating performance for firms not classified as having human capital constraints in Columns (3) or (4) ($p>0.10$). The incremental increase in future operating performance for firms with labor short-falls is consistent with the decision to engage an external party due to human capital resource constraints.

<<<<< Insert Table 6 about here >>>>>

4.3.3 Test of foreign growth

Firms experiencing abnormally high levels of growth likely face organizational capital constraints, especially when it comes to their control functions (Ashbaugh-Skaife et al., 2008). Growth arguably outpaces control processes and procedures already in place, requires hiring new and inexperienced employees, and implementation of new and untested technologies (Doyle et al., 2007). Moreover, foreign growth requires even greater complexity and sophistication in firms control functions as managers now face greater political risks, currency fluctuations, new tax implications, cultural complications, and supply chain risks (De Simone et al., 2015; Deumes and Knechel, 2008; Anderson et al., 2012). If NAS is positively related to future operating performance because of improvements in organizational capital, we expect the relation between performance and NAS to be greater among firms experiencing high levels of foreign growth. Specifically, we designate firms in the top quintile of foreign growth for a given industry in a given year as facing greater organizational capital pressure.[21] We then re-estimate Equation (1) across two subsamples, high foreign growth and not high foreign growth. Table 7 presents our results. We find some evidence consistent with our expectation as the coefficient on *TOTNAS* (0.233, $p<0.05$) is positive and significant in Column (1). We fail to find any evidence that NAS for non-high growth firms is related to future performance as neither *TOTNAS* or ε_TOTNAS are significant ($p>0.10$). The relatively higher level of future operating performance for firms with relatively greater growth in foreign operations is consistent with firms engaging an external party due to organizational capital resource constraints.

<<<<< Insert Table 7 about here >>>>>

[21] We define foreign growth as the percentage increase in ratio of foreign sales to total sales from the Compustat Segments file.

4.3.4 Tests of pre-existing risk

Our argument assumes that NAS influences subsequent performance, in part, through enhancing the control function and thus improving risk management within a firm. We provide further evidence about the link between organizational capital, performance and NAS by examining *preexisting* operating risk. We assume that relatively higher levels of operating risk reflect poorer firm-level risk management and greater opportunities for NAS to help a company improve performance.[22] First, our assumption is consistent with the emerging literature which studies enterprise risk management and posits that effective risk management lowers the chance of negative outcomes (Baxter et al., 2013). Second, we argue that high levels of risk likely burden preexisting control systems. Given that the purpose of internal controls is to minimize the likelihood of negative outcomes, volatile operations likely increase the need for adequate control systems (Deumes and Knechel, 2008; Ashbaugh-Skaife et al., 2008; Morris, 2011). Therefore, to the extent that risk management is affected by NAS, we expect significantly greater improvements in operating performance among firms with the greatest preexisting risk. To test this, we rerun Equation (1) on subsamples for firms we identify as high risk and those that are not high risk. A firm is classified as high risk if it falls into the top quintile for a given industry and year of our risk proxy $STDRNOA_{t-5}$ calculated for the five years *prior* to the purchase of NAS.

Table 8, presents the results of our performance analysis for the two subsamples. We find evidence that NAS is associated with higher operating performance among previously high-risk

[22] In the context of modern portfolio theory, a reduction in risk is not necessarily good news for investors. However, our study focuses on operating risk rather than investment risk. Thus, the extent to which investors would prefer higher risk in order to achieve a higher return is unclear in our non-asset pricing context. Our theory is consistent with prior findings that investors view reductions in operating risk as good news (Baxter et al., 2013) and can be interpreted as reductions in operating risk lowering the diversifiable risk of the firm.

firms using either *TOTNAS* (0.600, $p<0.01$) or *ε_TOTNAS* (0.601, $p<0.01$). We fail to find any evidence that NAS improves performance for firms that are not identified as high pre-existing risk ($p>0.10$). Thus, we find robust evidence consistent with firms operating in relatively high risk environments benefitting the most from their purchase of NAS.

<<<<< Insert Table 8 about here >>>>>

5. Additional Analysis

5.1 Control for endogeneity

In our primary analysis, we do not control for the potential endogeneity in the decision to jointly purchase NAS and auditing services from a single service provider. Prior literature documents that the purchase of NAS along with the audit is jointly determined (Whisenant et al., 2003). To control for potential endogeneity,[23] we employ three empirical techniques: (i) a two-stage ordinary least squares analysis, (ii) a treatment-effects specification, and (iii) a first-differences methodology. Our first-stage model for the two-stage ordinary least squares technique is as follows:

$$NAS_t = \beta_0 + \beta_1 TENURE_t + \beta_2 BUSY_t + \beta_3 AFMSAGROW_t + \beta_4 NFMSAGROW_t + \beta_5 CASH_t + \beta_6 NWC_t + \beta_7 SALESGROW_t + \beta_8 LEV_t + \beta_9 SIZE_t + \beta_{10} RNOA_t + \beta_{11} AUD\_FEES_t + Year\ fixed\ effects + Industry\ fixed\ effects + e \quad (4)$$

where NAS_t is defined as either *TOTNAS* or *ε_TOTNAS*. Our four instruments are the length of the auditor-client relationship (*TENURE*), whether the audit engagement is conducted during the auditor's busy season (*BUSY*), the growth of the audit market within the auditor's MSA (*AFMSAGROW*), and the growth of the market for nonaudit services provided to audit clients within the auditor's MSA (*NFMSAGROW*). We expect each of these instruments to predict NAS

[23] We also investigate the extent to which the endogenous choice to *purchase* NAS influences our results. We re-estimate Equation (1) over a sub-sample of only firms that purchase NAS (31,984 observations). We continue to find positive and significant coefficients on *TOTNAS* ($p < 0.05$) and *ε_TOTNAS* ($p < 0.10$). The decision to purchase a nonzero amount of NAS does not appear to influence our results.

but not to predict future operating performance; therefore they satisfy the necessary exogeneity assumptions for valid instruments. First, we expect firms with longer term relationships with their auditors to purchase greater amounts of NAS from them (Halperin and Lai, 2015; Omer et al., 2006). Second, we expect audit firms to have fewer opportunities to sell NAS to their clients when clients' fiscal year ends occur during busy season. Third, we expect growth in audit fees and non-audit fees in the metropolitan statistical area in which the auditor is located to be negatively and positively related to client-level NAS purchases, respectively. Recent evidence suggests that when auditors face audit fee pressure from within their competitive environment, auditors attempt to increase NAS in order to compensate for lost audit fee revenue (Beardsley et al., 2014). Meanwhile, we lack theory or economic intuition as to why our instruments would be related to subsequent firm performance. We also include all the control variables from our second-stage equation. All variables are defined in Appendix A.

We report the results of our two-stage least squares approach in Tables 9 and 10. Columns (1) and (2) in both tables report the results of our first-stage estimations while Columns (3) and (4) report the results of our re-estimation of Equation (1) and Equation (3) in Tables 9 and 10, respectively. We find that *TENURE* (p<0.01), and *AFMSAGROW* (p<0.10) are good instruments as they are significant in each first-stage specification. Moreover, our instruments are not subject to weak instrument concerns as joint F-tests in Tables 9 and 10 are both highly significant (untabulated, $p < 0.001$). [24] In Tables 9 and 10, we find that the fitted values of *TOTNAS* and *ε_TOTNAS* both remain positively and significantly associated with higher future

[24]To further verify the validity of our instruments, we include all four instruments in Equations (1) and (3). We fail to find significant coefficients in Equation (1) on any of our four instruments ($p > 0.10$), consistent with our instruments only predicting operating performance through their association with NAS. For Equation (3), we only find a significant coefficient on *BUSY* ($p < 0.01$). Nevertheless, the three remaining instruments remain insignificant.

operating performance (p<0.05) and negatively and significantly related to future operating risk (p<0.05), respectively.

As a second strategy to address endogeneity, we employ a treatment effects model. A treatment effects model, and in particular an inverse-probability weighted, regression-adjustment model, estimates counterfactuals across two subsets of observations which have differences in covariates (Guo and Fraser, 2015). We specifically estimate two regressions, one for treated firms and one for control firms, weighting the observations by the probability of treatment. We then use the regression of the untreated firms to estimate the expected performance for the treated firms, given their covariates (i.e. the counterfactual performance). The difference between actual and expected performance is the treatment effect.[25] In our context, the treatment effect is the extent to which purchasing NAS impacts subsequent operating performance. Employing two means of adjusting for treatment effects, namely inverse-probability weighting and regression-adjustment, minimizes the risk of model misspecification influencing results as only a single model needs to be appropriately specified (Stata 2013). Because treatment models can only accommodate binary treatments, we designate firms within the top industry-year quintile of *TOTNAS* (*ε_TOTNAS*) as *HIGHNAS* (*HIGHεNAS)*. Our selection model is the same as Equation (4) above while our outcome model is Equation (1) for operating performance and Equation (3) for operating risk.

