Client and audit partner ethnicity and auditor-client alignment

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Abstract

Purpose – The purpose of this study is to examine the role of ethnic similarity in the audit partner–client manager relationship and its impact on auditor selection and retention decisions.

Design/methodology/approach – The authors use name matching analysis to infer ethnicity of audit partners and client managers in the US nonprofit reporting environment. The authors examine the degree of ethnic similarity (co-ethnicity) between the two parties and model auditor selection and retention decisions as a function of co-ethnicity. The authors also model reporting attributes as a function of co-ethnicity.

Findings – The authors find that the ethnic similarity between the client manager and their external audit partner is a significant determinant of auditor-client alignment. Specifically, the authors find that clients are more likely to select and retain an audit partner who is ethnically similar to the client manager. The authors find that co-ethnicity is associated with a lowered propensity to issue a going concern opinion to a financially distressed client and an increased occurrence of underreporting of fundraising and administrative expenses.

Research limitations/implications – Taken together, the evidence suggests that ethnic diversity (the opposite of co-ethnicity) in the auditor-client relationship is associated with higher audit quality. These findings are relevant to client managers, audit committees and public accounting firms as they make auditor selection and reporting decisions.

Originality/value – Prior studies have found that co-ethnicity influences the formation and future success of various business partnerships. The auditor-client relationship is a unique setting within the business environment where the two parties must balance their desire to maintain a close relationship with their need to maintain independence. The study is the first to examine the role of ethnicity in the auditor-client relationship.

Keywords Diversity, Auditor selection, Not-for-profit, Going concern opinion

Paper type Research paper

1. Introduction

Auditor selection and auditor-client alignment are heavily researched in the auditing literature. Prior research documents that client characteristics such as agency costs, corporate governance, firm size and complexity affect the client's auditor selection decision (DeFond and Zhang, 2014, p. 294). Auditor characteristics such as auditor size and industry

specialization also play a role in this decision (Johnson and Lys, 1990; Chaney *et al.*, 1997; Shu, 2000; Knechel *et al.*, 2008; Landsman *et al.*, 2009). Recent literature has begun to explore the effect of individual audit partner characteristics on auditor-client alignments (Amir *et al.*, 2014; Hsieh and Lin, 2016; Lennox and Wu, 2018).

In this study, we explore the role of one personal characteristic that could influence auditor-client alignment – the similarity in ethnic background of the client's financial manager and the audit partner (co-ethnicity). We focus on co-ethnicity because prior studies in the management literature suggest that ethnic networks are important sources of credit, venture capital and social capital to entrepreneurs and small businesses (Kalnins and Chung, 2006; Hegde and Tumlinson, 2014; Bengtsson and Hsu, 2015). Many owners and managers hold preferences for conducting business with individuals of shared ethnicity and conducting business within a close ethnic network improves information flow and lowers the risk of opportunism and misconduct (Hegde and Tumlinson, 2014). For these reasons, small audit clients may choose an auditor based on co-ethnicity between the financial manager and audit partner.

We conduct our study using data from the US not-for-profit (NFP) sector. While our research question is relevant to all audited organizations, this question assumes additional importance in the NFP sector for three reasons. First, the unique charitable missions and community focus of most NFPs, such as hospitals and human services organizations, may increase the likelihood that clients choose auditors from within their social and ethnic networks[1]. Second, small CPA firms audit the majority of NFP clients and these firms are more likely than large CPA firms to have minority audit partner ownership (AICPA, 2013). Third, NFPs lack many of the monitoring mechanisms of for-profit firms (Bolton and Mehran, 2006; Burks, 2015) and face unique agency problems due to the absence of outside owners and difficulty contracting over the quality of goods and services provided (Fama and Jensen, 1983; Easley and O'Hara, 1983; Desai and Yetman, 2015). Thus, auditor selection takes on greater importance on behalf of stakeholders in the NFP sector than in some other settings[2].

We use a sample of NFP audit reports submitted to the USA Federal Government (in accordance with Office of Management and Budget (OMB) Circular A-133), which disclose the name of the audit partner and primary client audit contact over the period 1999-2013. We follow recent ethnicity research (Freeman and Huang, 2014; Bengtsson and Hsu, 2015; Brochet *et al.*, 2016; Gompers *et al.*, 2016) and measure ethnicity using Kerr's (2008a) methodology to estimate the likelihood that an individual belongs to one of nine ethnic categories given the individual's first and last name. This allows us to assess the likelihood that the audit partner and NFP manager are ethnically similar.

Our first analysis examines the role of co-ethnicity in auditor selection using a counterfactual analysis in years of audit firm and audit partner changes. In these tests, we gather samples of engaged audit partners (representing the factual observations) and construct sets of audit partners whom the client could plausibly have engaged (representing the counterfactual observations). The counterfactual samples are constructed based on the size of the audit firm and the geographic location of the client's headquarters. Essentially, this analysis compares clients' actual observed audit partner choices with sets of alternative audit partners the client did not choose[3]. The evidence from this analysis suggests that co-ethnicity is a significant determinant of auditor selection decisions.

Our second analysis focuses on whether co-ethnicity is associated with auditor retention decisions. We examine whether co-ethnicity of a new manager and an incumbent audit partner is associated with the likelihood of audit partner and audit firm changes. We document a significantly lower probability of an audit partner or audit firm change in the

current year or subsequent two years when the new client manager and the incumbent audit partner share the same ethnicity. This provides further evidence that co-ethnicity influences the formation and length of auditor-client relationships. Results are robust to various sampling and modeling specifications and alternate methods to measure and control for ethnicity and gender.

We next examine whether managers and audit partners pairing on ethnicity has material consequences for the audit. Specifically, we examine whether co-ethnicity is associated with audit quality. *Ex-ante*, there is reason to believe that co-ethnicity may be associated with lower audit quality. Recent research investigating "alma mater" relationships where the client's personnel have previously been used at the client's audit firm frequently demonstrates that these relationships impair auditor independence and threaten audit quality (Lennox, 2005; Lennox and Park, 2007; Basioudis, 2007; Ye *et al.*, 2011; Dhaliwal *et al.*, 2015). In addition, recent research using data from audits in China finds that social ties formed through attending the same university impairs audit quality (Guan *et al.*, 2016; He *et al.*, 2017).

