8-2018

The Influence of Nonpublic Audit Concentration on Public Client Audit Outcomes

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The Influence of Nonpublic Audit Concentration on Public Client Audit Outcomes

A dissertation submitted in partial fulfillment
of the requirements for the degree of
Doctor of Philosophy in Business Administration with a concentration in Accounting

by

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Abstract

Nonpublic clients make up a substantial portion of audit firm client portfolios and the demands they place on the audit firm differ from those of public clients. As such, I investigate the influence of nonpublic audit concentration (NPAC) on the quality, timeliness, and cost effectiveness of public client audits. I find that NPAC is unrelated to audit quality and negatively related to the likelihood of late filing financial statements and audit fees for public clients. My study contributes to audit literature that investigates the effect of audit firm portfolio characteristics on audit outcomes by 1) providing a new measure that allows researchers to proxy for nonpublic audit influence and 2) investigating the potential impact of NPAC on public client audit outcomes. My findings are important because they suggest that timely and cost-effective audits of similar quality are available from providers that do not concentrate on public client audits.

Acknowledgements

I would like to thank my dissertation committee Cory Cassell (chair), Gary Peters, Stephen Rowe, and Jonathan Shipman for their helpful comments and guidance. I would also like to acknowledge *Accounting Today* for generously providing the top 100 accounting firm-level data used in this paper.

Dedication

I dedicate my dissertation to my husband, Joshua Hunt, who not only encouraged me to take this path, but decided to walk down it with me and received his PhD in Accounting alongside me. I am also grateful for the love and support of my parents, Jerry and Theresa Jimmerson, who taught me the value of hard work and discipline from an early age and gave me the courage to chase my dreams.

Table of Contents

1. Introduction

Several accounting papers study the influence of audit firm portfolio characteristics and composition on audit outcomes. For example, seminal papers by Dopuch and Simunic (1980) and DeAngelo (1981) find that audit quality is positively related to audit firm size. More recent work investigates the effects of other audit firm portfolio characteristics such as city-specific industry specialization (Ferguson, Francis, and Stokes 2003; Francis, Reichelt, and Wang 2005; Reichelt and Wang 2010), national industry specialization (Balsam, Krishnan, and Yang 2003; Krishnan 2003; Lim and Tan 2008; Dunn and Mayhew 2004), and busy season client concentration (Lopez and Peters 2012). While the accounting literature seeks to understand audit firm characteristics that affect the quality of public client audits, it has not investigated the potential impact of a large component of the client portfolio of most firms – the set of nonpublic audit clients.[1]

Francis, Khurana, Martin, and Pereira (2011: 489) describe the sparse research related to the audits of nonpublic clients as follows: "Despite the importance of smaller entities to the economy and capital markets, surprisingly little is known about these firms with respect to their accounting and auditing choices or the economic consequence of these choices." Limitations in data availability have largely confined audit portfolio research to the study of public clients. While data limitations continue to pose significant problems for researchers attempting to directly answer the call in Francis et al. (2011), this study uses novel data to answer a related question – whether the concentration of nonpublic clients at the audit firm level influences audit outcomes for public audit clients.

[1] The data used in this study allow for the disaggregation of total audit and assurance fees into those collected from public clients and those collected from nonpublic clients.

Nonpublic clients make up a substantial portion of the overall economy and, more important to this study, audit firm portfolios. Private companies represent more than 99 percent of all companies in the U.S. (Minnis 2011). Governmental and non-profit (GNP) organizations also make up a significant portion of audit firm portfolios. According to the U.S. Census Bureau's 2012 "Census of Governments", there are over 90,000 local governments including local counties, independent school districts, townships, municipalities, and special districts. State and local governments have more than 16 million full-time equivalent employees as of the 2006 Census and report more than $1.8 trillion in general revenues as of the 2003 Census.[2] There are currently 2.3 million non-profit organizations in the U.S. that include libraries, museums, religious organizations, private colleges and universities, fraternal and social organizations, professional and trade organizations, health care organizations, and many other community service-oriented organizations.[3] In 2009, non-profit organizations reported $1.4 trillion in revenue (Wells 2012).

Audit fees collected from nonpublic clients make up a significant portion of audit firm revenue. In 2014, for example, Deloitte collected approximately 60 percent of their audit fees from nonpublic clients while other Big 4 members collected between 40 and 60 percent of their audit fees from nonpublic clients. Midtier and small firms, on average, collected over 80 percent of their audit fees from nonpublic clients in 2014.[4] More importantly, nonpublic client audits (and other services) are performed according to regulatory frameworks that differ significantly from that of public client audits. According to SAS No. 131, audit firms are required to conduct public client audits in accordance with Public Company Accounting Oversight Board (PCAOB)

[2] The United States Census Bureau's Census of Federal, State, & Local Governments, http://www.census.gov/govs
[3] The National Center for Charitable Statistics, http://nccs.urban.org/statistics/quickfacts.cfm.
[4] See Figure 1.

standards. The PCAOB requires public clients to submit audited financial statements prepared in accordance with Generally Accepted Accounting Principles (GAAP) annually and reviewed financial statements quarterly to the Securities and Exchange Commission (SEC), which also requires annual integrated audits of public clients who are accelerated filers.

While audits of private clients are to be conducted in accordance with Generally Accepted Auditing Standards (GAAS) and should also be prepared following GAAP, there is no requirement that they submit audited or reviewed financial statements to the SEC, nor is there a requirement for an integrated audit.[5] Furthermore, nonpublic clients are allowed to depart from GAAP when the cost to comply becomes unreasonable. The American Institute of Certified Public Accountants (AICPA) provides guidance in the Financial Reporting Framework for Small and Medium-Sized Entities to assist in determining whether GAAP compliance is necessary.

With regard to the audits of GNP organizations, audits of organizations that receive federal awards greater than $750,000 require a Circular A-133 audit, also known as a single audit, which requires audit firms to follow Generally Accepted Government Auditing Standards (GAGAS). Furthermore, many auditors of GNPs voluntarily follow GAGAS even when it is not required. Audits performed in accordance with GAGAS also require engagement team members working on GNP audits to obtain at least 24 hours of Yellow Book training in governmental auditing, the government environment, or the environment in which the GNP operates.

Private and GNP companies often have non-busy season year ends that can be set according to their own criteria. Nonprofit companies usually choose a fiscal year end based on some or all of the following criteria: 1) The fiscal year should coincide with its program year so

[5] A private company must file quarterly financial statements with the SEC if it has more than 500 shareholders and assets greater than or equal to $10 million in accordance with the Securities and Exchange Act of 1934. This enables the SEC to monitor private companies that have a large number of shareholders and behave similarly to a public company.

that program activities do not fall into two different years, 2) The fiscal year end will ideally align with the terms of the organization's major grants and/or funders, which simplifies the grant process, 3) Nonprofits that must be audited should not have a fiscal year end that falls during the organization's busiest time of year which would prevent staff from being able to gather audit evidence to aid the audit, and 4) Nonprofits should consider their debt covenants and the cyclical nature of the organization's operations and the impact that the fiscal year end will have on the calculation of those covenants. While these criteria lead many nonprofits to have fiscal year ends of June 30, nonprofit organizations may choose the fiscal year end as long as the end date is specified in the organizational documents. [6,7] Nonpublic entities also include governmental entities. All states in the U.S. have a fiscal year end of June 30 except Texas (August 31), New York (March 31), and Alabama and Michigan (September 30). Assuming that governmental entities generally follow the state's fiscal year end, we can assume that most of these entities have non-busy season year ends.[8] This is important because Lopez and Peters (2012) find that audit firms with a lower concentration of clients with similar fiscal year end dates are associated with better audit outcomes due to less workload compression.

Audit firms also face lower litigation risk with nonpublic clients compared to public clients. Audit firms are incentivized to shift audit resources to areas of greater litigation risk (Simunic and Stein, 1996). Thus, audit firms with higher nonpublic audit concentration (NPAC) may be better equipped to shift resources to public clients which are relatively higher risk than

[6] "Considerations for choosing your not-for-profit organizations fiscal year-end." *BKD CPA's & Advisors Industry Insights*, December, 2016. Nikki Kubly.
[7] "Nonprofits: Choosing or changing the fiscal year-end." *Langdon & Company CPAs*, November 8, 2016. Lee Byrd.
[8] Daniel Gartland, a CPA and risk control consultant at CNA, states, "Many government and not-for-profit organizations require an audit. And since the fiscal year end of many of these organizations is something other than December 31, this type of service presents an opportunity for CPA firms to shift work outside of the traditional busy season." See "Risks of not-for-profit and government audits." *Journal of Accountancy*, April 1, 2016.

nonpublic clients, compared to audit firms with lower NPAC. Thus, audit firms with greater NPAC may have more flexibility in the due dates for audit opinions, suggesting that audit firms with greater NPAC have greater resource flexibility with regard to filing deadlines.

Based on the preceding discussion, NPAC could have two divergent effects on public audit outcomes. First, audit firms with higher NPAC may enjoy greater resource flexibility as they complete the audits of their public clients. Because many nonpublic entities have non-busy season fiscal year ends, audit firms who have higher concentrations of non-busy season clients may experience smoother resource allocation throughout the year, leading to greater resource flexibility for their public clients. This, in turn, could lead to better public client audit outcomes for audit firms with higher NPAC.

Alternatively, public clients of audit firms with greater NPAC could experience negative audit outcomes due to the audit firm's relative inexperience with public client regulatory requirements. There is a wealth of accounting research that associates industry specialist audit firms with better audit outcomes, attributing the increase in quality to the audit firm's deep industry knowledge (Reichelt and Wang 2010; Krishnan 2003; Balsam, Krishnan, and Yang 2003; Dunn and Mayhew 2004, among others). Similarly, more public-concentrated audit firms should have more experience and deeper knowledge about public client audits. Thus, public clients of audit firms with greater NPAC could experience relatively worse audit outcomes.

To investigate whether the benefits of resource flexibility related to greater NPAC outweigh the disadvantages of relative inexperience with public client audits, I use data from the *Accounting Today* "Top 100 Firms" report. The *Accounting Today* report provides a list of the top 100 accounting firms in the U.S. ranked by total revenue, broken into audit and assurance services, tax, management advisory services, and other services. I calculate audit and assurance

service fees collected from nonpublic clients by subtracting audit fees from public clients (calculated by summing audit fees in Audit Analytics by audit firm year) from total audit and assurance services revenue (provided by *Accounting Today*) by audit firm year. I then divide nonpublic audit fees by total audit and assurance services revenue to generate the percentage of audit fees collected from nonpublic clients for an audit firm year, i.e., NPAC. I use this measure to proxy for the potential influence that nonpublic audit clients have on the audit outcomes of public clients.

Using misstatements to proxy for audit quality, I find that NPAC is not significantly associated with audit quality. Using financial statement late filing as a proxy for audit timeliness, NPAC is negatively and significantly associated with financial statement late filing. I find that a one standard deviation change in NPAC is associated with a 6.19 percent decrease in the unconditional probability of late filing. Collectively, these results suggest better audit outcomes for public audit clients that engage audit firms with higher NPAC. That is, although audit quality of public clients does not vary with NPAC, public clients of audit firms with higher NPAC are less likely to file late. Thus, the results suggest that the benefit of NPAC (resource flexibility) outweighs the potential cost (inexperience).

In my final main analysis, I examine the association between NPAC and audit fees for public client audits. If greater NPAC improves resource flexibility, then audit fees for public clients of audit firms with higher NPAC should be lower. Consistent with this, I find that NPAC is negatively and significantly associated with audit fees for public clients. This result, along with the results from the previous tests of audit quality and timeliness, suggests that NPAC is associated with more cost-effective audits for public clients.

My study contributes to the literature investigating audit firm portfolio characteristics such as industry expertise (Solomon, Shields, and Whittington 1999), workload compression (Lopez and Peters 2012), and audit firm size (Dopuch and Simunic 1980; DeAngelo 1981), among others. My findings should be of interest to audit committees and investors since they suggest that timely and cost-effective audits of similar quality are available from providers that do not have a high concentration of public client audits. My findings should also be of interest to researchers who seek to understand audit firm characteristics that impact public client audits. Whether NPAC influences the audit outcomes of public clients is an important empirical question to researchers because most audit portfolio-related literature excludes nonpublic clients from their study. By limiting analyses to characteristics of the portfolio of public clients, prior studies provide a useful but incomplete understanding of audit firm characteristics that affect audit outcomes.

The remainder of the paper proceeds as follows: I discuss prior literature and the hypotheses development in section two, sample selection and research methodology in section three, results in section four, and my concluding remarks in section five.

2. Prior Literature and Hypotheses Development

An extensive body of literature documents a number of audit firm characteristics (including portfolio composition) that impact public client audit outcomes. Examples include investigations of the effects of audit firm size (Dopuch and Simunic 1980; DeAngelo 1981; Dye 1993), auditor industry expertise (Solomon et al. 1999; Krishnan 2003; Krishnan 2005; Balsam, Krishnan, and Yang 2003; Reichelt and Wang 2010), the concentration of clients during busy season (Lopez and Peters 2010; Lopez and Peters 2012), and the concentration of non-audit

service fees (Lisic, Myers, Pawlewicz, and Seidel 2017; Beardsley, Lassila, and Omer 2016), among others. Although the effects of audit firm portfolio characteristics and composition have been studied extensively, prior literature has largely ignored the potential impact of NPAC on the audit outcomes of public clients.

Nonpublic clients make up a significant portion of audit firm client portfolios. In my sample, 47% of all audit fees are collected from nonpublic clients, with Big 4 audit firms collecting around 42% of their audit fees from nonpublic clients and non-Big 4 audit firms collecting around 70% of their audit fees from nonpublic clients. More importantly, nonpublic audit services are inherently different from public audits in terms of the nature of services provided, the level of assurance provided, and, within an audit, the regulatory requirements with which the audit firm must comply.

The private client's choice to engage an audit firm is a voluntary economic decision, not a regulatory mandate (Katz 2009). In choosing to engage an audit firm, private clients may choose to issue compiled or reviewed, rather than audited, financial statements, while public clients are required to have audited financial statements. A private client's choice of engagement may depend heavily on the requirements of lenders. While some lenders require annual audited financial statements, many will accept reviewed, compiled, or even internally prepared financial statements depending on the relationship with the client and the magnitude of the loan. Svanström and Sundgren (2012) show that small private clients frequently use the incumbent audit firm for different types of non-audit services, while public clients in the post-SOX era are prohibited from receiving most non-audit services from their audit firm.