For brevity, we do not tabulate the results from our treatment effect analysis. For both operating performance and operating risk, we find that *TENURE* and *NFMSAGROW* are good instruments as they are positively and significantly related to both *HIGHNAS* and *HIGHεNAS* (p<0.01). Among firms purchasing a large amount of (abnormal) NAS, we find NAS increases

[25] For further information on treatment effect models, please consult Guo and Fraser (2015) and Stata (2013). Also, for computation feasibility, we omit industry fixed effects from our selection and outcome models.

performance by 3.2% (2.2%) compared to the estimated performance of firms with similar covariates that did not purchase a large amount of NAS (p<0.01). Among firms purchasing a large amount of (abnormal) NAS, we find NAS decreases risk by 1.4% (1.1%) compared to the estimated risk of firms with similar covariates that did not purchase a large amount of NAS (p<0.01). Thus we interpret the collective evidence from our selection analysis consistent with our main analysis not being driven by endogeneity in the decision to jointly purchase NAS from the auditor.

Our final strategy is to estimate Equation (1) in a first difference specification. This achieves two objectives. First, while prior literature that examines NAS has generally employed a levels design (Ashbaugh et al., 2003; Chung and Kallapur, 2003; Schmidt, 2012), recent literature finds that the stickiness of NAS provision by the auditor has important implications with respect to audit production (Paterson and Valencia, 2011). Second, first-differences specifications alleviate concerns about potentially correlated omitted variables (Wooldridge, 2010, p. 317). In untabulated analysis, we modify Equations (1) and (3) such that each variable is the change from year t-1 to year t. We find that changes in *TOTNAS* or *ε_TOTNAS* continue to be positively related to changes in future operating performance and negatively related to changes in future operating risk (p<0.05).

Using three different research designs to address endogeneity, we continue to find that NAS is positively related to subsequent operating performance and negatively related to subsequent operating risk. We fail to find evidence that endogeneity is a concern in our research design.

5.2 Subsequent audit quality

While our results suggest that NAS has a positive impact on future performance, a concern may arise that those improvements may simply be the result of earnings management, which might be exacerbated by a loss of auditor independence arising from auditor-provided NAS. That is, if the provision of NAS impairs independence, then the auditor may be more willing to allow the client to record positive accruals which would appear to be superior future performance (Ashbaugh et al., 2003; DeAngelo, 1981; Simunic, 1984). Whether NAS may reduce audit quality is a contentious issue among researchers and regulators. There is mixed evidence in the prior literature as studies have documented a positive relation between NAS and audit quality (Kinney et al., 2004; Paterson and Valencia, 2011; Bell et al., 2015), a negative relation (Frankel et al., 2002; Ferguson et al., 2004), or no relation (Ashbaugh et al., 2003; Chung and Kallapur, 2003; DeFond et al., 2002).

Accordingly, we consider whether NAS that are related positively to future operating performance impair auditor independence and test for evidence of earnings management in subsequent periods. To do so, we estimate the following OLS model from Ashbaugh et al., (2003):

$$DACC_{t+1} = \alpha_0 + \alpha_1 NAS_t + \alpha_2 IMPPERF_t + \alpha_3 IMP*NAS_t + \alpha_4 SIZE_t + \alpha_5 BIGN_t + \alpha_6 CFO_t + \alpha_7 ABSCFO_t + \alpha_8 ACC_t + \alpha_9 LEV_t + \alpha_{10} LIT_t + \alpha_{11} MTB_t + \alpha_{12} LOSS_t + \alpha_{13} FIN_t + \alpha_{14} M\&A_t + \alpha_{15} CASH_t + \alpha_{16} NWC_t + \alpha_{17} SALESGROW_t + \alpha_{18} RNOA_t + \alpha_{19} AUD\_FEES_t + Year\ fixed\ effects + Industry\ fixed\ effects + e \quad (5)$$

We use future discretionary accruals (Jones, 1991; Kothari et al., 2005), *DACC*, as our proxy for our dependent variable measuring earnings management.[26] We include our measures of NAS,

[26] We calculate discretionary accruals as the residual from a cross-sectional, performance-adjusted modified Jones (1991) model estimated cross-sectionally by industry-year (Dechow et al., 1995; DeFond and Jiambalvo, 1994; McGuire et al., 2012).

TOTNAS or *ε_TOTNAS* respectively, as well as an indicator variable, *IMPPERF* equaling one when a firm's subsequent performance as measured by $RNOA_{t+1}$ is in the top quintile for its given industry and year, and zero otherwise. Our variable of interest is the interaction of *IMPPERF* and *NAS*. If future operating performance is driven by earnings management, we would expect a positive coefficient for *IMP*NAS* (α_3>0).

We include several controls which we identify from prior literature on NAS and earnings management (Ashbaugh et al., 2003; Chung and Kallapur, 2003; Frankel et al., 2002). We control for cash flow from operations using signed operating cash flows, *CFO*, as well as its absolute value, *ABSCFO*. Given that accruals reverse over time we include the lagged signed current accruals, *ACC*. Our control for client riskiness is *LIT* which takes a value of one if the firm operates in a litigious industry as defined by Ashbaugh et al., (2003), zero otherwise. We control for a firm's growth prospects by including the market-to-book ratio, *MTB*, and for its financial health with *LOSS*, an indicator variable taking a value of one if the firm experiences a net loss. We also incorporate measures of new financing activity, *FIN*, as well as engaging in mergers and acquisitions, *M&A*, consistent with Chung and Kallapur, (2003). All other control variables are as defined previously. We cluster standard errors by firm and include year and industry fixed effects (two digit SIC) (Petersen, 2009). We present our results concerning discretionary accruals in Table 11.

<<<<< Insert Table 11 about here >>>>>

The dependent variable for all four columns is signed discretionary accruals.[27] We find negative and significant coefficients for *TOTNAS* (-0.072, p<0.01) and *ε_TOTNAS* (-0.072, p<0.01) as reported in Columns (1) and (3), respectively. This is inconsistent with NAS

[27] We also specify a tobit regression and change our dependent variable to income increasing accruals in untabulated additional analysis. Our inferences remain unchanged.

compromising audit quality. Moreover, we find that the interactions between *IMPPERF* and *TOTNAS* or *ε_TOTNAS* in Columns (2) and (4) are insignificant ($p > 0.10$). This is inconsistent with NAS compromising audit quality among firms with subsequent improvements in operating performance. Overall, we fail to find evidence that firms that purchase NAS engage in earnings management to increase operating performance, in fact, we find more conservative financial reporting among firms that purchase NAS.[28]

Our tests of audit quality using discretionary accruals are subject to limitations as noted in prior audit archival research (DeFond and Zhang, 2014; Knechel et al., 2013; Schelleman and Knechel, 2010).[29] DeFond and Zhang (2014) suggest that audit quality research should use multiple measures that capture different degrees of audit quality from within-GAAP (discretionary accruals) to serious departures from GAAP (financial restatements). As a result, we also use incidences of income-decreasing financial restatements, *RESTATE*, as a proxy for audit quality. Specifically, we estimate a logistic regression using the same independent variables as Equation (5) where the dependent variable equals one for firm-years experiencing an income-decreasing restatement and zero otherwise. In untabulated additional analysis, we find that the coefficients on *TOTNAS* (0.599, $p>0.10$) and *ε_TOTNAS* (0.422, $p>0.10$) are insignificant. Further, the coefficients for our interaction terms $IMP*NAS_t$ are also insignificant ($p>0.10$). Thus we fail to find any evidence that firms that purchase NAS from their auditor and have the highest improvements in operating performance experience a reduction in audit quality.

[28] One possibility is that the auditor sees NAS as a risk factor in their audit planning which might necessitate extra audit effort, potentially resulting in a higher level of audit quality (Bell et al., 2015). There is also the possibility that the firm "cookie jars" reserves in year t. For this to be the case, however, the negative discretionary accruals of year t would need to reverse as positive discretionary accruals in year t+1 or later. Our subsequent period tests address this scenario and provide no evidence in support of it. In untabulated analysis, we find that current period discretionary accruals are negatively and significantly related to NAS among all firms and that this relation does not vary with improvements in operating performance.

[29] Discretionary accruals suffer from measurement error as auditors are likely to have carefully scrutinized abnormally high or low levels of accruals during the course of the audit (Schelleman and Knechel, 2010).

5.3 Analysis by type of NAS

Our two hypotheses make no distinction between different *types* of NAS. Initial theory proposed in the auditing literature treated NAS as essentially homogenous (Simunic, 1984). However, recent literature examines the relation between specific types of NAS and audit production as well as financial reporting quality. DeFond and Zhang (2014) note that the evidence suggests that not all NAS have the same relation with various measures of audit quality. In particular, the evidence is generally consistent with tax-related NAS yielding positive benefits in the form of a lower likelihood of future financial restatements (Kinney et al., 2004; Paterson and Valencia, 2011), greater likelihood of issuing a going-concern opinion for financially distressed clients (Robinson, 2008), higher quality internal controls (De Simone et al., 2015), more accurate tax accrual estimates (Gleason and Mills, 2011), and greater tax avoidance (Omer et al., 2006). There is also evidence that audit-related fees are not perceived by investors as impairing auditor independence (Mishra et al., 2005). Conversely, there is some evidence that NAS that is classified in the other category can have a negative influence on financial reporting quality (Kinney et al., 2004; Paterson and Valencia, 2011). Taken as a whole, the empirical evidence implies that the types of NAS are unlikely to have the same relation with future operating performance and risk.