In our empirical analysis we first measure audit quality as the propensity of the auditor to issue a going concern opinion to a financially distressed client. This is a direct measure of audit reporting that focuses on the auditor's ability to withstand client pressure and report independently[4]. We find a negative association between co-ethnicity and the issuance of a going concern opinion, suggesting that co-ethnicity is associated with lower audit quality. We also examine the association between co-ethnicity and expense misreporting. NFPs seek to minimize reported fundraising and administrative expenses to manage their program ratios (Krishnan *et al.*, 2006; Yetman and Yetman, 2012, 2013). Prior studies use such financial reporting quality metrics as a proxy for audit quality as the two are inextricably related (Yetman and Yetman, 2012; DeFond and Zhang, 2014). We find a positive association between co-ethnicity and the underreporting of both fundraising and administrative expenses. In summary, we find that co-ethnic auditor-client relationships are associated with lower audit quality, consistent with impaired independence.

This study makes several contributions to the literature. First, our results contribute to the literature on auditor-client alignment. While prior research investigates the factors, which influence the choice of a Big 4 or non-Big 4 auditor (Johnson and Lys, 1990; Chaney *et al.*, 2004) and a specialist auditor (Knechel *et al.*, 2007; Cahan *et al.*, 2008), the literature on how individual audit partner characteristics impact auditor selection is limited (Hsieh and Lin, 2016). The evidence in this paper illustrates that co-ethnicity of the client manager and audit partner affects auditor selection and retention decisions.

Second, this paper contributes to the literature on audit quality. Prior research has examined a host of client- and auditor-specific characteristics that are theoretical determinants of audit quality (Francis, 2011; DeFond and Zhang, 2014). The literature has found that shared characteristics between the audit partner and either top management or the audit committee impairs audit quality (Lennox, 2005; Basioudis, 2007; Ye *et al.*, 2011, Dhaliwal *et al.*, 2015; Guan *et al.*, 2016; He *et al.*, 2017). We expand on this literature and are the first to show that the co-ethnicity of the audit partner and client manager influences audit quality. Our evidence suggests that ethnic diversity (the opposite of co-ethnicity) in the auditor-client relationship improves audit quality. This result is useful for audit firms and audit committees as they assign audit personnel and make auditor selection decisions, respectively.

Finally, this paper contributes to management research examining ethnicity in the business environment. Prior studies have found that co-ethnicity influences the formation of various business partnerships and the future success of those partnerships (Kalnins and

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Chung, 2006; Hegde and Tumlinson, 2014; Bengtsson and Hsu, 2015; Gompers *et al.*, 2016). The auditor-client relationship is a unique setting within the business environment where the two parties must balance their desire to maintain a close relationship with their need to maintain independence. Our study is the first to examine the role of ethnicity in the auditor-client relationship. The analyses in this paper improve our understanding of the power of co-ethnicity to form business relationships and influence business outcomes.

The rest of the paper is organized as follows. Section 2 contains background information and hypothesis development. Section 3 outlines the research design and section 4 reports the sample selection and descriptive statistics. Section 5 contains the main empirical results, section 6 contains additional analyses, section 7 reports sensitivity analyses and section 8 concludes.

2. Background and hypothesis development

2.1 Background information on the not-for-profit sector

The NFP sector constitutes an important component of the USA economy, contributing 5.5 per cent of GDP in 2012 and reported total revenues of \$1.5tn in the same year (NCCS, 2014). NFPs used 10 per cent of the USA workforce in 2010 (Salamon *et al.*, 2012) and received nearly \$300bn in charitable giving in 2011 (Giving USA 2012). NFPs also comprise a substantial portion of public accounting firms' client portfolios (Guidestar 2011). In our sample, NFPs report over \$3.5bn in total outside accounting fees over the 15 year period from 1999 to 2013.

Due to their significant use of public resources, audit quality for NFPs is critically important to the public interest. All charitable organizations expending federal awards over a dollar threshold must be audited annually following the guidance in the guidelines of the USA OMB (2007) Circular A-133: *Audits of States, Local Governments and Nonprofit Organizations*. The auditor's responsibility includes issuing a report expressing an opinion on the entity's financial statements, an evaluation of internal control over financial reporting, a report on compliance with federal regulations concerning the appropriate administration of federal awards, and an expression of doubt about the entity's ability to continue as a going concern when necessary. The US Government Accountability Office (GAO) issues guidance for performing single audits (hereafter A-133 audits), which aligns closely with generally accepted auditing standards issued by the American Institute of Certified Public Accountants (AICPA) for private-company audits.

Due to the absence of residual claimants (i.e. owners), NFPs face unique agency problems and are known to lack many of the monitoring mechanisms of for-profit firms (Fama and Jensen, 1983; Easley and O'Hara, 1983; Bolton and Mehran, 2006; Burks, 2015). The A-133 audit duplicates some of the monitoring mechanisms in the for-profit environment (e.g. going concern and internal control reporting) and acts as a powerful monitoring tool for external stakeholders (Petrovits *et al.*, 2011). The primary users of the A-133 audits are the federal agencies that grant funds to the NFPs. These agencies use the reports to determine whether NFPs are in compliance with various federal program requirements[5].

2.2 Hypothesis development

The first hypothesis explores whether co-ethnicity is a factor in auditor-client alignment. A large literature in psychology and sociology indicates that people prefer to interact with others who are similar to themselves (McPherson *et al.*, 2001). One consistent finding from this literature is that people tend to interact with others that are of the same ethnicity or cultural background (Lincoln and Miller, 1979; Ibarra, 1995). The preference for interacting with others from the same ethnic background extends to business relationships. Recently,

both Bengtsson and Hsu (2015) and Hegde and Tumlinson (2014) provide evidence that venture capitalists prefer to fund start-ups when the founder is ethnically similar to themselves. Gompers *et al.* (2016) find that venture capitalists tend to syndicate with other venture capitalists who share the same ethnicity, educational background or career background.