Also included in my measure of NPAC is services provided to GNP organizations. GNP client's monitoring incentives, performance goals, and operations differ from that of public

clients (Hardiman, Squires, and Smith 1987; Wilson, Kattelus, and Reck 2007; Vermeer 2008). In a GASB white paper, the Governmental Accounting Standards Board (GASB) note that governmental organizations do not operate in a competitive marketplace, have virtually no threat of liquidation, and do not have equity owners.[9] The primary goal of most GNPs is to use their resources to support programs while publicly-traded companies focus on maximizing stockholders' wealth (Lopez and Peters 2010). The Financial Accounting Standards Board (FASB) notes the following distinguishing characteristics of GNPs that set them apart from for-profit business:

> 1)Receipts of significant amounts of resources from resource providers who do not expect to receive repayment or economic benefits proportionate to the resources provided.
>
> 2)Operating purposes that are other than to provide goods or services at a profit or profit equivalent.
>
> 3)Absence of defined ownership interests that can be sold, transferred, or redeemed or that convey entitlement to a share of a residual distribution of resources in the event of liquidation of the organization.[10]

Not only do nonpublic clients' demands differ from those of public clients, but the audit firm's responsibilities differ for nonpublic and public client audits. According to SAS No. 131, audit firms are required to conduct public client audits in accordance with PCAOB standards, while audits of nonpublic clients are to be conducted in accordance with GAAS and GNP audits in accordance with GAGAS. The PCAOB requires public clients to submit audited financial

[9] Governmental Accounting Standards Board, White Paper "Why Governmental Accounting and Financial Reporting is – and Should Be – Different." (Norwalk, CT, 2013, revised), Executive Summary, p. ii.
[10] The Financial Accounting Standards Board, Statement of Financial Accounting Concepts No.4 "Objectives of Financial Reporting by Nonbusiness Organizations." (December 1980), p.6.

statements prepared in accordance with GAAP annually and reviewed financial statements quarterly to the SEC. Though private client financial statements should also be prepared following GAAP, there is no requirement that they submit audited financial statements to the SEC. Furthermore, private clients are allowed to depart from GAAP when the cost to comply becomes unreasonable. The American Institute of Certified Public Accountants (AICPA) provides guidance in the Financial Reporting Framework for Small and Medium-Sized Entities to assist in determining whether GAAP compliance is necessary. Many public client audits require an integrated audit, while no such requirement exists for private client audits. In terms of requirements by lenders to private companies, many note the importance of internal controls but generally do not require compliance with SOX unless the company is preparing to be sold or make an initial public offering (Sinnett and Graziano 2006). According to the PCAOB's Auditing Standard No. 5, an integrated audit requires the auditor to perform an audit of management's assessment of the effectiveness of internal control over financial reporting that is integrated with the audit of the financial statements. Performing the audit of internal controls requires the auditor to understand, test, and express an opinion on internal control over financial reporting. For private clients, the auditor is not required to test internal controls and will likely only chose to do so if there are significant time savings related to reduced substantive testing for the financial statement audit.

GNP organizations that receive greater than $750,000 in federal funding require a single audit, and other GNP organizations often require audits performed in accordance with GAGAS due to individual state mandates. Another contrast between public and nonpublic GNP audits is the litigation risk for the audit firm. Gordon, Greenlee, and Nitterhouse (1999) find that the

audits of public clients expose the audit firm to higher levels of market discipline and thus higher levels of litigation risk compared to GNP audits.

Given the large proportion of audit fees that are collected from nonpublic clients and the significant differences in the needs of and regulations imposed on nonpublic and public clients, I expect that NPAC could influence public client audit outcomes. I offer two competing predictions. On one hand, it is possible that NPAC could positively impact resource flexibility when auditing public clients. Greater resource flexibility allows audit firms to shift audit resources to areas of greater litigation risk (Simunic and Stein, 1996), in this case, public clients. Thus, audit firms with higher NPAC may be better equipped to shift resources to public clients compared to audit firms with lower NPAC. As discussed above, relative to nonpublic audit clients, public audit clients and their audit firms face more stringent regulations and more severe consequences if the regulations are not followed. For example, SEC regulations require that public companies file annual reports containing audited financial statements 60 days (large accelerated filers), 75 days (accelerated filers), and 90 days (non-accelerated filers) after fiscal year end. Consistent with these deadlines causing resource allocation issues, Lopez and Peters (2012) find that audit firms with a lower concentration of companies with similar fiscal year end dates are associated with better audit outcomes due to less workload compression. As discussed previously, nonpublic clients often have non-busy season fiscal year ends, which could alleviate workload compression more for audit firms with higher NPAC. While private companies do not face filing deadlines with the SEC, they are often required to adhere to debt covenants which require audited, reviewed, compiled, or even self-prepared financial statements (depending on credit exposure, the size of the client, and the client's relationship with the lender) 150 days following year end (Sinnett and Graziano 2006). However, these deadlines are often not aligned

with busy season deadlines imposed by the SEC, as private companies often have non-busy season fiscal year ends. Collectively, prior research suggests that audit firms with higher NPAC may enjoy more resource flexibility when auditing public clients, which could lead to better audit outcomes for public client audits.

On the other hand, public client audit outcomes may be worse for audit firms with higher NPAC due to the audit firm's relative inexperience with public client regulatory requirements. Langli and Svanstrom (2014) show that nonpublic firms differ from public firms across a number of dimensions including regulation, agency costs, market exposure, litigation, and information environment. An audit firm with greater experience auditing nonpublic clients may lack expertise and deep knowledge in auditing public clients, which may lead to a negative association between NPAC and audit outcomes. Consistent with this argument, prior work finds that industry specialist audit firms provide better audit quality due, in part, to their deep industry knowledge (Reichelt and Wang 2010). Balsam et al. (2003) find that, controlling for audit firm size, clients of specialist audit firms are associated with better audit outcomes. Similarly, more public-concentrated audit firms should have more experience and deeper knowledge about public client audits. Thus, it is possible that audit firms with more experience and deeper knowledge about public clients will provide better audit outcomes in terms of audit quality and timeliness for public clients. These competing potential outcomes lead to the following hypotheses (stated in null form):

H1: Audit quality for public clients is unrelated to NPAC.

H2: Audit timeliness for public clients is unrelated to NPAC.

If greater NPAC leads to greater resource flexibility, then NPAC could be negatively associated with audit fees as auditors take advantage of efficiencies afforded by a more balanced

workload throughout the year. Gist (1994) find indirect evidence that links audit efficiency to lower audit fees. Dopuch, Gupta, Simunic and Stein (2003) study audit effort and pricing and note that efficient audit production could lead to fee discounting. However, as previously mentioned, the benefits of resource flexibility associated with NPAC could be outweighed by the cost of the auditor's relative inexperience with public client regulatory requirements. Johnstone, Li, and Luo (2014) find a positive relation between the auditor's inexperience and knowledge deficit of client processes and audit fees. The audit firm's inexperience associated with high NPAC could lead to audit inefficiencies, which could be reflected in an audit fee premium. These competing potential outcomes lead to the following hypotheses (stated in null form):

H3: Audit fees for public clients are unrelated to NPAC.

3. Sample Selection and Research Methodology

3.1 Sample Selection

My variable of interest, NPAC, is calculated using data provided by *Accounting Today*, a monthly trade magazine that focuses on tax and accounting news. The "Top 100 Firms" report uses self-reported U.S. revenue from U.S. accounting firms that include a breakdown of revenue from audit and assurance, tax, and management advisory services. Prior literature in accounting uses data provided by *Accounting Today*'s "Top 100 Firms" report. Most recently, Lisic et al. (2017) use the "Top 100 Firms" data to study the effect of consulting revenue on audit quality in the pre- and post-SOX periods. Chung and Kallapur (2003) also use the "Top 100 Firms" data to examine client importance and its effect on the relation between nonaudit fees and audit quality.

I calculate nonpublic audit fees by subtracting public audit fees (audit fees by firm year in Audit Analytics) from the total audit revenue for a firm year as reported in the *Accounting Today*

"Top 100 Firms" report. I then divide nonpublic audit fees by total audit revenue to capture NPAC.

Figure 1 depicts NPAC over time for each Big 4 firm and the cumulative NPAC over time for midtier and lowtier audit firm groups. I observe a drop in NPAC for EY from around 63% in 2009 to 35.6% in 2010. This drop is due to large declines in audit revenue from both public and private firms. When I break NPAC into changes in the numerator (nonpublic audit fees) and denominator (total audit fees), I find that there is $2.411 billion decline in audit fees collected from nonpublic clients and a $2.474 billion decline in total audit fees collected in the U.S. by EY from 2009 to 2010. These declines are consistent with reports from the 2010 Big Four Firms Performance Analysis which notes that in 2010, EY was the only Big 4 firm whose revenue shrank while simultaneously increasing their Transaction Advisory Services by 9.4% and Advisory by 13.3%.[11] To ensure that results are not driven by the decline in NPAC for EY in 2010, I remove all observations from the year 2010 from the sample. I rerun the main analysis on this sample and the results from the main analyses hold.

To validate the revenue in the "Top 100 Firms" report, I compare the revenue reported by Big 4 firms in *Accounting Today*'s "Top 100 Firms" report based on revenue reported by the Big 4 firms on their respective websites. I focus on Big 4 firms because approximately 75 percent of the observations in my sample are audited by these firms. I match net revenue to that reported on the websites of Deloitte, EY, and KPMG for 2014 and 2015. PWC's website reports total revenue for North America and the Caribbean combined. Thus, I compare the net revenue from *Accounting Today*'s "Top 100 Firms" report to the combined number reported on PWC's website and find the revenue reported to be reasonable. I randomly select midtier firms and

[11] "The 2010 Big Four Firms Performance Analysis." www.big4.com

check their revenue reported in *Accounting Today* against their respective websites. For example, BDO reports revenue of $1.29 billion in 2017 to *Accounting Today*. In an article published on BDO's website, the accounting firm reports revenue of $1.29 billion, an exact match.[12] BKD reports revenue of $537.6 million in 2017 to *Accounting Today*. In their 2017 firm profile, they report revenue for domestic and international operations of $564 million the fiscal year ended May 2017.[13] I attribute the difference in these numbers to the portion of revenue earned outside the U.S. since *Accounting Today* reflects revenue earned within the U.S. I also contacted the Editor-In-Chief of *Accounting Today*, who confirmed that the revenue reported is total revenue from both public and nonpublic clients within the U.S. While the revenue is self-reported, *Accounting Today* checks for reasonableness based on accounting firm growth as well as the revenue reported in prior years. I spoke to a representative at *Accounting Today* who said that the retention rate on reporting accounting firms is approximately 95% from year to year. This ensures that audit firms that are absent from the list in some years and return in subsequent years are absent because they did not make the "Top 100 Firms" cut, not because they did not report their revenue. This means that *Accounting Today* is able to check the reasonableness of the revenue reported based on accounting firm growth that is reported faithfully every year, lending additional credibility to the reasonableness of the revenue reported by *Accounting Today*'s "Top 100 Firms."

I use a sample of client-year observations from 2005 through 2015 with necessary data in Compustat, Audit Analytics, and *Accounting Today*'s "Top 100 Firms" report. I match firm-level data from *Accounting Today*'s "Top 100 Firms" report to client-level data in Compustat and Audit Analytics by first hand-collecting "auditor fkeys" for all observations in the "Top 100

[12] "BDO USA, LLP grows revenue by 9.6 percent in fiscal 2017." https://www.bdo.com/news
[13] The 2017 BKD CPAs & Advisors Firm Profile is available at https://www.bkd.com/docs

Firms" report. The year assigned to these observations is the year that the report is issued by *Accounting Today*. Because accounting firms have different fiscal year ends and audit firms have clients with different fiscal year ends, there is no perfect way to match *Accounting Today*'s "Top 100 Firms" data to client-level data. Therefore, I merge the datasets on "auditor fkey" and fiscal year from Audit Analytics and year of the "Top 100 Firms" report. To ensure that the results in this paper are not dependent on the choice to match *Accounting Today* "Top 100 Firms" reported firm-year to Audit Analytics fiscal year, I perform a separate analysis where I change the year reported in the "Top 100 Firms" report to the previous year if the accounting firm's fiscal year end is between January 1 and June 30 and results remain unchanged. This is likely because accounting firm revenue, while increasing over the sample period, is relatively stable from year to year.

I investigate the coverage of audit firms in my sample relative to the population in Audit Analytics for the years 2005 through 2015. There are 137 distinct firms that appear on *Accounting Today*'s "Top 100 Firms" report during the sample period. Of these firms, 37 do not audit companies that appear in Audit Analytics during the sample period. There are 874 audit firms in Audit Analytics during the sample period. Thus, in terms of audit firms, the *Accounting Today*'s "Top 100 Firms" report covers only 11.4 percent of Audit Analytics. However, many of these audit firms cover a large portion of the company years as well as audit fees collected that are reported in Audit Analytics. Therefore, I further investigate the coverage of company years in my sample relative to the population in Audit Analytics for the sample period 2005 through 2015. I find that audit firms on *Accounting Today*'s "Top 100 Firms" report cover approximately 59.4% of the company years in Audit Analytics and about 84.8% of the audit fees in Audit Analytics. Overall, the results of this investigation provide comfort that limiting the sample to

companies audited by firms appearing on the *Accounting Today*'s "Top 100 Firms" report should not limit the generalizability of the results.

I restrict the sample to U.S.-based clients with a U.S.-based audit firm. I exclude clients with standard industry classification (SIC) codes between 4400 and 4999 and between 6000 and 6999 because they face different regulatory and reporting requirements.[14] My final sample consists of 21,777 firm-year observations.

3.2 Research Methodology

3.2.1 Test of Audit Quality (H1)

My first hypothesis tests the implications of NPAC on public client audit quality. I proxy for audit quality using misstatements as revealed through Form 8-K financial statement restatements (*MISSTATE*). Misstatements are frequently used as a proxy for audit and financial reporting quality (Liu, Raghunandan, and Rama 2009; Becker, DeFond, Jiambalvo, and Subramanyam 1998; Francis, Maydew, and Sparks 1999; Kinney, Palmrose, and Scholz 2004) and represent a verifiable occurrence of poor audit quality (DeFond 2010). Using a linear probability model (LPM) design to test H1, I regress misstatements on NPAC and other controls as follows[15]:

$$\begin{aligned} MISSTATE_{it} = {} & \alpha_0 + \alpha_1 NPAC_{it} + \alpha_2 CLIENTSIZE_{it} + \alpha_3 LEVERAGE_{it} + \alpha_4 GCO_{it} + \alpha_5 LOSS_{it} + \\ & \alpha_6 ROA_{it} + \alpha_7 TENURE_{it} + \alpha_8 INFLUENCE_{it} + \alpha_9 INTANGIBLES_{it} + \alpha_{10} BUSY_{it} + \\ & \alpha_{11} ACCEL\_FILER_{it} + \alpha_{12} MTB_{it} + \alpha_{13} FIN_{it} + \alpha_{14} FREEC_{it} + \alpha_{15} ACQ_{it} + \alpha_{16} ARINV_{it} \\ & + \alpha_{17} ICMW_{it} + \alpha_{18} MKT\_VOL_{it} + \alpha_{19} AUDITORSIZE_{it} + \alpha_{20} AFEE\_CLIENT_{it} \\ & + \alpha_{21} TAX\_CLIENT_{it} + \alpha_j Industry\ FE_{it} + \alpha_k Year\ FE_{it} + \varepsilon \end{aligned} \quad (1)$$

where:

[14] SIC codes 4400 through 4999 include utility, communication, and transportation service industries. SIC codes 6000 through 6999 include finance, insurance, and real estate industries.

[15] I follow Shipman, Swanquist, and Whited (2017) in using a linear probability model to estimate equation (1) because it allows me to interpret the coefficient on *NPAC*. Statistical inferences are similar when I use a logistic regression model.