Such findings are likely to influence our analysis as well. For example, audit-related services could improve a firm's risk management processes so we might expect a positive (negative) relation between audit-related services and future operating performance (risk). On the other hand, such services may simply improve audit efficiency or yield a higher level of assurance on the financial statements without necessarily having a relation to operating performance (risk). Similarly, tax services could be positively (negatively) related to future

operating performance (risk) if they pertain to tax planning which reduces the likelihood of negative unintended consequences from expansion into a new tax jurisdiction. However, tax services focused solely on tax compliance may have limited future benefit for a client. While we expect that there will be differences between the different types of NAS (i.e. audit-related, tax and other), we do not have *a priori* expectations as to the effect of different types of NAS on operating performance and future risk. Thus, we conduct exploratory analysis to address this open empirical question.

We report the results of our tests of the relation between disaggregated NAS and future operating performance in Columns (3) through (4) of Table 3. We re-estimate Equation (1) with one modification where *NAS* is split into other fees (*OTH*), audit-related fees (*AR*), and tax fees (*TX*). All variables are defined in Appendix A. Disaggregating *NAS* into the three categories reveals that only tax services are positively related to subsequent operating performance (Column (3), 0.478, $p < 0.01$; Column (4), 0.527, $p < 0.01$). Finding that tax fees primarily benefit firms' operational performance is consistent with prior findings that tax fees are the primary source of knowledge spillover across firms. Audit-related and other types of NAS are not related to future firm performance ($p>0.10$).[30]

We report the results of our test of how disaggregated NAS are related to operating risk in Columns (3) and (4) of Table 4. When we disaggregate NAS into the three types of services we find evidence that other (Column (3), -0.465, $p < 0.01$; Column (4), -0.528, $p<0.05$) and audit-related (Column (3), -0.145, $p < 0.10$; Column (4), -0.176, $p < 0.05$) services are both negatively related to future operating risk. We fail to find any evidence of a relation between tax

[30] We acknowledge that the frequency of non-zero other fees is significantly lower than for audit-related or tax fees as evidenced by the median amount of other fees being $0 in our sample. We cannot rule out the alternative explanation that the failure to find an association for other fees is driven by this lack of variation.

services and future operating risk (p>0.10). Taken together, the evidence is consistent with different types of NAS having different relations with a client's future operating performance and risk.

6. Conclusion

Regulators, investors, and corporate boards must evaluate the costs and benefits of the joint provision of auditing and NAS as part of the role that each plays in the capital market. Prior academic research into NAS has considered the potential trade-off between economic bonding reducing audit quality via independence impairment (cost) and knowledge spillovers enhancing audit quality or efficiency (benefit). We expand the prior literature's exploration of the costs and benefits of NAS by considering two potential economic benefits accruing to the client firm, namely improvements in operating performance and risk management.

In general, we find that auditor-provided NAS are positively related to subsequent operating performance and reductions in risk. We provide evidence that firms with high preexisting levels of operating risk benefit the most from the purchase of NAS. Additionally, we find that NAS purchased by firms that have fewer resources available (i.e. smaller firms, firms with a human capital shortfall, or firms facing greater organizational resource pressure) are positively associated with future performance. We fail to find evidence of NAS compromising audit quality, suggesting the joint provision of NAS and audit services do not appear to systemically impair audit quality

In spite of extensive sensitivity testing and supplemental analyses, our paper is still subject to limitations. First, our analysis of operating performance does not preclude NAS impairing independence in appearance. If shareholders and debt-holders believe NAS compromises audit quality, they may increase the financing costs of firms that purchase NAS. Therefore, overall performance, net of financing costs, may not increase to the same extent as

operating performance. Second, we are only able to observe services purchased from auditors as part of a bundle. We are therefore unable to comment on the economic benefits of services purchased from other professional consulting firms. Lastly, we use common empirical proxies, such as discretionary accruals, to measure the constructs we are interested in studying and to the extent that these proxies are measured with error this may introduce bias into our analysis.

Overall, our study finds that NAS provide economic benefits to client firms. Our results may be of interest to several stakeholders. Regulators that are currently weighing whether or not to further restrict the bundling of NAS by audit firms should consider whether such restrictions could have unintended, negative consequences for client firms. Those charged with firm governance will be interested in our results that suggest that certain types of NAS can improve firm operations and lower risk without sacrificing financial reporting quality. Lastly, academics interested in studying the relation between auditing and NAS will be interested in our study as it underscores the importance of more broadly considering the potential costs and benefits to the client firm of the joint provision of audit and NAS in future research.

Appendix A
Variable definitions

Dependent Variables

$RNOA_{t+1}$	Operating income before interest (oiadp) in year t+1 divided by net operating assets (*NOA*) at t. *NOA* is defined as operating assets (*OA*) less operating liabilities (*OL*). *OA* is defined as total assets (at) short-term investments (ivao). *OL* is defined as total assets (at) less the sum of long- and short-term portions of debt (dlc+dltt), book value of total common (ceq) and preferred (pstk) equity, and minority interest (mib).
$STDRNOA_{t+k}$	The standard deviation of *RNOA* over the period from t+1 through t+5.

Independent Variables

$TOTNAS_t$	The total non-audit fees paid to the auditor for non-audit services [non_audit_fees] in year t scaled by the absolute value of operating income before interest (oiadp) in year t.
ε_TOTNAS_t	The residual from a regression of $TOTNAS_t$ on all determinants included in Equation (1).
OTH_FEES_t	The total fees paid to the auditor for other non-audit services [other_fees] in year t scaled by the absolute value of the quantity operating income before interest (oiadp) in year t.
$\varepsilon\_OTH\_FEES_t$	The residual from a regression of OTH_FEES_t on all determinants included in Equation (1).
AR_FEES_t	The total fees paid to the auditor for audit-related services [audit_related_fees] in year t scaled by the absolute value of the quantity operating income before interest (oiadp) in year t.
$\varepsilon\_AR\_FEES_t$	The residual from a regression of AR_FEES_t on all determinants included in Equation (1).
TX_FEES_t	The total fees paid to the auditor for tax services [tax_fees] in year t scaled by the absolute value of the quantity operating income before interest (oiadp) in year t.
$\varepsilon\_TX\_FEES_t$	The residual from a regression of TX_FEES_t on all determinants included in Equation (1).
$CASH_t$	The absolute value of total cash and cash equivalents (che) scaled by total assets (at) less cash and cash equivalents (che)
NWC_t	The firm's net working capital (wcap), excluding cash and cash equivalents (che), scaled by the quantity total assets (at) less cash and cash equivalents (che) at time t.
$SALESGROW_t$	Net sales (sale) at time t less net sales at t-1, scaled by net sales at t-1.
LEV_t	Total debt (dltt + dlc) divided by the quantity total assets (at) less cash and cash equivalents (che) for year t.
$SIZE_t$	The natural logarithm of total assets (at).
$RNOA_t$	Operating income before interest (oiadp) in year t divided by net operating assets (*NOA*) at t-1.
AUD_FEES_t	The natural logarithm of total audit fees [audit_fees] in year t.
$STDROA_t$	The standard deviation of *RNOA* for the period from t-5 through t-1.
$HIGH\_RISK_t$	Indicator variable taking a value of 1 when a firm is in the top quintile of *STDROA* for a given industry in year t, 0 otherwise.
$SMALL_t$	Indicator variable taking a value of 1 when a firm is in the bottom quintile of *SIZE* for a given industry in year t, 0 otherwise.
EMP_t	The residual from a regression, estimated by industry-year, of the percentage change in employees (emp) on the percentage change in sales (sale) at time t.
$FOREIGN_t$	Indicator variable taking a value of 1 when a firm is the top quintile of foreign growth for a given industry in year t, 0 otherwise. Growth is measured using percentage of foreign sales to total sales from Compustat's Segment file.

Two-Stage Selection Model Variables

$TENURE_t$	The natural log of 1 plus the numbers of years that firm i has engaged auditor j in year t.

$BUSY_t$ Indicator variable taking a value of 1 if the client's year-end (fyr) is 12/31 in year t, 0 otherwise.

$AFMSAGROW_t$ The change in total audit fees [audit_fees] for all auditors in a given MSA from year t-1 to year t.

$NFMSAGROW_t$ The change in total nonaudit fees [non_audit_fees] paid by audit clients for all auditors in a given MSA from year t-1 to year t.

Earnings Management Variables

$DACC_{t+k}$ Discretionary accruals computed as the residual from a cross-sectional, performance-adjusted modified Jones (1991) model estimated by industry-year.

$IMPPERF_{t+1}$ Indicator variable taking a value of 1 if the firm's subsequent performance measured as $\Delta RNOA_{t+1}$ is in the top quintile for its given year, 0 otherwise.

$BIGN_t$ Indicator variable taking a value of 1 if the firm engages an auditor identified as one of the Big 4 in year t, 0 otherwise.

CFO_t Cash from operations (oancf) scaled by average total assets.

$ABSCFO_t$ The absolute value of cash from operations (*CFO*).