Anecdotal evidence suggests that audit firms do consider ethnicity when assigning audit personnel to clients. For example, Ernst and Young (2014) states:

> We have a strong commitment to bringing together the right teams for our clients from across our global organization. These teams *match* our clients' needs in terms of knowledge, skills and *cultural background* [emphasis added].

Likewise, PricewaterhouseCoopers (PwC) states "[Clients] want our engagement teams to reflect the diversity within their own organizations," (PwC, 2014). KPMG maintains a "Key Accounts Rotation" program, which "targets ethnically diverse audit, tax and advisory associates and is intended to ensure that diverse representation on priority client engagements is appropriate[. . .]" (KPMG, 2014). While diversity is clearly a priority for public accounting firms in their strategy, empirical investigation of diversity in auditor-client relationships is lacking.

The findings across sociology and business literature (coupled with the preceding statements from prominent accounting firms) support the expectation that auditors and clients align with one another according to ethnic background. As such, we posit our hypothesis as a directional prediction:

H1. Client and audit partner co-ethnicity is positively associated with auditor-client alignment.

While we note no theoretical basis for a competing negative relationship (i.e. that managers would avoid audit partners of their own ethnicity), the strength of the hypothesized positive relationship may be subsumed by other factors. An economics-based view would predict that auditor-client alignments are based primarily on the client's demand for audit services and/or the auditor's cost function, such as the client's litigation risk, complexity or size (Johnson and Lys, 1990; Shu, 2000; Knechel *et al.*, 2008; Landsman *et al.*, 2009). Therefore, whether co-ethnicity affects auditor-client alignment (after controlling for economics-based factors) is an empirical matter[6].

3. Research design
3.1 Measurement of co-ethnicity
Our sample consists of US NFPs filing audit reports in accordance with OMB Section A-133 (2007), which requires NFPs receiving federal funding over a certain threshold to submit a financial statement and compliance audit to the federal government[7]. The database of A-133 audit report filings maintained by the US Census Department includes the name of the lead engagement partner and the primary auditee contact[8]. We obtain financial statement data and other data fields as reported on IRS Form 990 through the National Center for Charitable Statistics (NCCS).

To measure co-ethnicity between the two parties, we infer ethnicity based on the parties' first and last names. This methodology of inferring ethnicity based on name is used throughout social science research areas including health and human services (Fiscella and Fremont, 2006; Elliott *et al.*, 2009), psychology (Dion and Giordano, 1990; Dion and Toner, 2001) and management science (Agrawal *et al.*, 2008; Kerr, 2008a; Hegde and Tumlinson, 2014; Bengtsson and Hsu, 2015; Gompers *et al.*, 2016). We use Professor William

Kerr's (2008a, 2018b) ethnicity categorization data, given its common use within management and finance research (Foley and Kerr, 2013; Bengtsson and Hsu, 2015; Brochet *et al.*, 2016; Gompers *et al.*, 2016).

Professor Kerr's data provides the probability that each party is of nine ethnic categories (English, European, Russian, Chinese, Indian, Vietnamese, Japanese, Korean and Hispanic) based on a proprietary data set of the representation of first name/surname combinations within each category. We classify a manager or auditor partner as belonging to one of the nine ethnic categories if the data predicts at least an 80 per cent probability that a person with that name belongs to that ethnic category. If the data are unable to estimate the person's ethnicity with at least an 80 per cent likelihood, we drop the observation from the sample. Our variable of interest is *MATCH*, which equals 1 if both the audit partner and the client manager are classified in the same ethnic category, 0 otherwise[9].

Using the name matching methodology to infer ethnic background in a USA sample has two inherent limitations. First, this methodology is limited as to the number of ethnicities it can distinguish. For example, Professor Kerr's methodology can estimate the probability that a person is of Hispanic origin, but it cannot identify finer partitions, which may be important in ethnic and social networks. We are also unable to identify African Americans based on surnames – both African Americans and Caucasian Americans would fall under the English category. The second limitation is that a person's name may not accurately reflect their ethnicity for a variety of reasons. These include the effects of marriage, adoption, length of time spent in the USA, and the number of generations within the USA The risk that these limitations pose to our study is that our variable of interest, *MATCH*, may be misspecified.

While we note that there is an inherent risk of misclassification when inferring ethnicity, we believe that the methodology is powerful and appropriate for our analyses for two reasons. First, multiple studies using name matching analysis validate the methodology by comparing inferred ethnicity to reported ethnicity[10]. Second, we have no reason to expect that classification errors are systematically correlated with any variables in our models. As such, noise from misclassification is likely to bias the results toward finding no statistically significant relationships (Agrawal *et al.*, 2008; Hegde and Tumlinson, 2014; Bengtsson and Hsu, 2015).

3.2 Tests of hypothesis 1

3.2.1 Auditor selection model. As our first test of *H1*, we investigate whether co-ethnicity influences the NFP's audit partner selection in the event of an audit partner or audit firm switch. Our analysis follows two contemporary studies that investigate co-ethnicity as a determinant of investment choices made by venture capitalists (Hegde and Tumlinson, 2014; Bengtsson and Hsu, 2015). We identify observed audit partner and audit firm switches from the prior to current year and designate the selected audit partners as the factual observations. We then identify counterfactual observation audit partners that the NFP could have paired with but did not. Our goal is to gather a sample of audit partners that would have been reasonable alternatives for the NFP in their engagement decision. We designate observed partners as the counterfactuals to each factual partner if they are either:

- active within the same metropolitan statistical area (MSA) in the factual observation's fiscal year; or
- active within the same National Taxonomy of Exempt Entities (NTEE) industry six categories[11] with an office within proximity to the NFP's address in the factual observation's fiscal year[12].