MISSTATE	= Indicator variable equal to one if the client has a financial statement misstatement reported through the filing of a Form 8-K with the SEC, zero otherwise;
NPAC	= Audit fees collected from nonpublic clients divided by total audit fees collected as reported by *Accounting Today*'s "Top 100 firms" report;
CLIENTSIZE	= The natural logarithm of total assets;
LEVERAGE	= Total liabilities divided by total assets;
GCO	= Indicator variable equal to one if the client is issued a going concern opinion in the year, zero otherwise;
LOSS	= Indicator variable equal to one if net income is less than zero, zero otherwise;
ROA	= Operating income after depreciation divided by total assets;
TENURE	= Indicator variable equal to one if the current audit firm's tenure is more than four years, zero otherwise;
INFLUENCE	= Client audit fees divided by audit firm's total fees;
INTANGIBLES	= Intangible assets divided by total assets;
BUSY	= Indicator variable equal to one if the client has a December 31st fiscal year end, zero otherwise;
ACCEL_FILER	= Indicator variable equal to one if the client is an accelerated filer, zero otherwise;
MTB	= Book value of equity divided by market value of equity;
FIN	= The sum of cash raised from the issuance of long-term debt, common stock, and preferred stock divided by total assets;
FREEC	= Cash from operations minus average capital expenditures;
ACQ	= Indicator variable equal to one if there is an acquisition, zero otherwise;
ARINV	= The sum of accounts receivable and inventory divided by total assets;

ICMW = Indicator variable equal to one if a material weakness in internal controls over financial reporting is disclosed in the year, zero otherwise;

MKT_VOL = The standard deviation of the monthly price appreciation plus reinvestment of monthly dividends and cash equivalent distributions;

AUDITORSIZE = Total revenue collected by the accounting firm in the year as reported by *Accounting Today*'s "Top 100 firms" report;

AFEE_CLIENT = Audit fees at the client level.

TAX_CLIENT = Tax fees paid to the auditor at the client level.

Model (1) includes controls for client- and firm-level characteristics known to be associated with misstatements, following the model in Lisic et al. (2017). I add other control variables that may be correlated with the dependent variable including *GCO*, *INFLUENCE*, *INTANGIBLES*, *BUSY*, *ACCEL_FILER,* and *AUDITORSIZE.* My primary variable of interest is *NPAC*. In Model (1), α_1 is the effect of NPAC on the audit quality of public clients. An insignificant coefficient on α_1 would indicate that audit quality does not vary significantly with the level of NPAC. A positive (negative) and significant coefficient on α_1 would indicate that audit quality is lower (higher) for public clients that engage audit firms with higher NPAC, suggesting that the disadvantage of inexperience with the regulatory requirements of public client audits is greater than (less than) the benefit of resource flexibility.

3.2.2 Test of Audit Timeliness (H2)

My second hypothesis tests the implications of NPAC on public client audit timeliness. I proxy for audit timeliness using late filings (*LATE_FILE)*. Filing financial statements late is consequential for public clients for several reasons. For example, the SEC can punish public companies that file financial statements late by suspending their trading privileges or revoking their registration. In addition, Bartov and Konchitki (2017) find negative short and long run

market reactions to late filings and Glosten and Milgrom (1985) find that late filings negatively impact investors' ability to make informed investment decisions, thus increasing information asymmetry and trading costs. Finally, Whittred (1980) associates the timeliness of financial reports with an increase in time taken to complete the year-end audit and the time spent in auditor-client negotiations. Using an LPM design to test H2, I regress the likelihood of filing financial reports late on NPAC and other controls as follows:

$$\begin{aligned} LATE\_FILE_{it} = {} & \beta_0 + \beta_1 NPAC_{it} + \beta_2 CLIENTSIZE_{it} + \beta_3 LEVERAGE_{it} + \beta_4 GCO_{it} + \beta_5 LOSS_{it} + \\ & \beta_6 ROA_{it} + \beta_7 TENURE_{it} + \beta_8 INFLUENCE_{it} + \beta_9 INTANGIBLES_{it} + \beta_{10} BUSY_{it} + \\ & \beta_{11} ACCEL\_FILER_{it} + \beta_{12} MTB_{it} + \beta_{13} FIN_{it} + \beta_{14} FREEC_{it} + \beta_{15} ACQ_{it} + \beta_{16} ARINV_{it} \\ & + \beta_{17} ICMW_{it} + \beta_{18} MKT\_VOL_{it} + \beta_{19} AUDITORSIZE_{it} + \beta_{20} AFEE\_CLIENT_{it} + \\ & \beta_{21} TAX\_CLIENT_{it} + \beta_j Industry\ FE_{it} + \beta_k Year\ FE_{it} + \mu \end{aligned} \quad (2)$$

where:

LATE_FILE = Indicator variable equal to one if the client files a financial report late, zero otherwise; and

all other variables are as previously defined.

My primary variable of interest is *NPAC*. In this regression, β_1 is the effect of NPAC on the timeliness of public client filings with the SEC. An insignificant coefficient on β_1 would indicate that audit timeliness does not vary significantly with the level of *NPAC*. A positive (negative) and significant coefficient on β_1 would indicate that audit timeliness is worse (better) for public clients that engage audit firms with higher NPAC, suggesting that the disadvantage of inexperience with public client audits is greater than (less than) the benefit of resource flexibility.

3.2.3 Test of Audit Pricing (H3)

My third hypothesis tests the implications of NPAC on public client audit pricing. I proxy for audit pricing using audit fees (*CLIENT_LNAFEE)*. Audit pricing is an important audit outcome that has been used as a proxy for both audit risk and auditor effort. Using an OLS

design to test whether audit fees vary with NPAC, I regress audit fees on NPAC and other controls as follows:

$$CLIENT\_LNAFEE = \delta_0 + \delta_1 NPAC_{it} + \delta_2 CLIENTSIZE_{it} + \delta_3 LEVERAGE_{it} + \delta_4 GCO_{it} + \delta_5 LOSS_{it} + \delta_6 ROA_{it} + \delta_7 TENURE_{it} + \delta_8 INFLUENCE_{it} + \delta_9 INTANGIBLES_{it} + \delta_{10} BUSY_{it} + \delta_{11} ACCEL\_FILER_{it} + \delta_{12} MTB_{it} + \delta_{13} FIN_{it} + \delta_{14} FREEC_{it} + \delta_{15} ACQ_{it} + \delta_{16} ARINV_{it} + \delta_{17} ICMW_{it} + \delta_{18} MKT\_VOL_{it} + \delta_{19} AUDITORSIZE_{it} + \delta_{20} TAX\_CLIENT_{it} + \delta_j Industry\ FE_{it} + \delta_k Year\ FE_{it} + \nu \quad (3)$$

where:

CLIENT_LNAFEE = The natural logarithm of audit fees; and

all other variables are as previously defined.

My primary variable of interest is *NPAC*. In this regression, δ_1 is the effect of NPAC on audit fees for public clients. An insignificant coefficient would indicate that audit fees do not vary significantly with the level of NPAC. A positive (negative) and significant coefficient on δ_1 would indicate that audit fees are higher (lower) for public clients that engage audit firms with higher NPAC. If NPAC is associated with resource flexibility through a more balanced workload, then I should observe a negative relation between NPAC and audit fees. However, if the benefits of resource flexibility associated with NPAC are outweighed by the cost of the audit firm's relative inexperience with public client regulatory requirements, then I should observe an audit fee premium due to the inefficiencies associated with the audit firm's inexperience and knowledge deficit of client processes and audit fees.

4. Results

4.1 Descriptive Statistics

I present descriptive statistics for the full sample in Table 1. Approximately 3.4 percent of the sample have a Form 8-K misstatement, which is consistent with prior literature that observes material misstatements. On average, 10.7 percent of the sample file their financial statements late. The average logged audit fees from public clients 13.75.

Summary statistics for control variables are also consistent with expectations. I find that just over 4 percent of the company years in the sample are issued a going concern opinion. Approximately 35 percent of the company years in the sample reports a loss on their annual financial statements and approximately 71 percent have a December 31st fiscal year end. Just over 14 percent of the sample report an internal control material weakness. Average net revenue for accounting firms in my sample is approximately $5.8 billion, while average client level audit fees are just under $2 million and average client level auditor-provided tax fees are approximately $0.25 million.

There is a concern that limiting this sample to companies audited by *Accounting Today*'s Top 100 audit firms may bias the sample. To address this concern, I compare the descriptive statistics from my sample to samples of public companies from prior literature. I find that my descriptive statistics are generally consistent with prior literature, providing some assurance that the sample is representative of the population of public companies. I also check the distributions of control variables against Lisic et al (2017), a recent paper that uses *Accounting Today*'s Top 100 audit firm data. I find that *MISSTATE* is lower which is expected given that I use only material restatements. Also consistent with prior literature is the rate of late filing, client size, rate of going concern opinions issued, individual client influence, intangibles, rate of busy season

clients, rate of mergers and acquisitions, and level of accounts receivable. Compared to Lisic et al. (2017), the clients in my sample tend to be slightly more highly leveraged, are more likely to be accelerated filers, have slightly higher market-to-book ratios, greater cash raised from debt and equity, and are more likely to have internal control material weaknesses.

(Insert Table 1 Here)

I present descriptive statistics for Big 4 and non-Big 4 samples in Table 6. Prior literature generally finds significant differences in audit outcomes for clients of Big 4 versus non-Big 4 audit firms (DeFond and Zhang 2014).[16] Consistent with this notion, I find variation in my variables of interest as well as control variables across Big 4 and non-Big 4 samples. Clients of Big 4 auditors are less likely to file their financial statements late and tend to pay more in audit fees than clients of non-Big 4 auditors. Big 4 auditors collect a smaller portion of their fees from nonpublic clients than do non-Big 4 auditors. In a further examination of the Big 4 and non-Big 4 samples in Figure 1, I find significant variation in NPAC across both Big 4 and non-Big 4 firms over time. The remaining descriptive statistics for control variables show that clients of Big 4 auditors tend to be bigger and are less likely to receive a going concern opinion, report a loss on their annual financial statement, and are less likely to report an internal control material weakness.

(Insert Table 2 here)

4.2 Correlation Table

I present Pearson and Spearman correlations in Table 3. NPAC is negatively associated with the likelihood of misstatement, positively associated with the likelihood of late-filing financial statements, and negatively associated with audit fees. NPAC is positively associated

[16] See Table 7 for the cross sectional tests of clients of Big 4 audit firms.

with the client receiving a going concern opinion, experiencing a net loss, being a more influential client to the audit firm, experiencing an internal control material weakness and having higher market volatility. NPAC is negatively associated with client size, client leverage, client ROA, auditor tenure, having busy season clients, having accelerated filer clients, client market-to-book ratio, client cash from financing, client free cash flow, auditor size, and client level audit and tax fees. Overall, the results from this univariate analysis appear to associate NPAC with smaller, lower-performing clients.

(Insert Table 3 here)

4.3 Main Analyses

4.3.1 Audit Quality (H1)

Table 4 reports results for the estimation of Model (1) which I use to test H1.[17] The coefficient on *NPAC* is positive and insignificant (α_1= 0.001, p>0.10). Thus, I fail to reject the null hypothesis (H1) that material financial misstatements for public clients are unrelated to NPAC. Although nonpublic client audits make up a substantial portion of audit portfolios and are considerably different than public client audits, my results are consistent with NPAC having no significant influence on public client audit quality.

With respect to the control variables, I find a positive and significant association between *MISSTATE* and *LEVERAGE*, *ICMW*, and *AUDITORSIZE* and a negative and significant association between *MISSTATE* and *GCO*, *TENURE*, *FREEC*, and *ACQ*, which is consistent with general expectations following prior literature on misstatements.

(Insert Table 4 here)

[17] I check the variance inflation factors (VIFs) for all variables of interest in Table 4. All VIFs are less than 4, warranting no further investigation with regard to multicollinearity concerns.

4.3.2 Audit Timeliness (H2)

Table 5 reports results for the estimation of Model (2) which I use to test H2. The coefficient on *NPAC* is negative and significant ($ß$ = -0.037, p<0.05). Thus, I reject the null hypothesis (H2) that late filing financial statements for public clients is unrelated to NPAC. The model is estimated using a Linear Probability Model (LPM), so coefficient estimates can be interpreted as the likelihood change for a one-unit change in each regressor. Economic significance is calculated by multiplying the coefficient estimate on *LATE_FILE* (-0.037) by the standard deviation of *NPAC* (0.179). Given that the average rate of late filing in my sample is approximately 10.7 percent, the average marginal effect of a one standard deviation change represents an economically significant decrease of 6.19 percent (0.00662 / 0.107) in the unconditional probability of late filing. My results are consistent with audit firms with greater NPAC enjoying greater resource flexibility for their public clients.

With respect to the control variables, I find a positive and significant association between *LATE_FILE* and *LEVERAGE*, *GCO*, *LOSS*, *ROA*, *INFLUENCE*, *INTANGIBLES*, *ARINV*, *ICMW*, and *AFEE_CLIENT* and a negative and significant association between *LATE_FILE* and *CLIENTSIZE*, *TENURE*, *BUSY*, *FREEC*, *MKT_VOL*, *AUDITORSIZE*, and *TAX_CLIENT*, which is generally consistent with prior literature.

(Insert Table 5 here)

4.3.3 Audit Fees (H3)

Table 6 reports results for the estimation of Model (3) which I use to test H3. The coefficient on *NPAC* is negative and significant (δ = -0.536, p<0.01). Thus, I reject the null hypothesis (H3) that audit fees for public clients are unrelated to NPAC. This result is consistent with my resource flexibility argument. The coefficient estimate implies that a one standard

deviation increase in NPAC is associated with a 9.59 percent (-0.536 x 0.179) decrease in audit fees.

With respect to the control variables, I find a positive and significant association between *CLIENT_LNAFEE* and *CLIENTSIZE*, *LEVERAGE*, *GCO*, *LOSS*, *INFLUENCE*, *INTANGIBLES*, *BUSY*, *ACCEL_FILER*, *FIN*, *ACQ*, *ARINV*, *ICMW*, *MKT_VOL*, *AUDITORSIZE*, *TAX_CLIENT* and a negative and significant association between *CLIENT_LNAFEE* and *ROA* and *FREEC*, which is generally consistent with prior literature.

(Insert Table 6 here)

4.3.4 Summary of Main Analyses

The results from my main analyses suggest better audit outcomes for public audit clients that engage audit firms with higher NPAC. That is, although audit quality of public clients does not vary with NPAC, public clients of audit firms with higher NPAC are less likely to file late and have lower audit fees. All three tests combined suggest that greater NPAC is associated with more cost-effective audits for public clients. Thus, the results suggest that the benefit of NPAC (resource flexibility) outweighs the potential cost (inexperience).