ACC_t Total accruals measured as net income (ib) less cash from operations (oancf) plus depreciation (dp) scaled by average total assets.

LIT_t Dichotomous variable taking a value of 1 if the firm operates in a high litigation risk industry as identified by Frances et al. (1994), 0 otherwise.

MTB_t Market-to-book ratio measured as the market value of equity (prcc_f * csho) divided by book value of equity (at – lt).

$LOSS_t$ Dichotomous variable taking a value of 1 if the firm reported a net loss (ib < 0), 0 otherwise.

FIN_t Dichotomous variable taking a value of 1 if the firm obtained economically significant financing in year t (either SSTK or DLTIS being greater than $10 million), 0 otherwise.

$M\&A_t$ Dichotomous variable taking a value of 1 if the firm engaged in an acquisition in year t (sale_fn = 'AA'), 0 otherwise.

$RESTATE_t$ Dichotomous variable taking a value of 1 if a firm has an income-decreasing restatement [res_adverse=1], 0 otherwise.

Note: Compustat (Audit Analytics) data items are indicated in parentheses (brackets).

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Table 1
Descriptive statistics

Panel A: Dependent variables

Variables	*N*	MEAN	STD. DEV.	Q1	MEDIAN	Q3
$RNOA_{t+1}$	36,856	-0.011	0.835	-0.033	0.086	0.170
$STDRNOA_{t+k}$	31,064	0.129	0.325	0.025	0.055	0.120
$DACC_{t+k}$	30,850	-0.016	0.191	-0.080	-0.015	0.056

Panel B: Independent Variables

Variables	*N*	MEAN	STD. DEV.	Q1	MEDIAN	Q3
$NON\_AUDIT\_FEES_t$	36,856	497,845	1,714,207	16,780	88,000	344,755
$AUDIT\_FEES_t$	36,856	1,700,105	3,951,295	228,000	637,228	1,559,420
$AUDIT\_RELATED\_FEES_t$	36,856	193,336	920,364	0	14,500	100,000
TAX_FEES_t	36,856	257,526	880,661	0	30,665	162,987
$OTHER\_FEES_t$	36,856	46,063	364,659	0	0	2,000
$CASH_t$	36,856	0.790	2.775	0.046	0.160	0.509
NWC_t	36,856	-0.030	0.881	-0.081	0.045	0.195
$SALESGROW_t$	36,856	0.251	0.950	-0.022	0.093	0.258
LEV_t	36,856	0.292	0.646	0.008	0.180	0.373
$SIZE_t$	36,856	5.720	2.205	4.119	5.697	7.264
$RNOA_t$	36,856	-0.022	0.577	-0.037	0.085	0.169
$STDRNOA_t$	31,064	0.000	0.042	-0.014	-0.006	0.000
EMP_t	29,561	0.017	0.305	-0.095	-0.022	0.071
$FOREIGN_t$	18,852	0.422	0.286	0.176	0.389	0.635
$TENURE_t$	36,825	1.807	1.046	1.099	1.792	2.485
$BUSY_t$	36,825	0.681	0.466	0	1	1
$AFMSAGROW_t$	36,825	0.125	0.252	-0.037	0.043	0.211
$NFMSAGROW_t$	36,825	-0.038	0.191	-0.146	-0.056	0.074
$BIGN_t$	30,850	0.708	0.455	0.000	1.000	1.000
CFO_t	30,850	0.030	0.201	-0.002	0.074	0.132
$ABSCFO_t$	30,850	0.142	0.150	0.058	0.104	0.169
ACC_t	30,850	-0.032	0.135	-0.055	-0.013	0.022
LIT_t	30,850	0.406	0.491	0.000	0.000	1.000
MTB_t	30,850	3.109	4.850	1.223	2.077	3.636
$LOSS_t$	30,850	0.361	0.480	0.000	0.000	1.000
FIN_t	30,850	0.491	0.500	0.000	0.000	1.000
$M\&A_t$	30,850	0.160	0.367	0.000	0.000	0.000

This table presents the summary statistics for the variables used in our study. $RNOA_{t+1}$ is operating income before interest (oiadp) divided by net operating assets (*NOA*) at time t. $STDRNOA_{t+k}$ is the standard deviation of *RNOA* for the period from t+1 through t+5. $DACC_{t+k}$ is discretionary accruals computed as the residual from a cross-sectional, performance-adjusted modified Jones (1991) model estimated by industry-year. $NON\_AUDIT\_FEES_t$ is the total non-audit fees [non_audit_fees] paid to the auditor for non-audit services in year t. $AUDIT\_FEES_t$ is the total audit fees [audit_fees] paid to the auditor for the audit in year t. $AUDIT\_RELATED\_FEES_t$ is the total audit-related fees [audit_related_fees] paid to the auditor for audit-related services in year t. TAX_FEES_t is total tax fees [tax_fees] paid to the auditor for tax services in year t. $OTHER\_FEES_t$ is total other fees [other_fees] paid to the auditor for other services in year t. $CASH_t$ is the

absolute value of total cash and cash equivalents (che), scaled by the quantity total assets (at) less cash and cash equivalents (che). NWC_t is the firm's net working capital (wcap), excluding cash and cash equivalents (che), scaled by the quantity total assets (at) less cash and cash equivalents (che) at time t.. $SALESGROW_t$ is net sales (sale) at time t less net sales at t-1, scaled by net sales at t-1. LEV_t is total debt (dltt + dlc) divided by the quantity total assets (at) less cash and cash equivalents (che) for year t. $SIZE_t$ is the natural logarithm of total assets (at). $RNOA_t$ is operating income before interest (oiadp) in year t divided by net operating assets (*NOA*) at t-1. $STDRNOA_t$ is the standard deviation of *RNOA* for the period from t-1 through t-5. EMP_t is the residual of a regression, run by industry-year, of the percentage change in employees (emp) of percentage sales growth (sale) for year t. $FOREIGN_t$ is an indicator variable taking a value of 1 when a firm is in the top quintile of foreign growth for a given industry in year t, 0 otherwise. $TENURE_t$ is the natural log of 1 plus the numbers of years that firm i has engaged auditor j in year t. $BUSY_t$ is an indicator variable taking a value of 1 if the client's year-end (fyr) is 12/31 in year t, 0 otherwise. $AFMSAGROW_t$ is the change in total audit fees [audit_fees] for all auditors in a given MSA j from year t-1 to year t. $NFMSAGROW_t$ is the change in total nonaudit fees [non_audit_fees] paid by audit clients for all auditors in a given MSA j from year t-1 to year t. $BIGN_t$ is an indicator variable taking a value of 1 if the firm engages an auditor identified as one of the Big 4 in year t, 0 otherwise. CFO_t is cash from operations (oancf) scaled by average total assets. $ABSCFO_t$ is the absolute value of cash from operations (*CFO*). ACC_t is total accruals measured as net income (ib) less cash from operations (oancf) plus depreciation (dp) scaled by average total assets. LIT_t is an indicator variable taking a value of 1 if the firm operates in a high litigation risk industry as identified by Frances et al. (1994), 0 otherwise. MTB_t is a firm's market-to-book ratio measured as the market value of equity (prcc_f * csho) divided by book value of equity (at – lt). $LOSS_t$ is an indicator variable taking a value of 1 if the firm reported a net loss (ib < 0), 0 otherwise. FIN_t is an indicator variable taking a value of 1 if the firm obtained new financing year t (fincf>0), 0 otherwise. $M\&A_t$ is an indicator variable taking a value of 1 if the firm engaged in an acquisition in year t (sale_fn = 'AA'), 0 otherwise.
Continuous variables are winsorized at the 1st and 99th percentile.