We consolidate the factual and counterfactual observations and estimate the following model of the probability that the NFP will engage the factual observation:

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\begin{aligned}
\Pr\bigl(ENGAGE_{i,t} = 1\bigr) \; = \; &\alpha_0 + \alpha_1 MATCH_{i,t} + \alpha_2 DISTANCE_{i,t} + \alpha_3 NCLIENT_{i,t} \\
&+ \alpha_4 INDUSTRY\_EXP_{i,t} + \alpha_5 AUD\_TYPE\_MATCH_{i,t} \\
&+ \alpha_6 SIZE_{i,t} + \alpha_7 CR_{i,t} + \alpha_8 LEVERAGE_{i,t} + \alpha_9 FIN\_NEED_{i,t} \\
&+ \alpha_{10} AGE_{i,t} + \alpha_{11} COMPLEXITY_{i,t} + \alpha_{12} RISK_{i,t} \\
&+ Year\ Fixed\ Effects + \varepsilon_{i,t}
\end{aligned}
$$

(1)

Subscripts i and t denote firm and year, respectively. The dependent variable, *ENGAGE*, is an indicator variable that equals 1 if the firm engages the actual audit partner, 0 otherwise. This variable equals 1 for the factual observations and 0 for the counterfactual observations. Our variable of interest, *MATCH*, equals 1 if the manager and partner are of the same ethnicity, 0 otherwise. We control for several auditor characteristics that should be relevant to the NFP's engagement decision. We control for the distance in miles between the NFP's address and the partner's firm address (*DISTANCE*), the number of NFP audits that the audit partner conducts (other than the factual observation) in the observation's fiscal year (*NCLIENT*), whether the partner is engaged by other NFP's in the same industry (*INDUSTRY_EXP*), whether the partner's audit firm is of the same tier (e.g. Big N, regional and specialist tiers discussed later) as that which the NFP engaged in the prior period (*AUD_TYPE_MATCH*)[13]. The model also includes several NFP characteristics, including size (*SIZE*), current ratio (*CR*), leverage (*LEVERAGE*), financial need (*FIN_NEED*), age (*AGE*), number of funding sources (*COMPLEXITY*) and a high risk indicator (*RISK*). Refer to the Appendix for variable definitions. Finally, the model includes year fixed effects. We cluster standard errors by NFP in all regressions.

3.2.2 Auditor retention model. As a second test of *H1*, we investigate whether the ethnic similarity of the manager and the audit partner (co-ethnicity) is associated with auditor retention. We examine this relationship in the context of a manager change from the prior to current year. We assume that this is a situation in which the client critically examines the relationship with their auditor and auditor retention is a salient decision[14]. If the co-ethnicity of the two parties is not a determinant of the auditor retention decision, we expect auditor switching activity to be unrelated to co-ethnicity. To test the relationship between co-ethnicity and the auditor retention decision, we estimate the following model of the likelihood of an auditor switch:

$$
\begin{aligned}
&\Pr\bigl(ANY\_CHANGE_{i,t}\ or\ FIRM\_CHANGE_{i,t} = 1\bigr) \\
&= \alpha_0 + \alpha_1 INCUMBENT\_MATCH_{i,t} + \alpha_2 |CONCHG_{i,t}| + \alpha_3 |GOVCHG_{i,t}| \\
&\quad + \alpha_4 |FRCHG_{i,t}| + \alpha_5 |FEXPCHG_{i,t}| + \alpha_6 |LIABCHG_{i,t}| + \alpha_7 |DACHG_{i,t}| \\
&\quad + \alpha_8 |COMPCHG_{i,t}| + \alpha_9 |REVCHG_{i,t}| + \alpha_{10} SIZE_{i,t} + \alpha_{11} REV_{i,t} + \alpha_{12} CR_{it} \\
&\quad + \alpha_{13} LEVERAGE_{i,t} + \alpha_{14} FIN\_NEED_{it} + \alpha_{15} AGE_{i,t} + \alpha_{16} COMPLEXITY_{i,t} \\
&\quad + \alpha_{17} RISK_{i,t} + \alpha_{18} FINDORQ_{i,t-1} + \alpha_{19} FIRM\_CHANGE_{i,t-1} + \alpha_{20} BIGN_{i,t-1} \\
&\quad + \alpha_{21} REGIONAL_{i,t-1} + \alpha_{22} SPECIALIST_{i,t-1} + Industry\ and\ Year\ Fixed\ Effects \\
&\quad + \varepsilon_{i,t}
\end{aligned}
$$

(2)

We use two specifications for the dependent variable. *ANY_CHANGE* equals 1 if the NFP experiences an audit firm change or an audit partner change (within the incumbent audit firm), 0 otherwise. *FIRM_CHANGE* equals 1 only if the NFP experiences an audit firm change, 0 otherwise. For each of these variables, we examine changes across two time ranges. To investigate immediate auditor changes, we construct versions where the dependent variables equal 1 if there is a change in year t, 0 otherwise. To investigate near-term auditor changes, we construct versions where the dependent variables equal 1 if there is a change in year t, $t + 1$ or $t + 2$, 0 otherwise.

The variable of interest in the model is *INCUMBENT_MATCH*. This is a slight modification to the *MATCH* variable discussed previously. *INCUMBENT_MATCH* equals 1 if the incumbent auditor is the same ethnicity as the incoming manager, 0 otherwise. *MATCH* and *INCUMBENT_MATCH* are equal if there is no audit partner change from year $t - 1$ to year t. However, the two values may differ if there is an audit partner change concurrent with the manager change.

The control variables in the model are based on Tate's (2007) model of audit firm changes in the NFP sector. The model controls for the absolute value of changes in contributions (|*CONCHG*|), government contributions (|*GOVCHG*|), fundraising expenditures (|*FRCHG*|), federal expenditures (|*FEXPCHG*|), liabilities (|*LIABCHG*| and |*DACHG*|), executive compensation (|*COMPCHG*|) and total revenues (|*REVCHG*|). Changes in these variables represent changes in the source of funding and the use of funds, which should be related to auditor changes (Tate, 2007). The model controls for current-period NFP characteristics such as size (*SIZE*), revenues (*REV*), current ratio (*CR*), leverage (*LEVERAGE*), financial need (*FIN_NEED*), NFP age (*AGE*), complexity (*COMPLEXITY*), questioned costs in prior year (*FINDORQ$_{t-1}$*), prior year auditor changes (*FIRM_CHANGE$_{t-1}$*) and incumbent auditor size, whether a Big N auditor (*BIGN$_{t-1}$*), a regional auditor (*REGIONAL$_{t-1}$*) or a NFP specialist (*SPECIALIST$_{t-1}$*). Finally, the model includes industry and year fixed effects. Refer to the appendix for detailed variable definitions.