4.4 Additional Analyses and Robustness Tests

4.4.1 Cross-Sectional Tests

4.4.1.1 Clients of Big 4 Audit Firms

There is a concern that the association that I observe in my main analysis between NPAC and audit quality, timeliness, and cost effectiveness may vary across Big 4 and non-Big 4 audit clients (i.e., that I may not observe this association in the sample of Big 4 clients due to a lack of variation in audit outcomes among this group and that my results are being driven by clients of smaller auditors). To ensure that my results are generalizable to public clients of both Big 4 and

non-Big 4 audit firms, I split the sample by Big 4 and non-Big 4 audit clients and re-estimate my tests of H1, H2, and H3. I report my results in Table 7. The results for Big 4 audit firms are presented in Column (1) and the results for non-Big 4 audit firms are presented in Column (2). The difference in the variable of interest, *NPAC*, is presented in Column 3.[18]

In Table 7 Panel A, I report results for the estimation of Model (1), my misstatements model, on Big 4 and non-Big 4 clients. In Column (1), the coefficient on *NPAC* is negative and significant (α = -0.038, p<0.10) for the sample of Big 4 audit clients. In Column (2), the coefficient on *NPAC* is negative and insignificant (α = -0.002, p>0.10) for the sample of non-Big 4 audit clients. I compare *NPAC* across the regressions using a Z-statistic and find no significant difference in the effect of *NPAC* on *MISSTATE* for Big 4 and non-Big 4 clients. While results from Column (1) alone may suggest that greater NPAC is associated with better audit outcomes for Big 4 audit clients, the insignificant difference in the coefficients on *NPAC* across Big 4 and non-Big 4 clients reported in Column (3) suggests that the effect of NPAC does not differ across groups. These results are generally consistent with my main analysis of misstatements reported in Table 3 in that they suggest better (or no worse) audit outcomes for clients of audit firms with higher NPAC.

In Table 7 Panel B, I report results for the estimation of Model (2), my likelihood of late filing model, on Big 4 and non-Big 4 clients. In Column (1), the coefficient on *NPAC* is negative

[18] For all cross-sectional tests, I test whether the coefficient on *NPAC* is significantly different across sub-samples. I use a standard z-statistic as used Chen, Sun, and Wu (2010), among many other papers, in calculating the following test of differences:

$$Z = \frac{(\hat{\beta}_{NPAC1} - \hat{\beta}_{NPAC2})}{\sqrt{s^2(\hat{\beta}_{NPAC1}) + s^2(\hat{\beta}_{NPAC2})}},$$

where $\hat{\beta}_{NPAC1}$ and $\hat{\beta}_{NPAC2}$ are coefficient estimates from the two subsamples and $s^2(\,)$ are the squared standard errors of the coefficients.

and significant ($ß$ = -0.165, p<0.01) for the sample of Big 4 audit clients. In Column (2), the coefficient on *NPAC* is negative and significant ($ß$ = -0.119, p<0.01) for the sample of non-Big 4 audit clients. The results in column (1) and (2) mirror the results for the likelihood of late filing in my main analyses reported in Table 5. The insignificant z-stat in column (3) indicates no significant difference in the effect of NPAC on the likelihood of late filing for Big 4 and non-Big 4 clients and confirms that the result is not driven by either the Big 4 or non-Big 4 clients.

In Table 7 Panel C, I report results for the estimation of Model (3), my audit fees model, on Big 4 and non-Big 4 clients. In Column (1), the coefficient on *NPAC* is negative and significant (δ = -0.357, p<0.01) for the sample of Big 4 audit clients. In Column (2), the coefficient on *NPAC* is negative and significant (δ = -0.669, p<0.01) for the sample of non-Big 4 audit clients.. The significant z-stat in column (3) indicates that the negative association between NPAC and audit fees is larger for non-Big 4 clients.

Results from Table 7 show that clients of non-Big 4 auditors benefit incrementally more from having an auditor with greater NPAC in terms of audit pricing, while the impact of NPAC on audit quality and audit timeliness are no different across the groups. Overall, these results show that inferences from my main analyses are generalizable to clients of both Big 4 and non-Big 4 auditors.

(Insert Table 7 here)

4.4.1.2 Clients in Litigious Industries

Gordon, Greenlee, and Nitterhouse (1999) find that the audits of public clients expose the audit firm to higher levels of market discipline and thus higher levels of litigation risk. Given the higher probability that public clients will be sued compared to their nonpublic counterpart, it is possible that these clients also require an audit firm with greater expertise in navigating the needs

of public clients in terms of litigation risk. In Table 8, I test whether the benefits of resource flexibility associated with higher NPAC is outweighed by the cost of audit firm inexperience with auditing public clients (i.e., clients with greater litigation risks) for clients in litigious industries. First, I separate clients in litigious industries from those in non-litigious industries. I follow Cassell, Myers, and Seidel (2015) who classify clients in SIC codes 2833-2836, 3570-3577, 3600-3674, 5200-5961, and 7370 as litigious clients. I then regress *MISSTATE*, *LATE_FILE*, and *CLIENT_LNAFEE* on *NPAC* in Panels A, B, C respectively.

In Table 8 Panel A, I report results for the estimation of Model (1), my misstatements model, on clients in litigious industries (Column 1) and clients in non-litigious industries (Column 2). In Column (1), the coefficient on *NPAC* is positive and significant (α = 0.032, p<0.10) for clients in litigious industries. In Column (2), the coefficient on *NPAC* is negative and insignificant (α=-0.011, p>0.10) for clients in non-litigious industries. I compare *NPAC* across the regressions using a Z-statistic and find a significant difference in the coefficients on *NPAC* indicating that clients in litigious industries are more likely to report a misstatement as NPAC increases. This result is consistent with public clients in litigious industries receiving higher quality audits from audit firms with lower NPAC compared to clients in non-litigious industries.

In Table 8 Panel B, I report results for the estimation of Model (2), my likelihood of late filing model, on clients in litigious industries (Column 1) and clients in non-litigious industries (Column 2). In Column (1), the coefficient on *NPAC* is negative and insignificant (β = -0.029, p>0.10) for clients in litigious industries. In Column (2), the coefficient on *NPAC* is negative and significant (β = -0.044, p<0.05) for clients in non-litigious industries. However, the z-stat in Column (3) is insignificant, which leads me to conclude that there is no significant difference in

the association between *LATE_FILE* and *NPAC* for clients in litigious industries and clients in non-litigious clients.

In Table 8 Panel C, I report results for the estimation of Model (3), my audit fees model, on clients in litigious industries (Column 1) and clients in non-litigious industries (Column 2). In Column (1), the coefficient on *NPAC* is negative and significant (δ = -0.421, p<0.01) for clients in litigious industries. In Column (2), the coefficient on *NPAC* is negative and significant (δ = -0.585, p<0.01) for clients in non-litigious industries. The Z-statistic in Column (3) is significant, which is consistent with *NPAC* being more negatively associated with audit fees for clients in non-litigious industries.

My results from Table 8 suggest that clients in litigious industries are more likely to misstate financial statements, are equally likely to file financial statements late, and experience a smaller decline in audit fees when engaging an audit firm with greater *NPAC*. Overall, my results are consistent with clients in litigious industries benefitting from auditor expertise in navigating the needs of public clients (i.e., lower NPAC) and show that inferences from my main analysis that demonstrate the benefit of resource flexibility associated with greater NPAC may be more generalizable to clients in non-litigious industries.

(Insert Table 8 here)

4.4.1.3 Busy Season Clients

In my primary tests, I find results consistent with NPAC providing greater resource flexibility for audit firms. If audit firms with greater NPAC experience greater resource flexibility for their public clients, then busy season clients, which make up over 71 percent of my sample and are arguably competing more for the auditor's attention than non-busy season clients, may especially benefit from having an audit firm with greater NPAC due to their audit firm's

more balanced portfolio of busy and non-busy season clients. In other words, the relative decline in audit quality associated with being a busy season client due to competition in audit resources could be mitigated by engaging an auditor with greater NPAC (i.e., greater resource flexibility). I test this in Table 9.

In Table 9 Panel A, I report results for the estimation of Model (1), my misstatements model, on busy season clients in Column (1) and non-busy season clients in Column (2). In Column (1), the coefficient on *NPAC* is negative and insignificant (α = -0.007, p>0.10) for busy season clients. In Column (2), the coefficient on *NPAC* is negative and insignificant (α = -0.019, p>0.10) for non-busy season clients. In Column (3) I compare *NPAC* across the regressions using a Z-statistic and find no significant difference in the coefficients on *NPAC* across busy season and non-busy season clients.

In Table 9 Panel B, I report results for the estimation of Model (2), my likelihood of late filing model, on busy season clients in Column (1) and non-busy season clients in Column (2). In Column (1), the coefficient on *NPAC* is negative and significant ($ß$ = -0.040, p<0.05) for busy season clients. In Column (2), the coefficient on *NPAC* is negative and significant ($ß$ = -0.057, p<0.10) for non-busy season clients. In Column (3) I compare *NPAC* across the regressions using a Z-statistic and find no significant difference in the coefficients on *NPAC* across busy season and non-busy season clients.

In Table 9 Panel C, I report results for the estimation of Model (3), my audit fees model on busy season clients in Column (1) and non-busy season clients in Column (2). In Column (1), the coefficient on *NPAC* is negative and significant (δ = -0.554, p<0.01) for busy season clients. In Column (2), the coefficient on *NPAC* is negative and significant (δ = -0.490, p<0.01) for non-busy season clients. In Column (3) I compare *NPAC* across the regressions using a Z-statistic and

find no significant difference in the coefficients on *NPAC* across busy season clients and non-busy season clients.

Overall my results do not show any differences in the effect of NPAC on audit quality, audit timeliness, and audit pricing across busy and non-busy season clients. While these results are not consistent with NPAC mitigating the negative association between busy season clients and audit quality, they do provide evidence that inferences from my main analyses that demonstrate the benefit of resource flexibility associated with greater NPAC are generalizable across both busy and non-busy season clients.

(Insert Table 9 here)

4.4.1.4 Clients of Audit Firms with Five or Fewer Audit Offices

Audit firms with numerous offices likely have a higher level of resource flexibility to begin with versus audit firms with fewer audit offices due to the transferability of resources between offices. I suspect that audit firms with fewer audit offices (i.e. lower inherent resource flexibility) may especially benefit from resource flexibility associated with greater NPAC. I test this in Table 10.

In Table 10 Panel A, I report results for the estimation of Model (1), my misstatements model, on clients of audit firms with five or fewer offices in Column (1) and clients of audit firms with greater than five offices in Column (2). In Column (1), the coefficient on *NPAC* is negative and insignificant (α = -0.043, p>0.10) for clients of audit firms with five or fewer offices. In Column (2), the coefficient on *NPAC* is positive and insignificant (α = 0.010, p>0.10) for clients of audit firms with greater than five offices. In Column (3) I compare *NPAC* across the regressions using a Z-statistic and find no significant difference in the coefficients on *NPAC*

across clients of audit firms with five or fewer offices and clients of audit firms with greater than five offices.

In Table 10 Panel B, I report results for the estimation of Model (2), my likelihood of late filing model, on clients of audit firms with five or fewer offices (Column 1) and clients of audit firms with greater than five offices (Column 2). In Column (1), the coefficient on *NPAC* is negative and insignificant (β = -0.055, p>0.10) for clients of audit firms with five or fewer offices. In Column (2), the coefficient on *NPAC* is negative and significant ($ß$ = -0.038, p<0.05) for clients of audit firms with greater than five offices. In Column (3) I compare *NPAC* across the regressions using a Z-statistic and find no significant difference in the effect of NPAC on the likelihood of late filing for clients of audit firms with five or fewer offices and clients of audit firms with greater than five offices.

In Table 10 Panel C, I report results for the estimation of Model (3), my audit fees model, on clients of audit firms with five or fewer offices in Column (1) and clients of audit firms with greater than five offices in Column (2). In Column (1), the coefficient on *NPAC* is negative and significant (δ = -0.757, p<0.01) for clients of audit firms with five or fewer offices. In Column (2), the coefficient on *NPAC* is negative and significant (δ = -0.508, p<0.01) for clients of audit firms with greater than five offices. In Column (3) I compare *NPAC* across the regressions using a Z-statistic and find a significant difference in the effect of NPAC on audit fees for clients of audit firms with five or fewer offices and clients of audit firms with greater than five offices. The results indicate NPAC is more negatively associated with audit fees for clients of audit firms with five or fewer audit offices.

The results in Table 10 show that clients of audit firms with five or fewer offices benefit incrementally more from having an auditor with greater NPAC in terms of audit pricing, while

the impact of NPAC on audit quality and audit timeliness are no different across the groups. Overall, these results generally suggest that inferences from my main analyses are generalizable across these groups.

(Insert Table 10 here)

4.4.1.5 Clients of High Growth Audit firms

If NPAC is associated with greater resource flexibility, then audit firms may especially benefit from higher NPAC during periods of high growth. Bills, Swanquist, and Whited (2015) find that significant recent growth temporarily stresses office resources leading to worse audit quality. Thus, it is possible that relatively higher levels of NPAC could mitigate this effect. I test this by splitting the sample into high growth and low growth audit firms. I measure growth at the firm level as audit fees collected in year *t* minus audit fees collected in year *t-1* divided by audit fees collected in year *t-1*. Audit firms whose growth is greater than the median growth for that year are classified as *High Growth* and audit firms whose growth is less than the median growth for that year are classified as *Low Growth*.

In Table 11 Panel A, I report results for the estimation of Model (1), my misstatements model, on clients of *High Growth* audit firms in Column (1) and clients of *Low Growth* audit firms Column (2). In Column (1), the coefficient on *NPAC* is negative and insignificant (α = -0.000, p>0.10) for clients of *High Growth* audit firms. In Column (2), the coefficient on *NPAC* is positive and insignificant (α = 0.014, p>0.10) for clients of *Low Growth* audit firms. In Column (3) I compare *NPAC* across the regressions using a Z-statistic and find no significant difference in the coefficients on *NPAC* across clients of *High Growth* audit firms and clients of *Low Growth* audit firms.

In Table 11 Panel B, I report results for the estimation of Model (2), my likelihood of late filing model, on clients of *High Growth* audit firms in Column (1) and clients of *Low Growth* audit firms in Column (2). In Column (1), the coefficient on *NPAC* is negative and insignificant (β = -0.041, p>0.10) for clients of *High Growth* audit firms. In Column (2), the coefficient on *NPAC* is positive and insignificant (β = -0.032, p>0.10) for clients of *Low Growth* audit firms between NPAC and the likelihood of late filing for either group. In Column (3) I compare *NPAC* across the regressions using a Z-statistic and find a significant difference in the effect of NPAC on the likelihood of late filing for clients of *High Growth* audit firms.

In Table 11 Panel C, I estimate model (3), my audit fees model, on clients of *High Growth* audit firms in Column (1) and clients of *Low Growth* audit firms in Column (2). In Column (1), the coefficient on *NPAC* is negative and significant (δ = -0.348, p<0.01) for clients of *High Growth* audit firms. In Column (2), the coefficient on *NPAC* is negative and significant (δ = -0.663, p<0.01) for clients of *Low Growth* audit firms. In Column (3) I compare *NPAC* across the regressions using a Z-statistic and find a significant difference in the effect of NPAC on audit fees for between NPAC and audit fees for clients of *High Growth* audit firms and clients of *Low Growth* audit firms where clients of *High Growth* audit firms are less negatively associated with audit fees.

Overall, the results in Table 11 show some evidence that NPAC mitigates the negative audit outcomes associated with high growth at the audit firm level with regard to the likelihood of late filing financial statements. These results provide evidence that inferences from my main analyses regarding audit quality and audit pricing are generalizable across clients of *High Growth* and *Low Growth* auditors.