Table 2
Correlations

	Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
(1)	$RNOA_{t+1}$		**-0.088**	-0.004	0.008	**-0.136**	**-0.050**	**0.200**	**0.075**	**-0.054**	**0.288**	**0.141**	**0.075**
(2)	$STDRNOA_{t+k}$	**-0.144**		-0.001	**-0.019**	**0.092**	**0.132**	**-0.251**	**-0.164**	**0.080**	**-0.418**	**-0.186**	**-0.109**
(3)	$TOTNAS_t$	**-0.120**	**0.011**		**0.960**	**-0.013**	-0.007	**-0.153**	0.007	**-0.018**	0.009	**-0.107**	**-0.035**
(4)	ε_TOTNAS_t	0.000	**-0.105**	**0.459**		-0.001	0.003	**-0.024**	-0.006	0.003	**0.025**	0.008	**0.017**
(5)	$CASH_t$	**-0.204**	**0.248**	**0.032**	**-0.081**		**0.054**	**-0.184**	**-0.548**	**0.192**	**-0.173**	**-0.146**	**-0.029**
(6)	$SALESGROW_t$	**0.126**	**0.090**	**-0.041**	0.004	**0.026**		**-0.091**	**-0.045**	**0.022**	**-0.075**	**-0.102**	**-0.109**
(7)	$SIZE_t$	**0.397**	**-0.428**	**-0.173**	**0.218**	**-0.292**	**0.024**		**0.095**	-0.009	**0.346**	**0.857**	**0.372**
(8)	NWC_t	**0.173**	**-0.118**	**0.074**	**-0.020**	**-0.181**	**-0.018**	-0.007		**-0.477**	**0.210**	**0.066**	**0.032**
(9)	LEV_t	**0.021**	**-0.164**	**-0.042**	**0.111**	**-0.420**	**-0.031**	**0.260**	**-0.192**		**-0.130**	-0.004	0.002
(10)	$RNOA_t$	**0.769**	**-0.182**	**-0.158**	**-0.011**	**-0.198**	**0.194**	**0.432**	**0.229**	**-0.026**		**0.234**	**0.123**
(11)	AUD_FEES_t	**0.305**	**-0.338**	**-0.086**	**0.232**	**-0.164**	**-0.016**	**0.851**	**-0.012**	**0.192**	**0.327**		**0.388**
(12)	$TENURE_t$	**0.178**	**-0.185**	**0.028**	**0.133**	**-0.047**	**-0.082**	**0.359**	**0.061**	**0.013**	**0.186**	**0.374**	
(13)	$BUSY_t$	**-0.037**	**0.027**	**-0.061**	**0.027**	0.006	**0.079**	**0.063**	**-0.144**	**0.088**	**-0.040**	**0.081**	**-0.034**
(14)	$AFMSAGROW_t$	-0.006	**0.057**	**0.136**	**-0.113**	-0.003	**0.087**	**-0.060**	-0.009	**0.012**	**-0.017**	**-0.128**	**-0.065**
(15)	$NFMSAGROW_t$	-0.008	**-0.045**	**-0.047**	**0.103**	**-0.013**	**-0.011**	**0.048**	-0.003	0.007	0.008	**0.060**	**0.018**
(16)	$STDRNOA_t$	**-0.156**	**0.479**	**-0.056**	**-0.089**	0.301	**0.000**	**-0.403**	**-0.140**	**-0.191**	**-0.183**	**-0.260**	**-0.132**
(17)	EMP_t	**0.088**	**0.014**	**-0.019**	0.008	**0.029**	**0.251**	**0.053**	0.007	**-0.064**	**0.126**	**0.020**	**-0.013**
(18)	$FOREIGN_t$	**-0.035**	**0.036**	0.012	**0.027**	**0.169**	0.012	**0.118**	**-0.052**	**-0.026**	**-0.034**	**0.147**	-0.001
(19)	AR_FEES_t	**0.012**	**-0.085**	**0.543**	**0.310**	**-0.067**	0.000	**0.135**	**0.017**	**0.058**	-0.006	**0.139**	**0.082**
(20)	$\varepsilon\_AR\_FEES_t$	0.002	**-0.087**	**0.259**	**0.673**	**-0.086**	-0.001	**0.218**	**-0.026**	**0.131**	-0.001	**0.195**	**0.096**
(21)	TX_FEES_t	**-0.025**	**-0.024**	**0.743**	**0.359**	**0.029**	**-0.047**	**-0.044**	**0.078**	**-0.037**	**-0.048**	**0.029**	**0.129**
(22)	$\varepsilon\_TX\_FEES_t$	**0.038**	**-0.105**	**0.372**	**0.799**	**-0.080**	**0.027**	**0.230**	**-0.025**	**0.093**	**0.035**	**0.248**	**0.163**
(23)	OTH_FEES_t	**0.028**	**-0.036**	**0.217**	**0.129**	0.003	0.002	**0.090**	-0.005	**0.016**	**0.025**	**0.084**	**0.070**
(24)	$\varepsilon\_OTH\_FEES_t$	**0.087**	**-0.134**	**0.012**	**0.422**	**-0.073**	0.003	**0.330**	**-0.031**	**0.106**	**0.110**	**0.300**	**0.142**

Table 2 (cont.)
Correlations

	Variable	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)
(1)	$RNOA_{t+1}$	**-0.022**	-0.004	-0.001	**-0.130**	**0.024**	**-0.021**	-0.003	0.002	0.001	**0.013**	-0.008	0.002
(2)	$STDRNOA_{t+k}$	**0.039**	**0.028**	**-0.017**	**0.484**	0.007	0.007	-0.005	**-0.015**	-0.002	**-0.017**	0.002	-0.015
(3)	$TOTNAS_t$	**-0.028**	**0.072**	**-0.038**	-0.003	0.011	0.002	**0.701**	**0.665**	**0.813**	**0.769**	**0.399**	**0.351**
(4)	ε_TOTNAS_t	-0.009	-0.005	0.005	**-0.018**	**0.013**	0.010	**0.673**	**0.693**	**0.773**	**0.804**	**0.370**	**0.368**
(5)	$CASH_t$	**0.057**	0.004	-0.001	**0.106**	**-0.027**	**0.037**	**-0.016**	-0.001	-0.008	-0.001	**-0.013**	-0.001
(6)	$SALESGROW_t$	**0.062**	**0.031**	0.001	**0.071**	**0.024**	**0.028**	0.006	0.003	**-0.027**	0.000	0.001	0.005
(7)	$SIZE_t$	**0.067**	**-0.080**	**0.038**	**-0.281**	0.008	**0.098**	**-0.099**	**-0.017**	**-0.152**	**-0.024**	**-0.115**	**-0.013**
(8)	NWC_t	**-0.074**	0.005	-0.006	**-0.174**	**0.018**	**-0.038**	0.009	-0.006	0.008	-0.003	0.009	-0.004
(9)	LEV_t	**0.068**	0.005	0.007	**0.087**	**-0.023**	-0.003	**-0.022**	0.004	**-0.016**	0.001	**-0.012**	0.003
(10)	$RNOA_t$	**-0.037**	-0.004	-0.003	**-0.522**	**0.052**	**-0.027**	0.004	**0.011**	**0.013**	**0.028**	-0.002	**0.012**
(11)	AUD_FEES_t	**0.082**	**-0.135**	**0.048**	**-0.178**	**-0.025**	**0.110**	**-0.063**	0.006	**-0.098**	**0.017**	**-0.113**	**-0.012**
(12)	$TENURE_t$	**-0.030**	**-0.054**	**0.018**	**-0.100**	**-0.060**	-0.010	**-0.050**	**-0.012**	-0.003	**0.043**	**-0.040**	0.003
(13)	$BUSY_t$		**-0.020**	**0.011**	**0.012**	**0.027**	**0.052**	-0.002	**0.011**	**-0.038**	**-0.016**	**-0.041**	**-0.028**
(14)	$AFMSAGROW_t$	**-0.013**		**-0.064**	**-0.043**	0.008	**-0.038**	**0.046**	-0.002	**0.083**	-0.001	**0.064**	-0.008
(15)	$NFMSAGROW_t$	**0.013**	**-0.075**		0.004	0.006	0.013	**-0.013**	0.010	**-0.040**	0.003	**-0.026**	0.009
(16)	$STDRNOA_t$	**0.016**	**-0.116**	**0.017**		**-0.070**	0.015	-0.006	**-0.015**	-0.002	-0.016	-0.001	**-0.012**
(17)	EMP_t	**0.024**	**-0.035**	**0.020**	**-0.060**		0.005	**0.046**	**0.041**	**-0.019**	**-0.012**	**0.013**	**0.014**
(18)	$FOREIGN_t$	**0.048**	-0.011	**0.029**	**0.038**	-0.005		0.002	0.005	0.002	0.009	0.010	**0.021**
(19)	AR_FEES_t	-0.008	**0.093**	**-0.033**	**-0.120**	0.009	-0.011		**0.966**	**0.401**	**0.372**	**0.126**	**0.100**
(20)	$\varepsilon\_AR\_FEES_t$	**0.044**	**-0.076**	**0.074**	**-0.076**	**0.013**	0.003	**0.555**		**0.373**	**0.384**	**0.105**	**0.102**
(21)	TX_FEES_t	**-0.047**	**0.128**	**-0.042**	**-0.066**	**-0.025**	**0.045**	**0.234**	**0.071**		**0.956**	**0.201**	**0.155**
(22)	$\varepsilon\_TX\_FEES_t$	**0.030**	**-0.113**	**0.089**	**-0.077**	0.006	**0.028**	**0.127**	**0.380**	**0.543**		**0.165**	**0.161**
(23)	OTH_FEES_t	**-0.013**	**0.045**	-0.006	**-0.049**	0.011	**0.063**	**0.019**	0.000	**0.073**	**0.033**		**0.961**
(24)	$\varepsilon\_OTH\_FEES_t$	**0.022**	**-0.186**	**0.106**	**-0.072**	0.007	**0.054**	**-0.034**	**0.233**	**-0.069**	**0.267**	**0.421**	

This table reports Pearson (Spearman) correlations above (below) the diagonal. All correlations significant at the 0.05 level are bolded. Continuous variables are winsorized at the 1st and 99th percentile. Unless otherwise specified, variables are measured in year t. See Table 1 for variable definitions.