4. Sample selection and descriptive statistics

Panel A of Table I describes the sample selection process. We require data at the intersection of the A-133 database and Form 990. Kerr's proprietary data set provides matches for both the manager and auditor for over 90 per cent of the observations, reducing our main sample by only 19,919 observations. Our main sample contains 216,287 NFP-year observations representing 32,958 distinct organizations. We perform year-over-year comparisons of the A-133 audit reports to identify manager, audit partner, and audit firm changes[15]. Panels B and C of Table I outline the sample selection procedure for the auditor selection and auditor retention analyses, respectively. It is worth noting that these panels detail the sample selection procedure for the largest (least restrictive) samples used in the analyses. These samples are used for the first analyses presented in the results of multivariate analyses, but some analyses use sub-samples as appropriate.

Table II provides descriptive statistics on the distribution of ethnicities of auditors and managers in our sample. For the managers, 90.4 per cent of the observations are of English, European or Russian backgrounds, 4 per cent of the observations are of Asian backgrounds and 5.6 per cent are of Hispanic background. The statistics for audit partners are comparable to the AICPA's most recent firm demographics report (AICPA, 2013). The AICPA reports that 92 per cent of audit partners are White or Black/African-American and we reach the same percentage in our sample when

Sample selection steps	Firm-years
Panel A: Main sample	
NFP-years in A-133 and NCCS databases 1999-2013	236,266
Less: observations missing manager or auditor name	(25)
Less: observations without defined ethnicity category	(19,919)
Less: defense contractors	(35)
Main sample – used for univariate analysis at Table II	216,287
Panel B: Auditor selection sample	
Available observations with an auditor switch	18,742
Less: observations not in identified MSA	(2,894)
Less: observations missing data necessary to estimate model	(1,195)
Less: observations with no counterfactual observations[a]	(6)
Auditor selection factual observations	14,647
Add: counterfactual observations	2,260,175
Auditor selection sample - used for estimation of equation (1) at Table IV	2,274,822
Panel C: Auditor retention sample	
Available observations with a manager switch	19,412
Less: observations missing data necessary to estimate model	(3,195)
Auditor retention sample - used for estimation of equation (2) at Table V	16,217

Note: [a]See Table IV for discussion of the restrictions used to match factual observations with counterfactual observations

Table I.
Sample selection

	(1) The probability that the manager is of ethnicity$_i$.		(2) The probability that the auditor is of ethnicity$_i$.		(3) The probability that the auditor is of ethnicity$_i$ when the manager is of ethnicity$_i$.		(3) − (2)	((3) − (2))/(2)
Ethnicity$_i$ =	Mean	SD	Mean	SD	Mean	SD	Difference	Percentage difference
ENGLISH	0.798	0.398	0.811	0.387	0.825	0.375	0.014	2 ***
EUROPEAN	0.095	0.289	0.106	0.304	0.124	0.325	0.018	17 ***
RUSSIAN	0.011	0.104	0.014	0.118	0.025	0.155	0.011	74 ***
CHINESE	0.014	0.114	0.010	0.096	0.066	0.245	0.056	574 ***
HINDU	0.012	0.110	0.011	0.104	0.025	0.156	0.014	127 ***
VIETNAMESE	0.006	0.079	0.001	0.027	0.002	0.047	0.002	195
JAPANESE	0.005	0.072	0.004	0.063	0.128	0.334	0.124	3,117 ***
KOREAN	0.003	0.052	0.001	0.025	0.064	0.246	0.064	9,202 ***
HISPANIC	0.056	0.227	0.042	0.199	0.190	0.392	0.148	353 ***

Notes: This table reports the mean value of each of the nine ethnic categories for both the manager and auditor using the main sample of 216,287 observations described at Panel A of Table I. We also report the probability that the auditor belongs to a certain ethnicity given that manager's value of that same ethnic category is ≥ 80%. We also report the difference in means between the probability that the auditor is of ethnicity *i* and the conditional probability that the auditor is of ethnicity *i* when the manager is of ethnicity *i*. For example, in the fourth row, the baseline probability that an audit partner is Chinese is 0.010. The conditional probability that an audit partner is Chinese given that the manager is also Chinese is 0.066. The difference between the two probabilities is 0.056 (0.066 − 0.010). Therefore, having a Chinese client manager results in an increase in probability of an audit partner being Chinese of 574 per cent (0.056/0.010); *, ** and ***denote statistically different means at the 10, 5 and 1% levels, respectively

Table II
Do managers and auditors match according to ethnicity?

combining the English, European and Russian categories. The AICPA reports that among all public accounting firms, 5 per cent of audit partners are Asian/Pacific Islander and 2 per cent are Hispanic/Latino. Our statistics suggest that 2.7 per cent of audit partners in the sample have names that are likely Asian and 4.2 per cent that are likely Hispanic.

The right-hand side of Table II provides preliminary evidence on *H1* by presenting the probability that the engaged auditor belongs to one of the ethnic categories conditional on the probability that the manager is of the same ethnic category. In each of the nine ethnic categories, the probability that the auditor is of a given ethnicity is increasing in the probability that the manager is of that same ethnicity. For example, 4.2 per cent of the auditors in our sample are Hispanic. However, when we look solely at observations where the manager is Hispanic, we see that 19 per cent of the auditors are Hispanic (a 353 per cent increase relative to the baseline of 4.2 per cent). The difference in these mean values is statistically significant ($p < 0.01$) for eight of the nine ethnic categories. This provides preliminary evidence that the two parties tend to pair according to their ethnicity.