(Insert Table 11 here)

4.4.2 Other Additional Tests

4.4.2.1 Audit firm Switching

Results from my main tests show that the benefits of resource flexibility associated with NPAC outweigh the costs of relative inexperience in auditing public clients in terms of audit quality, timeliness, and pricing. Reason (2010) reports that in the post-Sarbanes Oxley era following a period of soaring audit fees and the practical disappearance of value-added services, companies are now demanding more value from their audit firm. One such example cited by Reason (2010) is IDT's (a telecommunications provider) switch from Ernst & Young to Grant Thornton in early 2008 whose CFO cited audit value as the driving force behind the switch. Broadly, my main results provide evidence that audit firms with greater NPAC provide greater value to their public clients. If audit value drives client decisions to switch auditors, I suspect that clients of audit firms with higher (lower) NPAC will be less likely (more likely) to switch auditors. In the case of a switch, I suspect that clients will be likely to switch to an audit firm with greater NPAC. Using an LPM design to test whether the likelihood of switching auditors varies with NPAC, I regress $AUDITOR\_SWITCH_{t+1}$ on NPAC and other controls as follows:

$$\begin{aligned} AUDITOR\_SWITCH_{t+1} = {} & \Omega_0 + \Omega_1 NPAC_{it} + \Omega_2 CLIENTSIZE_{it} + \Omega_3 LEVERAGE_{it} + \Omega_4 GCO_{it} + \Omega_5 LOSS_{it} + \Omega_6 ROA_{it} + \Omega_7 TENURE_{it} + \Omega_8 INFLUENCE_{it} + \\ & \Omega_9 INTANGIBLES_{it} + \Omega_{10} BUSY_{it} + \Omega_{11} ACCEL\_FILER_{it} + \\ & \Omega_{12} MTB_{it} + \Omega_{13} FIN_{it} + \Omega_{14} FREEC_{it} + \Omega_{15} ACQ_{it} + \Omega_{16} ARINV_{it} + \\ & \Omega_{17} ICMW_{it} + \Omega_{18} MKT\_VOL_{it} + \Omega_{19} AUDITORSIZE_{it} + \\ & \Omega_{20} AFEE\_CLIENT_{it} + \Omega_{21} TAX\_CLIENT_{it} + \Omega_j Industry\ FE_{it} + \\ & \Omega_k Year\ FE_{it} + \upsilon \end{aligned} \quad (4)$$

where:

$AUDITOR\_SWITCH_{t+1}$ = Indicator variable equal to one if the client switches audit firms in year $t+1$, zero otherwise.

all other variables are as previously defined.

I report results of test of the association between NPAC and the likelihood of switching audit firms in *t+1* in Table 12. I find a negative association (Ω = -0.050, p<0.01) between *NPAC* and $AUDITOR\_SWITCH_{t+1}$. This result shows that clients of audit firms with higher (lower) NPAC are less likely (more likely) to switch auditors.

With respect to the control variables, I find a positive and significant association between $AUDITOR\_SWITCH_{t+1}$ and *GCO*, *LOSS*, *ROA*, *INFLUENCE*, *ARINV*, *ICMW,* and *AUDITORSIZE* and a negative and significant association between *CLIENTSIZE*, *LEVERAGE*, *TENURE,* and *MKT_VOL,* which is generally consistent with prior literature.

In an untabulated test, I limit the sample to company years in which the client switches audit firms and find that the average NPAC in the year prior to the switch is 47.5 percent and the average NPAC in the year of the switch is 56.5 percent. This result shows that, on average, clients switch to audit firms with greater NPAC.

Collectively, these results show that clients, presumably seeking the best audit value, are more likely to stay with an audit firm with greater NPAC, i.e., an audit firm that is providing similar audit quality in a more timely and cost effective manner, on average. Furthermore, clients that do switch audit firms are likely to choose an audit firm with greater NPAC. These results are important to my main analysis because they provide evidence that clients are aware of audit value that is associated with greater NPAC and impound this into their decision to switch away from or retain an auditor.

(Insert Table 12 here)

4.4.3 Robustness Tests

4.4.3.1 Discretionary Accruals as a Measure of Audit Quality

In my primary test of H1, I examine the relation between audit quality and NPAC, where the proxy for audit quality is *MISSTATE*. However, DeFond and Zhang (2014) recommend that researchers use multiple proxies for audit quality to take advantage of each measure's strengths and weaknesses. Thus, in this section, I consider an alternative proxy for audit quality – discretionary accruals. Balsam et al. (2003) and Krishnan (2005) use discretionary accruals to examine the audit quality consequences of audit firm specialization, which is similar in structure to my study of the audit quality consequences of NPAC. Using an OLS design to test whether audit quality (as measured by discretionary accruals) varies with NPAC, I regress discretionary accruals on NPAC and other controls as follows:

$$\begin{aligned} ACCRUALS = {} & \gamma_0 + \gamma_1 NPAC_{it} + \gamma_2 CLIENTSIZE_{it} + \gamma_3 LEVERAGE_{it} + \gamma_4 GCO_{it} + \gamma_5 LOSS_{it} \\ & + \gamma_6 ROA_{it} + \gamma_7 TENURE_{it} + \gamma_8 INFLUENCE_{it} + \gamma_9 INTANGIBLES_{it} + \\ & \gamma_{10} BUSY_{it} + \gamma_{11} ACCEL\_FILER_{it} + \gamma_{12} MTB_{it} + \\ & \gamma_{13} FIN_{it} + \gamma_{14} FREEC_{it} + \gamma_{15} ACQ_{it} + \gamma_{16} ARINV_{it} + \gamma_{17} ICMW_{it} + \\ & \gamma_{18} MKT\_VOL_{it} + \gamma_{19} AUDITORSIZE_{it} + \gamma_{20} AFEE\_CLIENT_{it} + \\ & \gamma_{21} TAX\_CLIENT_{it} + \gamma_j Industry\ FE_{it} + \gamma_k Year\ FE_{it} + \sigma \end{aligned} \quad (5)$$

where:

ACCRUALS = The absolute value of the residual from a modified performance adjusted discretionary accruals model as in Kothari et al. (2005); and

all other variables are as previously defined.

Table 13 reports results for the estimation of Model (5) which I use to test whether audit quality (as measured by discretionary accruals) varies with NPAC. Similar to model (1), γ_1 is the effect of NPAC on the audit quality for public clients. Consistent with my primary findings, the results indicate that the level of NPAC has no significant impact on audit quality (γ = -0.002,

p>0.10). These results help to ensure that earlier results are not sensitive to my choice of audit quality proxy.

With respect to the control variables, I find a positive and significant association between *ACCRUALS* and *LEVERAGE*, *GCO*, *LOSS*, *BUSY*, *ACCEL_FILER*, *FIN*, *FREEC*, *ACQ*, *ICMW*, and *AUDITORSIZE* and a negative and significant association between *ACCRUALS* and *CLIENTSIZE*, *ROA*, *TENURE*, and *INTANGIBLES*, which is generally consistent with prior literature.

(Insert Table 13 here)

4.4.3.2 Audit Opinion Delay as a Measure of Audit Timeliness

In my primary test of H2, I examine the relation between NPAC and audit timeliness, where *LATE_FILE* is the proxy for audit timeliness. In this section, I supplement my primary results by using audit opinion delay as an alternative proxy for audit timeliness. Bamber, Bamber, and Schoderbek (1993) use audit opinion delay as a proxy for audit inputs arguing that audit opinion delay provides insight into audit efficiency, one component of which is timeliness. Furthermore, Givoly and Palmon (1982) find that the length of the audit is the single most important determinant of the timeliness of the earnings announcement. Thus, audit opinion delay should capture audit timeliness. I regress audit opinion delay on NPAC and other controls in the following LPM regression:

$$\begin{aligned} DELAY = {} & \lambda_0 + \lambda_1 NPAC_{it} + \lambda_2 CLIENTSIZE_{it} + \lambda_3 LEVERAGE_{it} + \lambda_4 GCO_{it} + \\ & \lambda_5 LOSS_{it} + \lambda_6 ROA_{it} + \lambda_7 TENURE_{it} + \lambda_8 INFLUENCE_{it} + \\ & \lambda_9 INTANGIBLES_{it} + \lambda_{10} BUSY_{it} + \lambda_{11} ACCEL\_FILER_{it} + \lambda_{12} MTB_{it} + \\ & \lambda_{13} FIN_{it} + \lambda_{14} FREEC_{it} + \lambda_{15} ACQ_{it} + \lambda_{16} ARINV_{it} + \lambda_{17} ICMW_{it} + \\ & \lambda_{18} MKT\_VOL_{it} + \lambda_{19} AUDITORSIZE_{it} + \lambda_{20} AFEE\_CLIENT_{it} + \\ & \lambda_{21} TAX\_CLIENT_{it} + \lambda_j Industry\ FE_{it} + \lambda_k Year\ FE_{it} + \Omega \end{aligned} \quad (6)$$

where:

DELAY = The number of days between the fiscal year end and the audit opinion date; and

all other variables are as previously defined.

Table 14 reports results for the estimation of Model (6) which I use to test whether audit timeliness (as measured by audit opinion delay) varies with NPAC. Consistent with model (2) above, λ_1 is the effect of NPAC on audit timeliness for public clients. The results again indicate that NPAC has a negative and significant impact on audit opinion delay quality (λ = -1.916, $p<0.05$). This result helps to ensure that earlier results are not sensitive to my choice of audit timeliness proxy.

With respect to the control variables, I find a positive and significant association between *DELAY* and *LEVERAGE*, *GCO*, *LOSS*, *ROA*, *INFLUENCE*, *INTANGIBLES*, *ARINV*, *ICMW*, *MKT_VOL*, *AFEE_CLIENT* and a negative and significant association between *DELAY* and *CLIENTSIZE*, *TENURE*, *ACCEL_FILER*, *MTB*, *FIN*, *FREEC*, *ACQ*, *AUDITORSIZE*, *TAX_CLIENT*, which is generally consistent with prior literature.

(Insert Table 14 here)

4.4.3.3 Alternative Measure of NPAC

My measure of NPAC assumes that all fees in audit analytics are from public clients. There is a concern that some public clients in Audit Analytics may behave differently than normal public clients, which would affect the numerator in my variable of interest, NPAC. Thus, in robustness (Table 15), I recalculate NPAC excluding private firms with public debt from my calculation of the numerator in NPAC. I identify private firms with public debt that exists in my sample by following Badertscher, Jorgensen, Katz, and Kinney (2014). They identify private firms with public debt as compustat observations that meet the following criteria: (1) the firm's stock price at fiscal year-end is unavailable (2) total debt as well as total annual revenues exceed

$1 million (3) the firm is a U.S.-domiciled company (4) the firm is not a subsidiary of another public firm (5) the firm is not a financial institution or in a regulated industry. I exclude these observations totaling 1,823 company years from the numerator in my variable of interest and find results consistent with my main tests with regard to audit quality and audit pricing. Contrary to my main results, I do not find that NPAC is associated with a decreased likelihood of late filing.

(Insert Table 15 Here)

4.4.3.4 Alternative Clustering by Company

Petersen (2009) suggests that residuals may be correlated across companies, which could bias OLS standard errors. Thus, to test the robustness of my main findings, I cluster observations by company for each of my main analyses and compare the results.

I report my findings in Table 16. After clustering by company for Models (1), (2), and (3), I find results similar to those reported in my main analyses. In Column (1), I regress *MISSTATE* on *NPAC* and other controls and find that the coefficient on *NPAC* is positive and insignificant (α = 0.001, p>0.10). In Column (2), I regress *LATE_FILE* on *NPAC* and other controls and find that the coefficient on *NPAC* is negative and significant ($ß$ = -0.037, p<0.05). In Column (3), I regress *CLIENT_LNAFEE* on *NPAC* and other controls and find that the coefficient on *NPAC* is negative and significant (δ = -0.530, p<0.01). Control variables from all three regressions in Table 16 are similar to those in my main analyses.

Overall, results from clustering by company suggest better audit outcomes for public audit clients that engage audit firms with higher NPAC, similar to my main analyses. That is, even when clustering by company, audit quality of public clients does not vary with NPAC, public clients of audit firms with higher NPAC are less likely to file late and are associated with

lower audit prices, suggesting that greater NPAC is associated with more cost-effective audits for public clients. Thus, the results provide additional support for the notion that the benefit of NPAC (resource flexibility) outweighs the potential cost (inexperience).

(Insert Table 16 Here)

5. Conclusion

Nonpublic audit fees make up a substantial portion of audit fees collected by accounting firms. More importantly, nonpublic audits are inherently different from public audits in terms of the level of assurance provided (compilation, review, or audit) and, within an audit, the responsibility of the audit firm to comply with regulatory requirements. I argue that NPAC could have two divergent impacts on public client audit outcomes. First, audit firms with high NPAC may have greater resource flexibility when completing public client audits which could be associated with better public client audit outcomes. Second, public clients of audit firms with greater NPAC could experience negative audit outcomes due to the audit firm's relative inexperience with the regulatory requirements of public client audits.

Using audit firm-level data provided by *Accounting Today*'s "Top 100 Firms" report, I find no significant association between NPAC and public client audit quality. In addition, I find evidence that greater NPAC is associated with a lower likelihood of filing financial statements late and lower audit fees. Collectively, my results suggest that higher NPAC is associated with more timely and cost-effective audits for public clients.

I perform a number of additional analyses and find that NPAC is associated with more timely and cost effective audits for clients of both Big 4 and non-Big 4 auditors and that NPAC may be associated with worse audit quality and less cost effective audits among clients in

litigious industries. I also find that inferences about the association of NPAC with more timely and cost effective audits are unchanged regardless of whether the client is a busy season filer, the ability of the audit firm to shift resources based on the number of audit offices, or audit firm growth. Given that results point to NPAC being associated with better audit value overall, I test the whether clients seek audit value in their decision to switch audit firms and find that the likelihood of switching audit firms decreases as NPAC increases and that clients that do switch are likely to choose an audit firm with greater NPAC.

In robustness tests, I find that my inferences are not sensitive to my choice of proxies for audit quality and audit timeliness. In other robustness tests, I use an alternative measure of NPAC and perform an alternative clustering approach by company and find results that are generally consistent with main analyses of audit quality, audit timeliness, and audit fees.

My findings should be important to audit committees charged with engaging an audit firm because they suggest that timely and cost-effective audits of similar quality are available from providers that do not concentrate on public client audits. My findings also contribute to audit literature that investigates audit firm portfolio characteristics including industry expertise (Solomon et al. 1999), workload compression (Lopez and Peters 2012), and audit firm size (Dopuch and Simunic 1980; DeAngelo 1981), among others. In addition, my study answers a call for more research about small nonpublic companies and the consequences of their auditing choices from Francis et al. (2011). Finally, I also provide a new measure, NPAC, that allows researchers to proxy for the influence of nonpublic clients within the audit firm's portfolio.

My study is subject to two important limitations. First, because the sample is limited to accounting firms appearing on the *Accounting Today*'s "Top 100 Firms" report, my results may not be generalizable to public clients audited by audit firms not appearing on the reports.

Because smaller audit firms tend to have smaller audit clients due to resource limitations for auditing larger clients, this could also systemically exclude smaller public clients from my sample. Second, my variable of interest, NPAC, includes all non-public audit fees collected by the audit firm. As such, I am unable disentangle audit and assurance fees collected from private, non-profit, governmental, and other clients. These limitations in my study provide an opportunity for future research as more and better data become available.