Table 3
OLS Regression of Operating Performance on Non-audit Fees and Controls

NAS Proxy:	*TOTNAS*	*Residual*	*Component*	*Residual*
Dep Var:	$RNOA_{t+1}$	$RNOA_{t+1}$	$RNOA_{t+1}$	$RNOA_{t+1}$
	(1)	(2)	(3)	(4)
	Coefficient	Coefficient	Coefficient	Coefficient
Variables	t-statistic	t-statistic	t-statistic	t-statistic
NAS_t	0.131**	0.130**		
	(1.920)	(1.726)		
OTH_t			-0.140	-0.148
			(-0.253)	(-0.240)
AR_t			-0.032	-0.106
			(-0.133)	(-0.400)
TX_t			0.478***	0.527***
			(3.352)	(3.404)
$CASH_t$	-0.025***	-0.025***	-0.025***	-0.025***
	(-5.631)	(-5.641)	(-5.635)	(-5.645)
NWC_t	-0.048*	-0.048*	-0.048*	-0.048*
	(-1.908)	(-1.908)	(-1.907)	(-1.908)
$SALESGROW_t$	-0.013	-0.013	-0.012	-0.013
	(-1.544)	(-1.554)	(-1.515)	(-1.553)
LEV_t	-0.029	-0.029	-0.029	-0.029
	(-1.547)	(-1.549)	(-1.549)	(-1.549)
$SIZE_t$	0.064***	0.063***	0.064***	0.064***
	(11.890)	(11.941)	(11.918)	(11.968)
$RNOA_t$	0.322***	0.322***	0.321***	0.322***
	(10.241)	(10.246)	(10.226)	(10.233)
AUD_FEES_t	-0.043***	-0.042***	-0.043***	-0.043***
	(-6.085)	(-6.080)	(-6.168)	(-6.159)
Constant	0.239***	0.244***	0.241***	0.250***
	3.559	3.628	(3.585)	(3.706)
Year FE?	Yes	Yes	Yes	Yes
Industry FE?	Yes	Yes	Yes	Yes
Observations	36,856	36,856	36,856	36,856
Adj-R^2	0.106	0.106	0.106	0.106

This table presents ordinary least squares regressions of Equation (1). The dependent variable $RNOA_{t+1}$ is operating income before interest (oiadp) divided by net operating assets (*NOA*) at time t. *NAS* is defined as either: (i) *TOTNAS* in column (1) or (ii) *ε_TOTNAS* in column (2). *OTH* is defined as either: (i) *OTH_FEES* in column (3) or (ii) *ε_OTH_FEES* in column (4). *AR* is defined as either: (i) *AR_FEES* in column (3) or (ii) *ε_AR_FEES* in column (4). *TX* is defined as either: (i) *TX_FEES* in column (3) or (ii) *ε_TX_FEES* in column (4).We define all variables in Table 1 and Appendix A. Industry fixed-effects (not tabulated) are estimated using Fama French 48 industry definitions. All t-statistics are presented below the coefficients in parentheses. We estimate all test statistics with robust standard errors clustered by firm consistent with Petersen (2009). The symbols *, **, and *** denote statistical significance at the 0.10, 0.05, and 0.01 levels, respectively.

Table 4
OLS Regression of Operating Risk on Non-audit Fees and Controls

	NAS Proxy:	*TOTNAS*	*Residual*	*Component*	*Residual*
	Dep Var:	$STDRNOA_{t+k}$	$STDRNOA_{t+k}$	$STDRNOA_{t+k}$	$STDRNOA_{t+k}$
		(1)	(2)	(3)	(4)
		Coefficient	Coefficient	Coefficient	Coefficient
Variables		t-statistic	t-statistic	t-statistic	t-statistic
NAS_t		-0.092***	-0.101***		
		(-3.058)	(-3.143)		
OTH_t				-0.465***	-0.528**
				(-2.611)	(-2.389)
AR_t				-0.145*	-0.176**
				(-1.807)	(-2.167)
TX_t				-0.113	-0.097
				(-1.441)	(-1.169)
$CASH_t$		-0.005***	-0.005***	-0.005***	-0.005***
		(-3.873)	(-3.849)	(-3.883)	(-3.851)
NWC_t		-0.028**	-0.028**	-0.028**	-0.028**
		(-2.277)	(-2.273)	(-2.276)	(-2.274)
$SALESGROW_t$		0.026***	0.026***	0.026***	0.026***
		(4.513)	(4.520)	(4.507)	(4.521)
LEV_t		-0.003	-0.003	-0.003	-0.003
		(-0.450)	(-0.446)	(-0.453)	(-0.445)
$SIZE_t$		-0.016***	-0.016***	-0.016***	-0.016***
		(-4.993)	(-4.958)	(-5.022)	(-4.952)
$RNOA_t$		-0.108***	-0.108***	-0.108***	-0.108***
		(-3.480)	(-3.481)	(-3.475)	(-3.479)
AUD_FEES_t		0.006	0.006	0.006	0.006
		(1.553)	(1.555)	(1.569)	(1.553)
$STDRNOA_t$		0.387***	0.387***	0.386***	0.386***
		(6.452)	(6.455)	(6.447)	(6.451)
Constant		0.098***	0.094***	0.099***	0.094***
		(2.689)	(2.572)	(2.723)	(2.564)
Year FE?		Yes	Yes	Yes	Yes
Industry FE?		Yes	Yes	Yes	Yes
Observations		31,064	31,064	31,064	31,064
Adj-R^2		0.298	0.298	0.298	0.298

This table presents ordinary least squares regressions of Equation (3). The dependent variable $STDRNOA_{t+k}$ is the standard deviation of *RNOA* for the period from t-5 through t-1. *NAS* is defined as either: (i) *TOTNAS* in column (1) or (ii) *ε_TOTNAS* in column (2). *OTH* is defined as either: (i) *OTH_FEES* in column (3) or (ii) *ε_OTH_FEES* in column (4). *AR* is defined as either: (i) *AR_FEES* in column (3) or (ii) *ε_AR_FEES* in column (4). *TX* is defined as either: (i) *TX_FEES* in column (3) or (ii) *ε_TX_FEES* in column (4).We define all variables in Table 1 and Appendix A. Industry fixed-effects (not tabulated) are estimated using Fama French 48 industry definitions. All t-statistics are presented below the coefficients in parentheses. We estimate all test statistics with robust standard errors clustered by firm consistent with Petersen (2009). The symbols *, **, and *** denote statistical significance at the 0.10, 0.05, and 0.01 levels, respectively.

Table 5
OLS Regression of Operating Performance on Non-audit Fees and Controls by Size

	Small		Not Small	
NAS Proxy:	$TOTNAS_t$	ε_TOTNAS_t	$TOTNAS_t$	ε_TOTNAS_t
Dep Var:	$RNOA_{t+1}$	$RNOA_{t+1}$	$RNOA_{t+1}$	$RNOA_{t+1}$
	(1)	(2)	(3)	(4)
	Coefficient	Coefficient	Coefficient	Coefficient
Variables	t-statistic	t-statistic	t-statistic	t-statistic
$TOTNAS_t$	0.420**		-0.174	
	(2.054)		(-4.101)	
ε_TOTNAS_t		0.550***		-0.143
		(2.357)		(-3.121)
$CASH_t$	-0.025***	-0.025***	-0.025***	-0.025***
	(-3.188)	(-3.208)	(-4.801)	(-4.796)
NWC_t	-0.050	-0.050	-0.036	-0.036
	(-1.311)	(-1.309)	(-1.163)	(-1.165)
$SALESGROW_t$	-0.014	-0.014	-0.012	-0.011
	(-0.899)	(-0.924)	(-1.322)	(-1.313)
LEV_t	-0.020	-0.019	-0.030	-0.029
	(-0.459)	(-0.454)	(-1.574)	(-1.567)
$RNOA_t$	0.310***	0.309***	0.355***	0.355***
	(6.317)	(6.312)	(8.993)	(8.999)
AUD_FEES_t	-0.035	-0.036	0.027***	0.027***
	(-1.450)	(-1.488)	(7.962)	(8.097)
Constant	0.341	0.371	-0.263***	-0.273***
	(1.254)	(1.364)	(-5.905)	(-6.145)
Year FE?	Yes	Yes	Yes	Yes
Industry FE?	Yes	Yes	Yes	Yes
Observations	7,192	7,192	29,664	29,664
Adj-R^2	0.055	0.055	0.141	0.141

This table presents ordinary least squares regressions of Equation (1). The first two columns report results on the subsample of firms classified as being small where a firm is identified as small if it falls in the bottom quintile of *SIZE* at t for a given industry-year. Columns (3) and (4) estimate Equation (1) for the subsample of firms not classified as small. The dependent variable $RNOA_{t+1}$ is operating income before interest (oiadp) divided by net operating assets (*NOA*) at time t. We define all variables in Table 1 and Appendix A. Industry fixed-effects (not tabulated) are estimated using Fama French 48 industry definitions. All t-statistics are presented below the coefficients in parentheses. We estimate all test statistics with robust standard errors clustered by firm consistent with Petersen (2009). The symbols *, **, and *** denote statistical significance at the 0.10, 0.05, and 0.01 levels, respectively.