Table III, Panel A reports descriptive statistics for the auditor selection analysis. As noted in Table I, the sample for this analysis consists of 14,647 observations that experience an audit partner change from the prior to current period. For our main analysis, we pair these factual observations with 2,260,175 counterfactual observations that are either active in the same MSA or are active within 125 miles in the same industry. This produces a full sample of 2,274,822 observations. In alternate specifications, we restrict the factual observations to those with an observed audit firm change and restrict the counterfactuals to those that match according to auditor type. These restrictions reduce the sample to as few as 404,873 observations[16]. Table III, Panel B reports descriptive statistics for the auditor change analysis. Within this sample of 16,217 observations, approximately 24.1 per cent of clients experience an audit firm or audit partner change (within the incumbent firm) from the prior to the current year. All continuous variables are winsorized at the 1st and 99th percentiles.

5. Empirical results

5.1 Auditor-client alignment analysis

Table IV reports the estimated coefficients for equation (1). The first column presents the estimation of equation (1) where the sample includes factual observations that experience an audit partner change (either through an audit firm change or a within-firm audit partner change) matched with counterfactuals in the same MSA or in the same industry within 125 miles. The second column introduces an additional restriction that the counterfactual partner be in the same tier audit firm as the factual observation (with the *AUD_TYPE_MATCH* variable removed from the model). The third and fourth columns follow the first two but are estimated using samples of observed audit *firm* changes. The estimated coefficient of *MATCH* is positive and significant ($p < 0.01$) using each specification. These results indicate that, when the NFP engages a new auditor, they are between 24 and 29 per cent more likely to select an auditor with common ethnic background than one without[17]. Taken together, the evidence in Table IV supports the directional prediction of *H1* and demonstrates that co-ethnicity is a significant determinant of auditor selection decisions.

Table V reports the estimated coefficients for equation (2)[18]. Columns 1 and 2 report results when considering any audit partner or audit firm change to be a change

Variable	N	Mean	Median	P10	P90	SD
Panel A: Descriptive statistics for auditor selection sample						
MATCH	2,274,822	0.631	0.000	1.000	1.000	0.482
DISTANCE	2,274,822	48.049	0.000	107.873	107.732	40.631
NCLIENT	2,274,822	3.020	1.000	7.000	7.000	3.439
INDUSTRY_EXP	2,274,822	0.709	0.000	1.000	1.000	0.454
AUD_TYPE_MATCH	2,274,822	0.309	0.000	1.000	1.000	0.462
SIZE	2,274,822	15.624	13.395	18.516	18.551	1.970
CR	2,274,822	0.857	0.000	1.000	1.000	0.350
LEVERAGE	2,274,822	0.038	0.000	0.165	0.168	0.112
FIN_NEED	2,274,822	0.422	−0.222	0.917	0.914	0.442
AGE	2,274,822	3.249	2.303	4.127	4.127	0.662
COMPLEXITY	2,274,822	1.651	0.000	3.000	3.000	0.971
RISK	2,274,822	0.319	0.000	1.000	1.000	0.466
Panel B: Descriptive statistics for auditor retention sample						
ANY_CHANGE	16,217	0.241	0.000	0.000	1.000	0.428
FIRM_CHANGE	16,217	0.167	0.000	0.000	1.000	0.373
INCUMBENT_MATCH	16,217	0.684	1.000	0.000	1.000	0.465
CONCHG	16,217	0.002	0.000	−0.064	0.062	0.141
GOVCHG	16,217	0.001	0.000	−0.054	0.055	0.131
FRCHG	16,217	−0.001	0.000	−0.005	0.004	0.010
FEXPCHG	16,217	0.092	0.007	−0.149	0.365	0.354
LIABCHG	16,217	0.152	0.000	−0.239	0.564	0.645
DACHG	16,217	0.010	0.004	−0.080	0.105	0.109
COMPCHG	16,217	0.094	0.000	−0.293	0.696	0.520
REVCHG	16,217	0.072	0.038	−0.117	0.268	0.229
SIZE	16,217	15.325	14.975	13.273	18.034	1.864
REV	16,217	15.140	15.213	12.322	17.638	2.017
CR	16,217	0.882	1.000	0.000	1.000	0.323
LEVERAGE	16,217	0.029	0.000	0.000	0.080	0.095
FIN_NEED	16,217	0.438	0.557	−0.231	0.929	0.445
AGE	16,217	3.199	3.258	2.303	4.078	0.654
COMPLEXITY	16,217	1.599	2.000	0.000	3.000	0.997
RISK	16,217	0.311	0.000	0.000	1.000	0.463
$FINDORQ_{t-1}$	16,217	0.178	0.000	0.000	1.000	0.382
$FIRM\_CHANGE_{t-1}$	16,217	0.091	0.000	0.000	0.000	0.287
$BING_{t-1}$	16,217	0.095	0.000	0.000	0.000	0.293
$REGIONAL_{t-1}$	16,217	0.137	0.000	0.000	1.000	0.344
$SPECIALIST_{t-1}$	16,217	0.465	0.000	0.000	1.000	0.499

Notes: This table presents the mean, median, 10th percentile, 90th percentile and standard deviation for all variables used in the analyses. Each independent variable is winsorized at the 1st and 99th percentile. Refer to the appendix for variable definitions

Table III.
Descriptive statistics
for multivariate
analyses

in auditor. Using either a one-year or a three-year window to identify auditor changes, we find that the estimated coefficient of *INCUMBENT_MATCH* is negative and significant. Columns 3 and 4 consider only audit firm changes. The estimated coefficient of *INCUMBENT_MATCH* is again negative and significant in both columns. The results indicate that ethnic similarity between the incumbent auditor and the incoming manager reduces the likelihood of a near-term subsequent auditor switch by 7 to 13 per cent. Based on the evidence in Table V, we support the