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Appendix
Variable Definitions

MISSTATE	= Indicator variable equal to one if the client has a financial statement misstatement reported through the filing of a Form 8-K with the SEC, zero otherwise.
LATE_FILE	= Indicator variable equal to one if the client files a financial report late, zero otherwise.
CLIENT_LNAFEE	= The natural logarithm of audit fees.
NPAC	= Audit fees collected from nonpublic clients divided by total audit fees collected as reported by *Accounting Today*'s "Top 100 firms" report.
CLIENTSIZE	= The natural logarithm of total assets.
LEVERAGE	= Total liabilities divided by total assets.
GCO	= Indicator variable equal to one if the client is issued a going concern opinion in the year, zero otherwise.
LOSS	= Indicator variable equal to one if net income is less than zero, zero otherwise.
ROA	= Operating income after depreciation divided by total assets.
TENURE	= Indicator variable equal to one if the current audit firm's tenure is more than four years, zero otherwise.
INFLUENCE	= Client audit fees divided by audit firm's total fees.
INTANGIBLES	= Intangible assets divided by total assets.
BUSY	= Indicator variable equal to one if the client has a December 31st fiscal year end, zero otherwise.
ACCEL_FILER	= Indicator variable equal to one if the client is an accelerated filer, zero otherwise.
MTB	= Book value of equity divided by market value of equity.
FIN	= The sum of cash raised from the issuance of long-term debt, common stock, and preferred stock divided by total assets.
FREEC	= Cash from operations minus average capital expenditures.

ACQ	= An indicator variable equal to one if there is an acquisition, zero otherwise.
ARINV	= The sum of accounts receivable and inventory divided by total assets.
ICMW	= An indicator variable equal to one if a material weakness in internal controls over financial reporting is disclosed in the year, zero otherwise.
MKT_VOL	= The standard deviation of the monthly price appreciation plus reinvestment of monthly dividends and cash equivalent distributions.
AUDITORSIZE	= Total revenue collected by the accounting firm in that year as reported by *Accounting Today*'s "Top 100 firms" report.
AFEE_CLIENT	= Audit fees at the client level.
TAX_CLIENT	= Tax fees paid to the auditor at the client level.
ACCRUALS	= The absolute value of the residual from a modified performance adjusted discretionary accruals model as in Kothari et al. (2005).
DELAY	= The number of days between the fiscal year end and the audit opinion date.

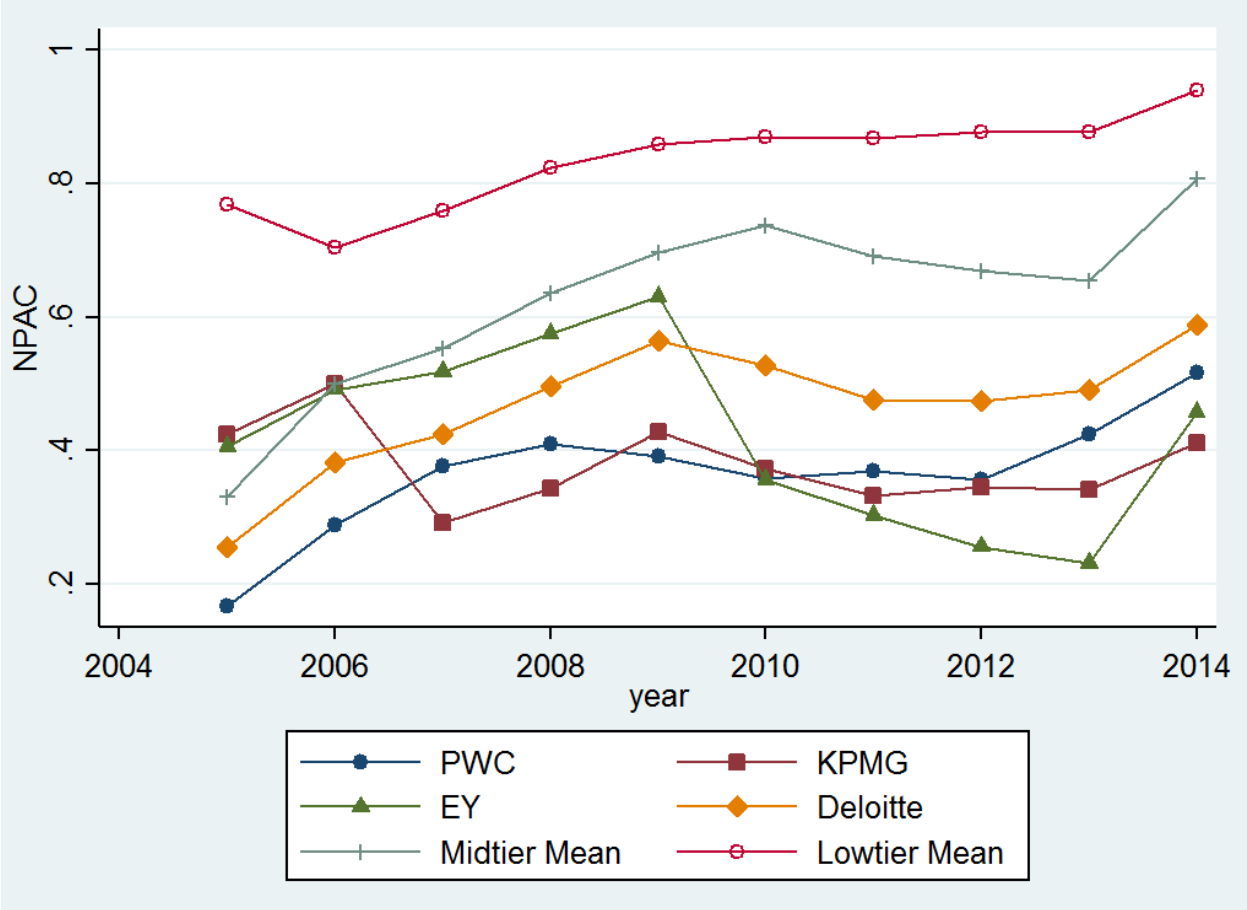

Figure 1. NPAC over the sample period of each Big 4 audit firm and average NPAC over the sample period for Midtier and Lowtier audit firms.

Table 1
Summary Statistics for Regression Variables

Variable	Obs.	Mean	Median	S.D.	75th	25th
MISSTATE	21,777	0.034	0	0.183	0	0
LATE_FILE	21,777	0.107	0	0.309	0	0
CLIENT_LNAFEE	21,777	13.753	13.752	1.179	14.498	12.221
NPAC	21,777	0.474	0.425	0.179	0.576	0.356
CLIENTSIZE	21,777	6.038	6.050	2.079	7.453	13.455
LEVERAGE	21,777	0.507	0.471	0.313	0.644	0.291
GCO	21,777	0.046	0	0.209	0	0
LOSS	21,777	0.353	0	0.478	1	0
ROA	21,777	-0.009	0.064	0.275	0.117	-0.017
TENURE	21,777	0.533	1	0.499	1	0
INFLUENCE	21,777	0.009	0.001	0.048	0.003	0.000
INTANGIBLES	21,777	0.174	0.103	0.194	0.284	0.009
BUSY	21,777	0.713	1	0.453	1	0
ACCEL_FILER	21,777	0.859	1	0.449	1	1
MTB	21,777	3.445	2.08	53.786	3.619	1.210
FIN	21,777	0.200	0.04	1.092	0.219	0.006
FREEC	21,777	51.122	8.349	196.897	33.617	1.029
ACQ	21,777	0.001	0	0.035	0	0
ARINV	21,777	0.257	0.227	0.188	0.366	0.109
ICMW	21,777	0.143	0	0.350	0	0
MKT_VOL	21,777	16.923	11.887	322.443	16.950	8.252
AUDITORSIZE	21,777	5838.300	6330.64	3521.674	8034	4115
AFEE_CLIENT	21,777	1.939	0.938	3.714	1.979	0.434
TAX_CLIENT	21,777	0.254	0.040	0.735	0.189	0

The sample consists of all observations that have the necessary data from Audit Analytics, Compustat, and *Accounting Today*'s "Top 100 firms" report.

Table 2
Summary Statistics for Regression Variables
Big 4 versus non-Big 4

			Big 4			
Variable	Obs.	Mean	Median	S.D.	75th	25th
MISSTATE	16,548	0.035	0	0.183	0	0
LATE_FILE	16,548	0.082	0	0.274	0	0
CLIENT_LNAFEE	16,548	14.111	14.027	1.008	14.732	13.425
NPAC	16,548	0.405	0.406	0.108	0.492	0.344
CLIENTSIZE	16,548	6.625	6.603	1.798	7.808	5.395
LEVERAGE	16,548	0.506	0.487	0.277	0.646	0.310
GCO	16,548	0.025	0	0.155	0	0
LOSS	16,548	0.308	0	0.462	1	0
ROA	16,548	0.021	0.074	0.229	0.123	0.010
TENURE	16,548	0.644	1	0.479	1	0
INFLUENCE	16,548	0.001	0.001	0.002	0.001	0.000
INTANGIBLES	16,548	0.184	0.120	0.194	0.301	0.017
BUSY	16,548	0.733	1	0.442	1	0
ACCEL_FILER	16,548	0..903	1	0.295	1	1
MTB	16,548	3.616	2.210	60.148	3.724	1.338
FIN	16,548	0.184	0.043	1.198	0.209	0.008
FREEC	16,548	65.448	14.455	223.445	47.420	3.122
ACQ	16,548	0.001	0	0.035	0	0
ARINV	16,548	0.245	0.219	0.175	0.343	0.108
ICMW	16,548	0.102	0	0.302	0	0
MKT_VOL	16,548	13.506	11.129	51.316	15.773	7.792
AUDITORSIZE	16,548	7515.089	7463.770	2134.351	8232.1	5753
AFEE_CLIENT	16,548	2.400	1.236	4.141	2.500	0.677
TAX_CLIENT	16,548	0.325	0.071	0.829	0.281	0.004

The sample consists of all observations that have the necessary data from Audit Analytics, Compustat and *Accounting Today*'s "Top 100 firms" report.

Table 2 (cont.)

		Non-Big 4				
Variable	Obs.	Mean	Median	S.D.	75th	25th
MISSTATE	5,229	0.034	0	0.182	0	0
LATE_FILE	5,229	0.184	0	0.388	0	0
CLIENT_LNAFEE	5,229	12.621	12.564	0.940	13.254	11.965
NPAC	5,229	0.690	0.666	0.189	0.859	0.599
CLIENTSIZE	5,229	4.181	4.239	1.796	5.342	3.132
LEVERAGE	5,229	0.507	0.409	0.406	0.633	0.240
GCO	5,229	0.113	0	0.317	0	0
LOSS	5,229	0.495	0	0.500	1	0
ROA	5,229	-0.104	0.018	0.370	0.088	-0.127
TENURE	5,229	0.182	0	0.386	0	0
INFLUENCE	5,229	0.033	0.007	0.093	0.025	0.002
INTANGIBLES	5,229	0.142	0.053	0.189	0.225	0
BUSY	5,229	0.648	1	0.478	1	0
ACCEL_FILER	5,229	0.652	1	0.655	1	0
MTB	5,229	2.905	1.639	24.467	3.147	0.883
FIN	5,229	0.248	0.028	0.652	0.251	0.002
FREEC	5,229	5.786	1.228	27.385	4.760	-0.349
ACQ	5,229	0.001	0	0.037	0	0
ARINV	5,229	0.295	0.263	0.218	0.445	0.112
ICMW	5,229	0.272	0	0.445	1	0
MKT_VOL	5,229	27.738	14.600	651.592	20.912	10.203
AUDITORSIZE	5,229	531.818	558.000	419.980	939.550	98.580
AFEE_CLIENT	5,229	0.481	.286	0.618	.570	.157
TAX_CLIENT	5,229	0.029	0	0.076	0.030	0

The sample consists of all observations that have the necessary data from Audit Analytics, Compustat and *Accounting Today*'s "Top 100 firms" report.

Table 3
Pearson and Spearman Correlation Table

Variable		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
MISSTATE	(1)		**0.100**	0.001	**-0.032**	**-0.023**	**0.016**	**-0.018**	**0.015**	**-0.024**	**-0.047**	-0.007	**0.014**
LATE_FILE	(2)	**0.100**		**-0.061**	**0.035**	**-0.165**	**0.076**	**0.203**	**0.159**	**-0.162**	**-0.165**	**0.112**	-0.014
CLIENT_LNAFEE	(3)	-0.001	**-0.069**		**-0.338**	**0.848**	**0.266**	**-0.212**	**-0.274**	**0.331**	**0.332**	**0.234**	**0.367**
NPAC	(4)	**-0.034**	**0.046**	**-0.419**		**-0.306**	**-0.026**	**0.125**	**0.123**	**-0.135**	**-0.229**	**0.426**	**-0.085**
CLIENTSIZE	(5)	**-0.020**	**-0.176**	**0.860**	**-0.378**		**0.285**	**-0.266**	**-0.403**	**0.451**	**0.362**	**0.164**	**0.305**
LEVERAGE	(6)	0.011	**0.117**	**0.124**	**0.033**	**0.058**		**0.168**	**0.068**	**-0.014**	**0.032**	**0.181**	**0.106**
GCO	(7)	**-0.018**	**0.203**	**-0.225**	**0.161**	**-0.327**	**0.314**		**0.269**	**-0.295**	**-0.139**	**0.072**	**-0.099**
LOSS	(8)	**0.015**	**0.159**	**-0.268**	**0.135**	**-0.402**	**0.140**	**0.269**		**-0.735**	**-0.175**	**-0.041**	**-0.167**
ROA	(9)	-0.001	**-0.135**	**0.364**	**-0.172**	**0.525**	**-0.204**	**-0.508**	**-0.575**		**0.201**	**0.043**	**0.214**
TENURE	(10)	**-0.047**	**-0.165**	**0.336**	**-0.258**	**0.360**	-0.012	**-0.139**	**-0.175**	**0.164**		**-0.142**	**0.092**
INFLUENCE	(11)	-0.004	**0.053**	**-0.152**	**0.365**	**-0.141**	0.008	**0.062**	**0.033**	**-0.055**	**-0.108**		**0.162**
INTANGIBLES	(12)	0.012	-0.004	**0.264**	**-0.079**	**0.227**	**0.036**	**-0.058**	**-0.114**	**0.165**	**0.057**	**-0.024**	
BUSY	(13)	-0.012	**-0.042**	**0.067**	**-0.067**	**0.065**	**0.064**	**0.015**	**0.053**	**-0.062**	**0.034**	**-0.035**	-0.006
ACCEL_FILER	(14)	-0.003	**-0.072**	**0.467**	**-0.220**	**0.318**	**-0.016**	**-0.102**	**-0.156**	**0.140**	**0.159**	**-0.099**	**0.087**
MTB	(15)	0.000	-0.006	-0.008	-0.004	**-0.017**	-0.013	-0.005	0.004	**-0.030**	0.008	-0.004	-0.003
FIN	(16)	0.000	**0.016**	**-0.046**	**0.016**	**-0.077**	**0.080**	**0.075**	**0.057**	**-0.151**	**-0.031**	0.005	**-0.017**
FREEC	(17)	**-0.025**	**-0.067**	**0.393**	**-0.094**	**0.450**	**0.046**	**-0.058**	**-0.152**	**0.129**	**0.143**	**-0.016**	0.010
ACQ	(18)	-0.007	0.001	**0.016**	-0.005	0.011	-0.008	-0.002	-0.001	0.008	0.002	-0.003	0.006
ARINV	(19)	0.008	**0.053**	-0.007	**0.100**	**-0.039**	**0.078**	**-0.038**	**-0.125**	**0.203**	**-0.056**	**0.065**	**-0.156**
ICMW	(20)	**0.100**	**0.341**	**-0.237**	**0.056**	**-0.310**	**0.069**	**0.154**	**0.157**	**-0.152**	**-0.229**	**0.069**	**-0.046**
MKT_VOL	(21)	-0.001	0.002	**-0.026**	**0.021**	**-0.036**	**0.039**	**0.042**	0.006	-0.004	-0.012	0.004	-0.011
AUDITORSIZE	(22)	**-0.026**	**-0.159**	**0.511**	**-0.460**	**0.484**	**0.015**	**-0.168**	**-0.154**	**0.186**	**0.389**	**-0.264**	**0.097**
AFEE_CLIENT	(23)	-0.010	**-0.019**	**0.659**	**-0.165**	**0.552**	**0.137**	**-0.077**	**-0.146**	**0.152**	**0.184**	**-0.030**	**0.141**
TAX_CLIENT	(24)	-0.013	**-0.049**	**0.461**	**-0.127**	**0.414**	**0.085**	**-0.062**	**-0.147**	**0.126**	**0.157**	**-0.029**	**0.140**

Bold coefficients are significant at the <0.05 level.
Pearson correlations are in the bottom left, Spearman correlations are in the top right.
See the appendix for variable definitions.