Table 6
OLS Regression of Operating Performance on Non-audit Fees and Controls by Labor Growth

	Low Labor Growth		Not Low Labor Growth	
NAS Proxy:	$TOTNAS_t$	ε_TOTNAS_t	$TOTNAS_t$	ε_TOTNAS_t
Dep Var:	$RNOA_{t+1}$	$RNOA_{t+1}$	$RNOA_{t+1}$	$RNOA_{t+1}$
	(1)	(2)	(3)	(4)
	Coefficient	Coefficient	Coefficient	Coefficient
Variables	t-statistic	t-statistic	t-statistic	t-statistic
$TOTNAS_t$	0.634***		0.049	
	(2.791)		(0.638)	
ε_TOTNAS_t		0.673***		0.045
		(2.658)		(0.532)
$CASH_t$	-0.024***	-0.024***	-0.027***	-0.027***
	(-3.145)	(-3.169)	(-5.123)	(-5.126)
NWC_t	-0.091*	-0.091*	-0.038**	-0.038**
	(-1.807)	(-1.817)	(-2.097)	(-2.096)
$SALESGROW_t$	-0.018	-0.019	0.002	0.002
	(-1.109)	(-1.136)	(0.109)	(-0.106)
LEV_t	-0.024	-0.024	-0.035	-0.035
	(-0.554)	(-0.553)	(-1.483)	(-1.483)
$SIZE_t$	0.141***	0.139***	0.052***	0.051***
	(8.491)	(8.429)	(7.716)	(7.766)
$RNOA_t$	0.208***	0.209***	0.349***	0.349***
	(3.656)	(3.670)	(7.175)	(7.174)
AUD_FEES_t	-0.134***	-0.134***	-0.032***	-0.032***
	(-5.865)	(-5.854)	(-3.480)	(-3.476)
Constant	0.934***	0.964***	0.183**	0.184**
	(4.207)	(4.361)	(2.141)	(2.154)
Year FE?	Yes	Yes	Yes	Yes
Industry FE?	Yes	Yes	Yes	Yes
Observations	5,758	5,758	23,803	23,803
Adj-R^2	0.091	0.091	0.107	0.107

This table presents ordinary least squares regressions of Equation (1). The first two columns report results on the subsample of firms classified as having low labor growth where a firm is classified as having low labor growth if the residual from an estimation of labor growth on sales growth measured consistent with Jung et al. (2014) falls into the bottom quintile for a given industry-year. Columns (3) and (4) estimate Equation (1) for the subsample of firms not classified as low labor growth. The dependent variable $RNOA_{t+1}$ is operating income before interest (oiadp) divided by net operating assets (*NOA*) at time t. We define all variables in Table 1 and Appendix A. Industry fixed-effects (not tabulated) are estimated using Fama French 48 industry definitions. All t-statistics are presented below the coefficients in parentheses. We estimate all test statistics with robust standard errors clustered by firm consistent with Petersen (2009). The symbols *, **, and *** denote statistical significance at the 0.10, 0.05, and 0.01 levels, respectively.

Table 7
OLS Regression of Operating Performance on Non-audit Fees and Controls by Foreign Growth

	High Foreign Growth		Not High Foreign Growth	
NAS Proxy:	$TOTNAS_t$	ε_TOTNAS_t	$TOTNAS_t$	ε_TOTNAS_t
Dep Var:	$RNOA_{t+1}$	$RNOA_{t+1}$	$RNOA_{t+1}$	$RNOA_{t+1}$
	(1)	(2)	(3)	(4)
	Coefficient	Coefficient	Coefficient	Coefficient
Variables	t-statistic	t-statistic	t-statistic	t-statistic
$TOTNAS_t$	0.233**		-0.109	
	(1.997)		(-0.953)	
ε_TOTNAS_t		0.130		-0.074
		(0.898)		(-0.582)
$CASH_t$	-0.011	-0.011	-0.025***	-0.025***
	(-1.104)	(-1.125)	(-3.526)	(-3.523)
NWC_t	-0.002	-0.002	-0.076**	-0.076**
	(-0.027)	(-0.026)	(-2.169)	(-2.170)
$SALESGROW_t$	-0.014	-0.015	-0.020	-0.019
	(-0.339)	(-0.344)	(-1.260)	(-1.256)
LEV_t	-0.081	-0.081	0.002	0.002
	(-1.363)	(-1.363)	(0.048)	(0.049)
$SIZE_t$	0.032*	0.031*	0.042***	0.043***
	(1.889)	(1.829)	(5.601)	(5.672)
$RNOA_t$	0.591***	0.592***	0.371***	0.371***
	(2.913)	(2.918)	(5.663)	(5.658)
AUD_FEES_t	-0.006	-0.005	-0.024**	-0.024**
	(-0.311)	(-0.265)	(-2.225)	(-2.236)
Constant	0.051	0.050	0.113	0.110
	(0.244)	(0.238)	(1.005)	(0.978)
Year FE?	Yes	Yes	Yes	Yes
Industry FE?	Yes	Yes	Yes	Yes
Observations	2,931	2,931	13,701	13,701
Adj-R^2	0.187	0.186	0.101	0.101

This table presents ordinary least squares regressions of Equation (1). The first two columns report results on the subsample of firms classified as having high foreign growth where a firm is classified as having high foreign growth if its change in foreign sales falls into the top quintile for a given industry-year. Columns (3) and (4) estimate Equation (1) for the subsample of firms not classified as having high foreign growth. The dependent variable $RNOA_{t+1}$ is operating income before interest (oiadp) divided by net operating assets (*NOA*) at time t. We define all variables in Table 1 and Appendix A. Industry fixed-effects (not tabulated) are estimated using Fama French 48 industry definitions. All t-statistics are presented below the coefficients in parentheses. We estimate all test statistics with robust standard errors clustered by firm consistent with Petersen (2009). The symbols *, **, and *** denote statistical significance at the 0.10, 0.05, and 0.01 levels, respectively.

Table 8
OLS Regression of Operating Performance on Non-audit Fees and Controls by Risk

	High Risk		Not High Risk	
NAS Proxy:	$TOTNAS_t$	ε_TOTNAS_t	$TOTNAS_t$	ε_TOTNAS_t
Dep Var:	$RNOA_{t+1}$	$RNOA_{t+1}$	$RNOA_{t+1}$	$RNOA_{t+1}$
	(1)	(2)	(3)	(4)
	Coefficient	Coefficient	Coefficient	Coefficient
Variables	t-statistic	t-statistic	t-statistic	t-statistic
$TOTNAS_t$	0.600***		-0.062	
	(2.648)		(-0.926)	
ε_TOTNAS_t		0.601***		-0.072
		(2.299)		(-0.996)
$CASH_t$	-0.021*	-0.021*	-0.017***	-0.017***
	(-1.838)	(-1.853)	(-4.886)	(-4.882)
NWC_t	-0.033	-0.033	-0.049***	-0.049***
	(-0.581)	(-0.576)	(-2.639)	(-2.636)
$SALESGROW_t$	0.012	0.011	-0.009	-0.009
	(0.632)	(0.601)	(-1.326)	(-1.323)
LEV_t	0.045	0.044	-0.043**	-0.043**
	(1.068)	(1.064)	(-2.102)	(-2.101)
$SIZE_t$	0.120***	0.118***	0.018***	0.018***
	(5.802)	(5.757)	(4.124)	(4.160)
$RNOA_t$	0.183***	0.184***	0.726***	0.725***
	(4.572)	(4.583)	(9.307)	(9.304)
AUD_FEES_t	-0.073**	-0.072**	-0.008*	-0.008*
	(-2.432)	(-2.421)	(-1.676)	(-1.670)
Constant	0.405	0.426	0.044	0.042
	(1.405)	(1.480)	(1.009)	(0.945)
Year FE?	Yes	Yes	Yes	Yes
Industry FE?	Yes	Yes	Yes	Yes
Observations	6,146	6,146	24,918	24,918
Adj-R^2	0.071	0.071	0.226	0.226

This table presents ordinary least squares regressions of Equation (1). The first two columns report results on the subsample of firms classified as having high risk where a high risk firm is identified as a firm falling in the top quintile of *STDRNOA* for the period from t-5 to t-1 by industry-year. Columns (3) and (4) estimate Equation (1) for the subsample of firms not classified as high risk. The dependent variable $RNOA_{t+1}$ is operating income before interest (oiadp) divided by net operating assets (*NOA*) at time t. We define all variables in Table 1 and Appendix A. Industry fixed-effects (not tabulated) are estimated using Fama French 48 industry definitions. All t-statistics are presented below the coefficients in parentheses. We estimate all test statistics with robust standard errors clustered by firm consistent with Petersen (2009). The symbols *, **, and *** denote statistical significance at the 0.10, 0.05, and 0.01 levels, respectively.