| | Dependent variable = Pr (ENGAGE = 1) | | | |
| | Sample: Observed auditor change ($ANY\_CHANGE_{t-1\ to\ t}$ = 1) | | Sample: Observed audit firm change ($FIRM\_CHANGE_{t-1\ to\ t}$ = 1) | |
Variable	Restriction 1	Restriction 2	Restriction 1	Restriction 2
MATCH	0.210*** ([11.77)	0.206*** (11.13)	0.249*** (10.76)	0.246*** (10.27)
DISTANCE	−0.015*** (−29.77)	−0.016*** (−31.59)	−0.012*** (−22.18)	−0.014*** (−24.01)
NCLIENT	0.118*** (63.64)	0.102*** (54.36)	0.134*** (65.50)	0.120*** (55.72)
INDUSTRY_EXP	−0.452*** (−17.46)	−0.520*** (−19.73)	−0.462*** (−14.22)	−0.567*** (−17.05)
AUD_TYPE_MATCH	1.612*** (77.58)		0.422*** (17.35)	
SIZE	0.004 (0.68)	0.052*** (7.59)	−0.038*** (−4.67)	0.030*** (3.48)
CR	0.101*** (4.03)	0.076** (2.71)	0.110*** (3.33)	0.058 (1.59)
LEVERAGE	0.410*** (4.91)	0.615*** (6.24)	0.230** (2.11)	0.383*** (3.05)
FIN_NEED	0.089*** (4.07)	0.078*** (3.37)	0.135*** (5.12)	0.092*** (3.31)
AGE	−0.020 (−1.29)	−0.018 (−1.10)	−0.018 (−0.91)	−0.009 (−0.47)
COMPLEXITY	0.008 (0.77)	−0.017 (−1.60)	0.020* (1.65)	−0.009 (−0.69)
RISK	−0.021 (−1.27)	−0.043** (−2.50)	−0.024 (−1.23)	−0.042* (−1.99)
CONSTANT	−5.623*** (−42.92)	−4.273*** (−31.03)	−4.609*** (−27.06)	−4.101*** (−22.69)
Year fixed Effect	Included	Included	Included	Included
Factual N	14,647	14,509	7,772	7,708
Counter factual N	2,260,175	694,198	1,195,729	397,165
PR > F	<0.0001	<0.0001	<0.0001	<0.0001
Area under ROC curvee	0.792	0.739	0.738	0.744

Notes: This table reports estimated coefficients from estimating the likelihood of engaging a particular auditor using logistic regressions [equation (1)]. The analysis is performed on samples of factual observations paired with selected counterfactual observations. The factual observations are those that experienced an audit partner change or audit firm change from period $t-1$ to period t. The counterfactual observations are chosen with the following restrictions: *Restriction 1*. Counterfactuals are all observed partners active within the same year-MSA as the factual observation and all observed partners active within the same year-industry (NTEE six categories) within 125 miles of the factual NFP. For the observed auditor change sample, counterfactuals exclude the partner that the NFP engaged in the prior period. For the observed audit firm change sample, counterfactuals exclude all partners from the audit firm that the NFP engaged in the prior period; *Restriction 2*. Same as Counterfactual Restrictions 1 with the additional restriction that the counterfactual partners are in the same tier audit firm (i.e. BIGN, REGIONAL and SPECIALIST) as the factual partner. Z-statistics are reported in brackets below the coefficients and are adjusted for standard errors clustered by NFP. See Appendix for variable definitions. *; ** and ***denote statistical significance at the 10, 5, and 1% levels, respectively, using a two-tailed test

directional prediction of *H1* and conclude that co-ethnicity is a significant determinant of auditor retention decisions.

6. Additional analyses

6.1 Audit quality analysis

Given the documented evidence that client and audit partner co-ethnicity is positively associated with auditor-client alignment, we address an additional research question: is client and audit partner co-ethnicity associated with audit quality? *Ex-ante* it is not clear if and how co-ethnicity would affect audit quality. The co-ethnicity literature finds mixed evidence on whether co-ethnicity in business relationships improves outcomes. Hegde and Tumlinson (2014) find that when venture capitalists fund ethnically similar start-ups, those start-ups are more successful than the other start-ups funded by the same venture capitalists. On the other hand, the evidence in Bengtsson and Hsu (2015) suggests the

Y =	ANY_CHANGE		FIRM_CHANGE	
Auditor change window	(1) one-year	(2) three-year	(3) one-year	(4) three-year
Variable				
INCUMBENT_MATCH	−0.071* (−1.71)	−0.086** (−2.07)	−0.084* (−1.78)	−0.135*** (−3.11)
|CONCHG|	1.499*** (7.86)	0.828*** (3.76)	2.094*** (10.56)	1.016*** (4.56)
|GOVCHG|	0.249 (1.21)	0.383* (1.70)	0.173 (0.79)	0.587** (2.57)
|FRCHG|	3.863* (1.90)	6.784*** (3.07)	3.510 (1.56)	6.883*** (3.12)
|FEXPCHG|	0.395*** (6.77)	0.270*** (4.22)	0.464*** (7.22)	0.311*** (4.85)
|LIABCHG|	0.095*** (2.58)	0.078** (2.05)	0.094** (2.33)	0.095** (2.47)
|DACHG|	0.646*** (2.59)	0.539** (2.06)	0.712** (2.54)	0.381 (1.40)
|COMPCHG|	0.338*** (8.14)	0.149*** (3.39)	0.477*** (10.77)	0.266*** (5.95)
|REVCHG|	−0.177* (−1.65)	0.020 (0.18)	−0.149 (−1.24)	0.049 (0.43)
SIZE	−0.049** (−2.31)	−0.067*** (−3.02)	−0.059** (−2.45)	−0.128*** (−5.46)
REV	−0.058*** (−2.93)	0.021 (1.02)	−0.090*** (−3.89)	−0.012 (−0.51)
CR	−0.004 (−0.06)	−0.001 (−0.02)	0.043 (0.55)	−0.002 (−0.03)
LEVERAGE	−0.195 (−0.81)	−0.533** (−2.14)	0.006 (0.02)	−0.552** (−2.03)
FIN_NEED	−0.075 (−1.35)	0.009 (0.16)	−0.097 (−1.53)	0.013 (0.21)
AGE	0.067* (1.91)	−0.077** (−2.12)	0.020 (0.50)	−0.075* (−1.95)
COMPLEXITY	−0.022 (−0.85)	0.000 (0.020)	0.039 (1.31)	0.026 (0.91)
RISK	0.473*** (11.23)	0.306*** (6.85)	0.511*** (10.49)	0.455*** (9.79)
FINDORQ$_{t-1}$	−0.107** (−2.01)	−0.039 (−0.71)	0.005 (0.07)	0.001 (0.02)
FIRM_CHANGE$_{t-1}$	−0.276*** (−3.87)	−0.177*** (−2.72)	−0.467*** (−5.52)	−0.320*** (−4.54)
BING$_{t-1}$	0.912*** (11.57)	1.182*** (13.48)	0.199** (2.05)	0.657*** (7.26)
REGIONAL$_{t-1}$	0.518*** (8.59)	0.540*** (8.08)	0.149** (2.21)	0.135* (1.95)
SPECIALIST$_{t-1}$	−0.298*** (−6.44)	−0.182*** (−3.77)	−0.586*** (−11.33)	−0.512*** (−9.93)
CONSTANT	−0.439 (−1.34)	0.632* (1.84)	−0.028 (−0.07)	1.777*** (4.94)
Year FE	Included	Included	Included	Included
Ind. FE	Included	Included	Included	Included
N	16,217	13,097	16,217	13,097
% D. V. = 1	24	48	17	34
PR > F	<0.0001	<0.0001	<0.0001	<0.0001
Area under ROC Curve	0.649	0.632	0.682	0.655