Table 3 (Cont.)

Variable		(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)
MISSTATE	(1)	-0.012	-0.003	0.002	**0.018**	**-0.037**	-0.007	0.007	**0.100**	**0.025**	**-0.033**	0.001	0.001
LATE_FILE	(2)	**-0.042**	**-0.081**	**-0.086**	**0.014**	**-0.167**	0.001	**0.042**	**0.341**	**0.123**	**-0.162**	**-0.061**	**-0.086**
CLIENT_LNAFEE	(3)	**0.054**	**0.464**	**0.099**	**0.079**	**0.683**	**0.015**	**0.062**	**-0.223**	**-0.335**	**0.474**	**1.000**	**0.529**
NPAC	(4)	**-0.058**	**-0.182**	**-0.123**	**-0.060**	**-0.224**	-0.004	**0.062**	**0.038**	**0.176**	**-0.265**	**-0.337**	**-0.231**
CLIENTSIZE	(5)	**0.062**	**0.345**	**0.085**	**0.073**	**0.851**	0.010	-0.006	**-0.306**	**-0.442**	**0.450**	**0.848**	**0.497**
LEVERAGE	(6)	**0.073**	0.019	**-0.033**	**0.226**	**0.200**	-0.005	**0.108**	**0.020**	**0.036**	**0.087**	**0.266**	**0.141**
GCO	(7)	**0.015**	**-0.118**	**-0.112**	**0.074**	**-0.252**	-0.002	**-0.066**	**0.154**	**0.244**	**-0.157**	**-0.212**	**-0.138**
LOSS	(8)	**0.053**	**-0.171**	**-0.156**	**0.094**	**-0.526**	-0.001	**-0.159**	**0.157**	**0.415**	**-0.134**	**-0.274**	**-0.223**
ROA	(9)	**-0.049**	**0.191**	**0.259**	**-0.084**	**0.614**	0.002	**0.205**	**-0.177**	**-0.413**	**0.166**	**0.331**	**0.255**
TENURE	(10)	**0.034**	**0.174**	**0.114**	0.008	**0.306**	0.002	**-0.033**	**-0.229**	**-0.203**	**0.360**	**0.332**	**0.263**
INFLUENCE	(11)	**-0.046**	**-0.077**	**-0.070**	-0.003	**0.177**	**0.015**	**0.152**	**0.055**	**-0.055**	**-0.451**	**0.234**	**0.077**
INTANGIBLES	(12)	**-0.030**	**0.127**	**0.041**	**0.057**	**0.251**	0.013	0.004	**-0.072**	**-0.214**	**0.121**	**0.367**	**0.233**
BUSY	(13)		**0.054**	**0.038**	**0.079**	**0.043**	-0.004	**-0.136**	**-0.071**	**0.050**	**0.068**	**0.054**	0.001
ACCEL_FILER	(14)	**0.053**		**0.121**	**0.044**	**0.282**	0.003	**-0.065**	**-0.148**	**-0.153**	**0.247**	**0.333**	**0.203**
MTB	(15)	0.004	0.002		**0.161**	**0.142**	-0.005	**-0.141**	**-0.044**	**-0.164**	**0.097**	**0.099**	**0.090**
FIN	(16)	**0.024**	**-0.018**	**0.499**		**0.016**	-0.006	**-0.142**	**0.053**	**0.048**	**0.051**	**0.079**	0.004
FREEC	(17)	**0.038**	**0.075**	0.001	**-0.020**		0.010	**-0.028**	**-0.268**	**-0.452**	**0.337**	**0.683**	**0.425**
ACQ	(18)	-0.004	0.002	-0.001	-0.002	0.001		0.003	-0.011	-0.008	-0.001	**0.015**	0.013
ARINV	(19)	**-0.128**	**-0.092**	**-0.023**	**-0.017**	**-0.068**	0.001		**0.048**	**-0.042**	**-0.067**	**0.062**	**0.064**
ICMW	(20)	**-0.071**	**-0.132**	-0.002	**0.036**	**-0.090**	-0.011	**0.071**		**0.134**	**-0.232**	**-0.223**	**-0.133**
MKT_VOL	(21)	0.006	**-0.021**	-0.001	**0.028**	-0.007	-0.001	0.002	0.005		**-0.159**	**-0.335**	**-0.250**
AUDITORSIZE	(22)	**0.072**	**0.245**	0.002	**-0.022**	**0.124**	-0.001	**-0.098**	**-0.229**	**-0.018**		**0.474**	**0.323**
AFEE_CLIENT	(23)	**0.041**	**0.121**	0.000	**-0.027**	**0.634**	0.013	**0.016**	**-0.079**	-0.009	**0.207**		**0.529**
TAX_CLIENT	(24)	**0.038**	**0.092**	0.001	**-0.022**	**0.409**	0.005	0.003	**-0.087**	-0.007	**0.185**	**0.632**	

Bold coefficients are significant at the <0.05 level.
Pearson correlations are in the bottom left, Spearman correlations are in the top right.
See the appendix for variable definitions.

Table 4
The association between audit quality (*MISSTATE*) and NPAC

	Coeff.	t-value
NPAC	**0.001**	**(0.14)**
CLIENTSIZE	0.001	(0.85)
LEVERAGE	0.012**	(2.56)
GCO	-0.030***	(-4.71)
LOSS	0.005	(1.52)
ROA	-0.003	(-0.44)
TENURE	-0.010***	(-3.37)
INFLUENCE	-0.010	(-0.57)
INTANGIBLES	0.007	(0.94)
BUSY	-0.003	(-0.91)
ACCEL_FILER	0.007	(1.62)
MTB	0.000	(0.81)
FIN	-0.000	(-0.83)
FREEC	-0.000***	(-3.29)
ACQ	-0.026***	(-5.06)
ARINV	-0.005	(-0.56)
ICMW	0.037***	(6.58)
MKT_VOL	0.000	(0.37)
AUDITORSIZE	0.000*	(1.75)
AFEE_CLIENT	0.000	(0.38)
TAX_CLIENT	-0.000	(-0.46)
Constant	-0.015	(-0.96)
Industry FE	Yes	
Year FE	Yes	
Observations	21,777	
Adj. R-squared	0.027	

This table presents results from the estimation of Model (1) used to test H1. See the Appendix for variable definitions. Models are run with robust standard errors. *, **, *** indicate significance at $p < 0.10$, $p < 0.05$, and $p < 0.01$ levels, respectively (using two-tailed tests).

Table 5
The association between audit timeliness (*LATE_FILE*) and NPAC

	Coeff.	t-value
NPAC	**-0.037****	**(-2.27)**
CLIENTSIZE	-0.003*	(-1.55)
LEVERAGE	0.050***	(5.64)
GCO	0.191***	(11.33)
LOSS	0.056***	(9.63)
ROA	0.033**	(2.35)
TENURE	-0.030***	(-6.85)
INFLUENCE	0.111*	(1.83)
INTANGIBLES	0.048***	(3.88)
BUSY	-0.012***	(-2.61)
ACCEL_FILER	-0.001	(-0.30)
MTB	0.000	(0.36)
FIN	-0.002	(-1.01)
FREEC	-0.000***	(-6.52)
ACQ	0.033	(0.66)
ARINV	0.065***	(3.96)
ICMW	0.225***	(23.57)
MKT_VOL	-0.000***	(-7.13)
AUDITORSIZE	-0.000***	(-3.46)
AFEE_CLIENT	0.000***	(7.17)
TAX_CLIENT	-0.000***	(-3.17)
Constant	0.004	(0.03)
Industry FE	Yes	
Year FE	Yes	
Observations	21,777	
Adj. R-squared	0.172	

This table presents results from the estimation of Model (2) used to test H2. See the Appendix for variable definitions. Models are run with robust standard errors. *, **, *** indicate significance at $p < 0.10$, $p < 0.05$, and $p < 0.01$ levels, respectively (using two-tailed tests).

Table 6
The association between audit fees (*CLIENT_LNAFEE)* and NPAC

	Coeff.	t-value
NPAC	**-0.536*** **	**(-19.37)**
CLIENTSIZE	0.484***	(141.45)
LEVERAGE	0.236***	(16.84)
GCO	0.058***	(2.77)
LOSS	0.120***	(13.03)
ROA	-0.385***	(-18.88)
TENURE	-0.010	(-1.35)
INFLUENCE	0.232**	(2.50)
INTANGIBLES	0.161***	(7.69)
BUSY	0.045***	(5.82)
ACCEL_FILER	0.121***	(10.77)
MTB	0.000	(0.18)
FIN	0.012***	(5.37)
FREEC	-0.000**	(-2.28)
ACQ	0.183**	(2.27)
ARINV	0.541***	(19.93)
ICMW	0.063***	(4.82)
MKT_VOL	0.000***	(4.98)
AUDITORSIZE	0.000***	(19.87)
TAX_CLIENT	0.000***	(18.53)
Constant	10.146***	(30.40)
Industry FE	Yes	
Year FE	Yes	
Observations	21,777	
Adj. R-squared	0.829	

This table presents results from the estimation of Model (3) used to test H3. See the Appendix for variable definitions. Models are run with robust standard errors. *, **, *** indicate significance at $p < 0.10$, $p < 0.05$, and $p < 0.01$ levels, respectively (using two-tailed tests).

Table 7
Additional Analyses: Cross sectional tests of clients of Big 4 audit firms

Panel A: DV=MISSTATE

	(1) *Big 4*		(2) *Non-Big 4*		(3) *Difference*
	Coeff.	t-value	Coeff.	t-value	z-stat
NPAC	-0.038 **	(-1.75)	-0.002	(-0.08)	-1.182
Control Variables	Yes		Yes		
Industry FE	Yes		Yes		
Year FE	Yes		Yes		
Observations	16,548		5,229		
Adj. R-squared	0.032		0.027		

Panel B: DV=LATE_FILE

	(1) *Big 4*		(2) *Non-Big 4*		(3) *Difference*
	Coeff.	t-value	Coeff.	t-value	z-stat
NPAC	-0.165 ***	(-5.48)	-0.119 ***	(-2.80)	-0.875
Control Variables	Yes		Yes		
Industry FE	Yes		Yes		
Year FE	Yes		Yes		
Observations	16,548		5,229		
Adj. R-squared	0.160		0.167		

Panel C: DV=CLIENT_LNAFEE

	(1) *Big 4*		(2) *Non-Big 4*		(3) *Difference*
	Coeff.	t-value	Coeff.	t-value	z-stat
NPAC	-0.357 ***	(-7.59)	-0.669 ***	(-12.36)	6.113 ***
Control Variables	Yes		Yes		
Industry FE	Yes		Yes		
Year FE	Yes		Yes		
Observations	6,432		15,345		
Adj. R-squared	0.823		0.841		

This table presents results from the estimation of Model (1), (2), and (3) used to test H1, H2, and H3 for clients of Big 4 and non-Big 4 audit firms. See the Appendix for variable definitions. The Z-statistic is calculated using the formula referenced in footnote 18. Models are run with robust standard errors. *, **, *** indicate significance at $p < 0.10$, $p < 0.05$, and $p < 0.01$ levels, respectively (using two-tailed tests).

Table 8
Additional Analyses: Cross sectional tests of clients in litigious industries

Panel A: DV=MISSTATE

	(1) *Litigious*		(2) *Non-Litigious*		(3) *Difference*
	Coeff.	t-value	Coeff.	t-value	z-stat
NPAC	0.032 *	(1.89)	-0.011	(-0.92)	2.077 ***
Control Variables	Yes		Yes		
Industry FE	Yes		Yes		
Year FE	Yes		Yes		
Observations	6,432		15,345		
Adj. R-squared	0.032		0.027		

Panel B: DV=LATE_FILE

	(1) *Litigious*		(2) *Non-Litigious*		(3) *Difference*
	Coeff.	t-value	Coeff.	t-value	z-stat
NPAC	-0.029	(-0.96)	-0.044 **	(-2.25)	0.408
Control Variables	Yes		Yes		
Industry FE	Yes		Yes		
Year FE	Yes		Yes		
Observations	6,432		15,345		
Adj. R-squared	0.145		0.191		

Panel C: DV=CLIENT_LNAFEE

	(1) *Litigious*		(2) *Non-Litigious*		(3) *Difference*
	Coeff.	t-value	Coeff.	t-value	z-stat
NPAC	-0.421 ***	(-8.65)	-0.585 ***	(-17.56)	2.778 ***
Control Variables	Yes		Yes		
Industry FE	Yes		Yes		
Year FE	Yes		Yes		
Observations	6,432		15,345		
Adj. R-squared	0.819		0.834		

This table presents results from the estimation of Model (1), (2), and (3) used to test H1, H2, and H3 for clients in litigious industries and clients in non-litigious industries. See the Appendix for variable definitions. The Z-statistic is calculated using the formula referenced in footnote 18. Models are run with robust standard errors. *, **, *** indicate significance at $p < 0.10$, $p < 0.05$, and $p < 0.01$ levels, respectively (using two-tailed tests).

Table 9
Additional Analyses: Cross sectional tests of busy season clients

Panel A: DV=MISSTATE

	(1) *Busy*		(2) *Non-Busy*		(3) *Difference*
	Coeff.	t-value	Coeff.	t-value	z-stat
NPAC	-0.007	(-0.65)	0.019	(0.99)	-1.182
Control Variables	Yes		Yes		
Industry FE	Yes		Yes		
Year FE	Yes		Yes		
Observations	15517		6260		
Adj. R-squared	0.026		0.046		

Panel B: DV=LATE_FILE

	(1) *Busy*		(2) *Non-Busy*		(3) *Difference*
	Coeff.	t-value	Coeff.	t-value	z-stat
NPAC	-0.040**	(-2.07)	-0.057*	(-1.76)	0.448
Control Variables	Yes		Yes		
Industry FE	Yes		Yes		
Year FE	Yes		Yes		
Observations	15517		6260		
Adj. R-squared	0.171		0.183		

Panel C: DV=CLIENT_LNAFEE

	(1) *Busy*		(2) *Non-Busy*		(3) *Difference*
	Coeff.	t-value	Coeff.	t-value	z-stat
NPAC	-0.554***	(-16.74)	-0.490***	(-9.89)	-1.087
Control Variables	Yes		Yes		
Industry FE	Yes		Yes		
Year FE	Yes		Yes		
Observations	15517		6260		
Adj. R-squared	0.828		0.839		

This table presents results from the estimation of Model (1), (2), and (3) used to test H1, H2, and H3 for busy and non-busy season clients. See the Appendix for variable definitions. The Z-statistic is calculated using the formula referenced in footnote 18. Models are run with robust standard errors. *, **, *** indicate significance at $p < 0.10$, $p < 0.05$, and $p < 0.01$ levels, respectively (using two-tailed tests).