Table 9
Two-stage OLS Regression of Operating Performance on Non-audit Fees and Controls

	First-Stage Model		Second-Stage Performance	
Dep Var:	$TOTNAS_{t+1}$	ε_TOTNAS_{t+1}	$RNOA_{t+1}$	$RNOA_{t+1}$
	(1)	(2)	(3)	(4)
	Coefficient	Coefficient	Coefficient	Coefficient
Variables	t-statistic	t-statistic	t-statistic	t-statistic
$TENURE_t$	0.001***	0.001***		
	(3.250)	(3.191)		
$BUSY_t$	-0.001	-0.001		
	(-1.427)	(-1.398)		
$AFMSAGROW_t$	-0.003*	-0.004**		
	(-1.601)	(-2.080)		
$NFMSAGROW_t$	0.002	0.003**		
	(1.428)	(1.956)		
$TOTNAS_t$			7.041**	
			(1.933)	
ε_TOTNAS_t				6.575**
				(1.837)
$CASH_t$	-0.022***	-0.024***	-0.000***	-0.000***
	(-4.686)	(-5.481)	(-4.645)	(-1.804)
NWC_t	-0.044*	-0.044*	-0.001**	-0.001**
	(-1.704)	(-1.739)	(-2.090)	(-2.121)
$SALESGROW_t$	-0.010	-0.014*	-0.000	0.000
	(-1.138)	(-1.700)	(-1.325)	(1.243)
LEV_t	-0.028	-0.030	-0.000	0.000
	(-1.444)	(-1.570)	(-0.469)	(0.306)
$SIZE_t$	0.104***	0.084***	-0.006***	-0.003***
	(4.787)	(6.633)	(-19.132)	(-11.551)
$RNOA_t$	0.288***	0.298***	0.005***	0.004***
	(7.980)	(8.730)	(13.364)	(10.826)
AUD_FEES_t	-0.074***	-0.071***	0.005***	0.004***
	(-4.108)	(-4.166)	(9.831)	(9.979)
Constant	0.208**	0.469***	0.007	-0.032***
	(2.115)	(3.194)	(0.718)	(-4.399)
Year FE?	Yes	Yes	Yes	Yes
Industry FE?	Yes	Yes	Yes	Yes
Observations	36,825	36,825	36,825	36,825
Adj-R^2	0.051	0.006	0.1072	0.1072

The first two columns of this table report the results of Equation (4). Columns (3) and (4) report the results of estimating Equation (1) after estimating Equation (4) to control for selection. Specifically, the selection models reported in Columns (1) and (2) correspond to the second-stage models in Columns (3) and (4), respectively. We define all variables in Table 1 and Appendix A. Industry fixed-effects (not tabulated) are estimated using Fama French 48 industry definitions. All t-statistics are presented below the coefficients in parentheses. We estimate all test

statistics with robust standard errors clustered by firm consistent with Petersen (2009). The symbols *, **, and *** denote statistical significance at the 0.10, 0.05, and 0.01 levels, respectively.

Table 10
Two-stage OLS Regression of Operating Risk on Non-audit Fees and Controls

	Selection Model		Operating Risk	
Dep Var:	$TOTNAS_{t+1}$	ε_TOTNAS_{t+1}	$STDRNOA_{t+k}$	$STDRNOA_{t+k}$
	(1)	(2)	(3)	(4)
	Coefficient	Coefficient	Coefficient	Coefficient
Variables	t-statistic	t-statistic	t-statistic	t-statistic
$TENURE_t$	0.001***	0.001***		
	(3.096)	(3.045)		
$BUSY_t$	-0.001	-0.001		
	(-0.881)	(-0.948)		
$AFMSAGROW_t$	-0.004**	-0.004**		
	(-1.929)	(-2.311)		
$NFMSAGROW_t$	0.002	0.003*		
	(1.381)	(1.823)		
$TOTNAS_t$			-3.862**	
			(-2.313)	
ε_TOTNAS_t				-3.897***
				(-2.375)
$CASH_t$	-0.007***	-0.006***	-0.001***	-0.000**
	(-4.471)	(-4.113)	(-4.317)	(-1.991)
NWC_t	-0.031**	-0.031**	-0.001**	-0.001**
	(-2.555)	(-2.374)	(-2.185)	(-2.095)
$SALESGROW_t$	0.025***	0.028***	-0.000	0.000
	(4.360)	(4.606)	(-0.661)	(1.586)
LEV_t	-0.003	-0.002	-0.000	0.000
	(-0.495)	(-0.338)	(-0.135)	(0.474)
$SIZE_t$	-0.039***	-0.029***	-0.006***	-0.004***
	(-3.425)	(-4.042)	(-18.117)	(-11.040)
$RNOA_t$	-0.093***	-0.097***	0.004***	0.003***
	(-2.910)	(-3.082)	(8.039)	(6.278)
AUD_FEES_t	0.024**	0.023**	0.005***	0.004***
	(2.486)	(2.532)	(9.410)	(9.491)
$STDRNOA_t$	0.371***	0.374***	-0.004***	-0.003***
	(6.206)	(6.297)	(-3.366)	(-2.936)
Constant	31,038	31,038	31,038	31,038
Year FE?	Yes	Yes	Yes	Yes
Industry FE?	Yes	Yes	Yes	Yes
Observations	31,038	31,038	31,038	31,038
Adj-R^2	0.051	0.006	0.026	0.053

The first two columns of this table report the results of Equation (4). Columns (3) and (4) report the results of estimating Equation (3) after estimating Equation (4) to control for selection. Specifically, the selection models reported in Columns (1) and (2) correspond to the second-stage models in Columns (3) and (4), respectively. We define all variables in Table 1 and Appendix A. Industry fixed-effects (not tabulated) are estimated using Fama French 48 industry definitions. All t-statistics are presented below the coefficients in parentheses. We estimate all test statistics with robust standard errors clustered by firm consistent with Petersen (2009). The symbols *, **, and *** denote statistical significance at the 0.10, 0.05, and 0.01 levels, respectively.

Table 11
OLS Regression of Future Discretionary Accruals on Nonaudit Fees and Controls

NAS Proxy:	*TOTNAS*		*ε_TOTNAS*	
Dep Var:	$DACC_{t+1}$	$DACC_{t+1}$	$DACC_{t+1}$	$DACC_{t+1}$
	(1)	(2)	(3)	(4)
	Coefficient	Coefficient	Coefficient	Coefficient
Variables	t-statistic	t-statistic	t-statistic	t-statistic
NAS_t	-0.072***	-0.088***	-0.072***	-0.078***
	(-2.609)	(-2.963)	(-2.491)	(-2.452)
$IMPPERF_t$		0.020***		0.021***
		(5.595)		(6.309)
$IMP*NAS_t$		0.077		0.035
		(1.283)		(0.531)
$SIZE_t$	-0.004*	-0.003	-0.003*	-0.003
	(-1.832)	(-1.580)	(-1.727)	(-1.474)
$BIGN_t$	0.004	0.004	0.004	0.004
	(1.009)	(0.910)	(1.004)	(0.896)
CFO_t	-0.178***	-0.183***	-0.178***	-0.183***
	(-9.860)	(-10.117)	(-9.870)	(-10.137)
$ABSCFO_t$	-0.044***	-0.044***	-0.043***	-0.044***
	(-2.804)	(-2.834)	(-2.771)	(-2.803)
ACC_t	-0.142***	-0.143***	-0.143***	-0.143***
	(-7.707)	(-7.722)	(-7.721)	(-7.736)
LEV_t	0.006	0.006	0.006	0.006
	(0.570)	(0.613)	(0.577)	(0.621)
LIT_t	-0.010*	-0.010*	-0.010*	-0.010*
	(-1.886)	(-1.871)	(-1.885)	(-1.881)
MTB_t	-0.001	-0.001	-0.001	-0.001
	(-1.424)	(-1.632)	(-1.422)	(-1.634)
$LOSS_t$	0.010**	0.007*	0.010**	0.007*
	(2,447)	(1.806)	(2.424)	(1.779)
FIN_t	0.008***	0.009***	0.008***	0.009***
	(2.687)	(2.778)	(2.691)	(2.778)
$M\&A_t$	-0.011***	-0.010***	-0.011***	-0.010***
	(-3.798)	(-3.486)	(-3.810)	(-3.499)
$CASH_t$	0.005***	0.006***	0.005***	0.006***
	(4.773)	(5.121)	(4.800)	(5.145)
NWC_t	-0.002	-0.001	-0.002	-0.001
	(-0.381)	(-0.159)	(-0.386)	(-0.168)
$SALESGROW_t$	-0.001	-0.001	-0.001	-0.001
	(-0.533)	(-0.591)	(-0.511)	(-0.573)
$RNOA_t$	0.005	0.011	0.005	0.011

	(0.488)	(1.061)	(0.486)	(1.079)
AUD_FEES_t	-0.002	-0.002	-0.002	-0.002
	(-0.753)	(-0.890)	(-0.763)	(-0.896)
Constant	0.222	0.224	0.219	0.221
	(1.504)	(1.514)	(1.481)	(1.487)
Year FE?	Yes	Yes	Yes	Yes
Industry FE?	Yes	Yes	Yes	Yes
Observations	30,850	30,850	30,850	30,850
adj-R2 / Pseudo R2	0.075	0.076	0.075	0.076

This table presents ordinary least squares regressions of Equation (5). The dependent variable $DACC_{t+1}$ is discretionary accruals computed as the residual from a cross-sectional, performance-adjusted modified Jones (1991) model estimated by industry-year. We define all other variables in Table 1 and Appendix A. Industry fixed-effects (not tabulated) are estimated using Fama French 48 industry definitions. All t-statistics are presented below the coefficients in parentheses. We estimate all test statistics with robust standard errors clustered by firm consistent with Petersen (2009). The symbols *, **, and *** denote statistical significance at the 0.10, 0.05, and 0.01 levels, respectively.