Table 10
Additional Analyses: Cross sectional tests of clients of audit firms with five or fewer offices

Panel A: DV=MISSTATE

	(1) *<=5 Offices*		(2) *>5 Offices*		(3) *Difference*
	Coeff.	t-value	Coeff.	t-value	z-stat
NPAC	-0.043	(-0.90)	0.010	(0.95)	-1.077
Control Variables	Yes		Yes		
Industry FE	Yes		Yes		
Year FE	Yes		Yes		
Observations	1046		20731		
Adj. R-squared	0.029		0.029		

Panel B: DV=LATE_FILE

	(1) *<=5 Offices*		(2) *>5 Offices*		(3) *Difference*
	Coeff.	t-value	Coeff.	t-value	z-stat
NPAC	-0.055	(-0.58)	-0.038 **	(-2.32)	-0.170
Control Variables	Yes		Yes		
Industry FE	Yes		Yes		
Year FE	Yes		Yes		
Observations	1046		20731		
Adj. R-squared	0.196		0.159		

Panel C: DV=CLIENT_LNAFEE

	(1) *<=5 Offices*		(2) *>5 Offices*		(3) *Difference*
	Coeff.	t-value	Coeff.	t-value	z-stat
NPAC	-0.757 *****	(-6.51)	-0.508 ***	(-17.87)	-2.079 **
Control Variables	Yes		Yes		
Industry FE	Yes		Yes		
Year FE	Yes		Yes		
Observations	1046		20731		
Adj. R-squared	0.696		0.819		

This table presents results from the estimation of Model (1), (2), and (3) used to test H1, H2, and H3 for clients of audit firms with fewer than 5 offices and clients of audit firms with greater than 5 offices. See the Appendix for variable definitions. The Z-statistic is calculated using the formula referenced in footnote 18. Models are run with robust standard errors. *, **, *** indicate significance at $p < 0.10$, $p < 0.05$, and $p < 0.01$ levels, respectively (using two-tailed tests).

Table 11
Additional Analyses: Cross sectional tests of clients of high growth audit firms

Panel A: DV=MISSTATE

	(1) *High Growth*		(2) *Low Growth*		(3) *Difference*
	Coeff.	t-value	Coeff.	t-value	z-stat
NPAC	-0.000	(-0.03)	0.014	(1.06)	-0.751
Control Variables	Yes		Yes		
Industry FE	Yes		Yes		
Year FE	Yes		Yes		
Observations	8893		8974		
Adj. R-squared	0.018		0.015		

Panel B: DV=LATE_FILE

	(1) *High Growth*		(2) *Low Growth*		(3) *Difference*
	Coeff.	t-value	Coeff.	t-value	z-stat
NPAC	-0.041	(-1.53)	0.032	(1.25)	-1.969 **
Control Variables	Yes		Yes		
Industry FE	Yes		Yes		
Year FE	Yes		Yes		
Observations	8893		8974		
Adj. R-squared	0.180		0.164		

Panel C: DV=CLIENT_LNAFEE

	(1) *High Growth*		(2) *Low Growth*		(3) *Difference*
	Coeff.	t-value	Coeff.	t-value	z-stat
NPAC	-0.348 ***	(-7.47)	-0.663 ***	(-15.49)	<0.01 ***
Control Variables	Yes		Yes		
Industry FE	Yes		Yes		
Year FE	Yes		Yes		
Observations	8893		8974		
Adj. R-squared	0.837		0.838		

This table presents results from the estimation of Model (1), (2), and (3) used to test H1, H2, and H3 for clients of high growth audit firms and clients of low growth audit firms. See the Appendix for variable definitions. The Z-statistic is calculated using the formula referenced in footnote 18. Models are run with robust standard errors. *, **, *** indicate significance at $p < 0.10$, $p < 0.05$, and $p < 0.01$ levels, respectively (using two-tailed tests).

Table 12
Additional Analysis: The association between the likelihood of switching audit firms and *NPAC*

DV=AUDITOR_SWITCH$_{t+1}$

	Coeff.	t-value
NPAC	-0.050***	(-5.08)
CLIENTSIZE	-0.002*	(-1.90)
LEVERAGE	-0.015***	(-3.52)
GCO	0.019**	(2.05)
LOSS	0.012***	(3.58)
ROA	0.019***	(2.77)
TENURE	-0.073***	(-24.47)
INFLUENCE	0.123***	(2.82)
INTANGIBLES	0.001	(0.14)
BUSY	-0.003	(-1.00)
ACCEL_FILER	-0.003	(-0.70)
MTB	-0.000	(-0.16)
FIN	-0.000	(-0.06)
FREEC	0.000	(0.23)
ACQ	0.009	(0.25)
ARINV	0.016*	(1.75)
ICMW	0.019***	(3.80)
MKT_VOL	-0.000***	(-3.27)
AUDITORSIZE	0.000***	(7.49)
AFEE_CLIENT	0.000	(1.51)
TAX_CLIENT	-0.000	(-0.93)
Constant	0.020	(1.36)
Industry FE	Yes	
Year FE	Yes	
Observations	21777	
Adj. R-squared	0.048	

This table presents results from the estimation of Model (4). *AUDITOR_SWITCH* is an indicator equal to one if the client switches audit firms in the following year, zero otherwise. See the Appendix for all other variable definitions. Models are run with robust standard errors. *, **, *** indicate significance at $p < 0.10$, $p < 0.05$, and $p < 0.01$ levels, respectively (using two-tailed tests).

Table 13
Robustness: The association between audit quality (discretionary accruals) and NPAC

	Coeff.	t-value
NPAC	**-0.002**	**(-0.58)**
CLIENTSIZE	-0.005***	(-11.78)
LEVERAGE	0.024***	(9.79)
GCO	0.008*	(1.80)
LOSS	0.015***	(10.40)
ROA	-0.016***	(-3.92)
TENURE	-0.004***	(-3.62)
INFLUENCE	-0.006	(-0.54)
INTANGIBLES	-0.025***	(-9.01)
BUSY	0.003***	(3.40)
ACCEL_FILER	0.002	(1.62)
BTM	0.000	(0.55)
FIN	0.004***	(2.82)
FREEC	0.000	(1.42)
ACQ	0.021**	(1.97)
ARINV	0.004	(1.02)
ICMW	0.005**	(2.24)
MKT_VOL	0.000	(1.28)
AUDITORSIZE	0.000**	(2.09)
AFEE_CLIENT	-0.000	(-1.39)
TAX_CLIENT	-0.000	(-1.02)
Constant	0.052***	(6.95)
Industry FE	Yes	
Year FE	Yes	
Observations	17,848	
Adj. R-squared	0.177	

This table presents results from the estimation of Model (5). *ACCRUALS* is the absolute value of the residual from a modified performance adjusted discretionary accruals model as in Kothari et al. (2005). See the Appendix for all other variable definitions. Models are run with robust standard errors. *, **, *** indicate significance at $p < 0.10$, $p < 0.05$, and $p < 0.01$ levels, respectively (using two-tailed tests).

Table 14
Robustness: The association between audit timeliness (audit opinion delay) and NPAC

	Coeff.	t-value
NPAC	**-1.916****	(-2.57)
CLIENTSIZE	-3.074***	(-33.70)
LEVERAGE	1.669***	(4.54)
GCO	5.668***	(8.73)
LOSS	3.679***	(15.23)
ROA	3.276***	(5.55)
TENURE	-1.587***	(-8.46)
INFLUENCE	8.956***	(4.17)
INTANGIBLES	4.289***	(8.28)
BUSY	0.230	(1.11)
ACCEL_FILER	-3.640***	(-11.16)
MTB	-0.003**	(-2.20)
FIN	-0.194*	(-1.81)
FREEC	-0.003***	(-4.90)
ACQ	-3.987*	(-1.91)
ARINV	3.199***	(4.51)
ICMW	7.083***	(17.30)
MKT_VOL	0.003***	(3.32)
AUDITORSIZE	-0.000***	(-5.35)
AFEE_CLIENT	0.000***	(8.31)
TAX_CLIENT	-0.000***	(-5.22)
Constant	89.642***	(24.94)
Industry FE	Yes	
Year FE	Yes	
Observations	21,775	
Adj. R-squared	0.370	

This table presents results from the estimation of Model (6). *DELAY* is the number of days between the fiscal year end and the audit opinion date. See the Appendix for all other variable definitions. Models are run with robust standard errors. *, **, *** indicate significance at $p < 0.10$, $p < 0.05$, and $p < 0.01$ levels, respectively (using two-tailed tests).

Table 15
Other Robustness: Alternative measure of NPAC

	(1) *MISSTATE*		(2) *LATE_FILE*		(3) *CLIENT_LNAFEE*	
	Coeff.	t-value	Coeff.	t-value	Coeff.	t-value
NPAC_ALT	0.004	(0.39)	-0.030	(-1.63)	-0.600 ***	(-19.48)
CLIENTSIZE	0.001	(0.89)	-0.003	(-1.46)	0.484 ***	(141.39)
LEVERAGE	0.012 **	(2.56)	0.050 ***	(5.63)	0.235 ***	(16.80)
GCO	-0.030 ***	(-4.71)	0.190 ***	(11.33)	0.059 ***	(2.82)
LOSS	0.005	(1.53)	0.056 ***	(9.64)	0.119 ***	(12.93)
ROA	-0.003	(-0.44)	0.033 **	(2.34)	-0.385 ***	(-18.88)
TENURE	-0.010 ***	(-3.35)	-0.029 ***	(-6.79)	-0.010	(-1.36)
INFLUENCE	-0.012	(-0.69)	0.102 *	(1.69)	0.238 **	(2.56)
INTANGIBLES	0.007	(0.94)	0.048 ***	(3.87)	0.161 ***	(7.74)
BUSY	-0.003	(-0.90)	-0.012 ***	(-2.59)	0.045 ***	(5.82)
ACCEL_FILER	0.007	(1.63)	-0.002	(-0.27)	0.120 ***	(10.69)
MTB	0.000	(0.81)	0.000	(0.36)	0.000	(0.18)
FIN	-0.000	(-0.82)	-0.002	(-1.00)	0.012 ***	(5.36)
FREEC	-0.000 ***	(-3.31)	-0.000 ***	(-6.54)	-0.000 **	(-2.28)
ACQ	-0.026 ***	(-5.05)	0.033	(0.67)	0.183 **	(2.28)
ARINV	-0.005	(-0.57)	0.064 ***	(3.94)	0.542 ***	(19.98)
ICMW	0.037 ***	(6.58)	0.225 ***	(23.59)	0.064 ***	(4.90)
MKT_VOL	0.000	(0.36)	-0.000 ***	(-7.14)	0.000 ***	(5.08)
AUDITORSIZE	0.000 *	(1.86)	-0.000 ***	(-3.14)	0.000 ***	(22.22)
AFEE_CLIENT	0.000	(0.38)	0.000 ***	(7.18)		
TAX_CLIENT	-0.000	(-0.47)	-0.000 ***	(-3.19)	0.000 ***	(18.55)
Constant	-0.017	(-1.05)	0.002	(0.01)	10.220 ***	(30.62)
Industry FE	Yes		Yes		Yes	
Year FE	Yes		Yes		Yes	
Observations	21,777		21,777		21,777	
Adj. R-squared	0.027		0.172		0.829	

This table presents results from the estimation of Model (1) and (2). *NPAC_ALT* excludes private firms with public debt from the numerator of *NPAC* following the criteria set forth in Badertscher et al. (2014). See the text for full description of the criteria. See the Appendix for all other variable definitions. Models are run with robust standard errors. *, **, *** indicate significance at $p < 0.10$, $p < 0.05$, and $p < 0.01$ levels, respectively (using two-tailed tests).

Table 16
Other Robustness: Main tests with alternative clustering approach by company

	(1) *MISSTATE*		(2) *LATE_FILE*		(3) *CLIENT_LNAFEE*	
	Coeff.	t-value	Coeff.	t-value	Coeff.	t-value
NPAC	0.001	(0.11)	-0.037**	(-1.96)	-0.536 ***	(-12.11)
CLIENTSIZE	0.001	(0.66)	-0.003	(-1.11)	0.484 ***	(67.29)
LEVERAGE	0.012*	(1.90)	0.050***	(4.52)	0.236 ***	(9.08)
GCO	-0.030***	(-4.40)	0.190***	(9.92)	0.058 **	(2.14)
LOSS	0.005	(1.30)	0.056***	(9.00)	0.120 ***	(8.81)
ROA	-0.003	(-0.36)	0.033**	(2.07)	-0.385 ***	(-11.77)
TENURE	-0.010**	(-2.41)	-0.029***	(-5.59)	-0.010	(-0.67)
INFLUENCE	-0.010	(-0.39)	0.111	(1.60)	0.232	(1.64)
INTANGIBLES	0.007	(0.69)	0.048***	(3.19)	0.161 ***	(3.66)
BUSY	-0.003	(-0.64)	-0.012**	(-2.00)	0.045 **	(2.55)
ACCEL_FILER	0.007	(1.24)	-0.002	(-0.23)	0.121 ***	(5.46)
MTB	0.000	(0.78)	0.000	(0.36)	0.000	(0.16)
FIN	-0.000	(-0.75)	-0.002	(-0.98)	0.012 ***	(4.07)
FREEC	-0.000**	(-2.42)	-0.000***	(-3.72)	-0.000	(-1.07)
ACQ	-0.026***	(-4.53)	0.033	(0.65)	0.183 **	(2.21)
ARINV	-0.005	(-0.41)	0.065***	(3.17)	0.541 ***	(9.77)
ICMW	0.037***	(6.10)	0.225***	(21.24)	0.063 ***	(3.80)
MKT_VOL	0.000	(0.35)	-0.000***	(-6.79)	0.000 ***	(4.68)
AUDITORSIZE	0.000	(1.27)	-0.000***	(-2.80)	0.000 ***	(9.78)
AFEE_CLIENT	0.000	(0.34)	0.000***	(4.11)		
TAX_CLIENT	-0.000	(-0.45)	-0.000***	(-2.69)	0.000 ***	(10.96)
Constant	-0.015	(-0.87)	0.004	(0.03)	10.146 ***	(30.17)
Industry FE	Yes		Yes		Yes	
Year FE	Yes		Yes		Yes	
Company FE	Yes		Yes		Yes	
Observations	21,777		21,777		21,777	
Adj. R-squared	0.027		0.172		0.829	

This table presents results from the estimation of Model (1) and (2). See the Appendix for all other variable definitions. Models are run with robust standard errors. *, **, *** indicate significance at $p < 0.10$, $p < 0.05$, and $p < 0.01$ levels, respectively (using two-tailed tests).