Notes: This table reports estimated coefficients from estimating different versions of equation (2). The auditor change window is either one-year in Columns 1 and 3 or three-years in Columns 2 and 4. While the first two columns report results when considering any auditor change, Columns 3-4 use only audit firm changes. The sample for this table includes only observations in which the NFP hires a new manager from period *t*−1 to period *t*. Z-statistics are reported in brackets below the coefficients and are based on standard errors clustered by NFP. See Appendix for variable definitions. *; ** and ***denote statistical significance at the 10, 5 and 1% levels, respectively, using a two-tailed test

Table V.
Does an ethnic match influence auditor retention decisions?

opposite[19]. Although the auditing literature has not investigated how co-ethnicity impacts audit quality, there is evidence that other shared characteristics lead to poor audit quality, including alma-mater relationships and prior employment relationships (Lennox, 2005; Basioudis, 2007; Ye *et al.*, 2011; Guan *et al.*, 2016; He *et al.*, 2017). It is interesting to see whether co-ethnicity affects audit quality negatively, similar to other social ties.

6.1.1 Going concern opinion analysis. We first examine whether co-ethnicity is associated with the likelihood of issuing a going concern modified audit report to a distressed client. Going concern report modification is a common measure of audit quality (DeFond and Francis, 2005; Francis, 2011; DeFond and Zhang, 2014; Dhaliwal *et al.*, 2015; Berglund *et al.*, 2018) and the issuance of a going concern modified audit report is costly to NFPs (Feng, 2014; Amin and Harris, 2017)[20]. We test whether the ethnic

similarity between the manager and the audit partner affects the likelihood of the client receiving a going concern modified audit report by estimating the following logistic regression model:

$$
\begin{aligned}
\Pr(GCAR_{i,t} = 1) = {} & \alpha_0 + \alpha_1 MATCH_{i,t} + \alpha_2 SIZE_{i,t} + \alpha_3 CR_{i,t} + \alpha_4 LOWOPRSRV_{i,t} \\
& + \alpha_5 LEVERAGE_{i,t} + \alpha_6 FREXPR_{i,t} + \alpha_7 GRANT\_LOSS_{i,t} \\
& + \alpha_8 PSREV\_LOSS_{i,t} + \alpha_9 NI\_LOSS_{i,t} + \alpha_{10} AGE_{i,t} \\
& + \alpha_{11} COMPLEXITY_{i,t} + \alpha_{12} RISK_{i,t} + \alpha_{13} FINDORQ_{i,t} \\
& + \alpha_{14} TENURE_{i,t} + \alpha_{15} BIGN_{i,t} + \alpha_{16} REGIONAL_{i,t} \\
& + \alpha_{17} SPECIALIST_{i,t} + \alpha_{18} GCAR_{i,t-1} \\
& + Industry\ and\ Year\ Fixed\ Effects + \varepsilon_{i,t}
\end{aligned}
$$

(3)

The dependent variable, *GCAR*, equals 1 if the client receives a going concern modified audit report, 0 otherwise[21]. The variable of interest is *MATCH*. If working with a manager who is ethnically similar impairs auditor independence, we should observe that $\alpha_1 < 0$. Consistent with prior research, we estimate equation (3) on a sample of firm-years with going concern modified audit reports and financially distressed control observations with clean opinions. We consider an observation to be financially distressed if it exhibits either negative net assets, negative net income or current liabilities greater than current assets (Feng, 2010)[22].

The control variables are based on Feng (2010). We include indicator variables for NFPs with low current ratios (*CR*), low operating reserve ratios (*LOWOPRSRV*), decreases in government contributions (*GRANT_LOSS*), decreases in program service revenue (*PSREV_LOSS*), negative net income (*NI_LOSS*), questioned costs (*FINDORQ*) and NFPs who received a going concern modified audit report in the prior year ($GCAR_{t-1}$)[23]. We also control for other NFP risk characteristics, including NFP size (*SIZE*), leverage (*LEVERAGE*), fundraising expenses (*FREXP*), age (*AGE*), the number or revenue sources reported by the NFP (*COMPLEXITY*) and riskiness (*RISK*). We also control for several auditor characteristics, including indicator variables for auditor size (*BIGN*, *REGIONAL* and *SPECIALIST*) and audit partner tenure (*TENURE*). Finally, the model includes industry and year fixed effects.

Table VI reports the results of estimating equation (3) on samples of observations with a going concern modified opinion and distressed observations that have an unmodified opinion. For the sample used in Column 1, an observation is classified as financially distressed if it exhibits either negative net assets, negative net income or current liabilities greater than current assets (Feng, 2010). The area under the ROC curve is 0.875 indicating that the model has adequate discriminatory power. The coefficients for *LOWOPRSVR*, *LEVERAGE*, *PSREV_LOSS*, *GRANT_LOSS*, *NI_LOSS* and *RISK* are all positive and significant, consistent with clients' financial condition being a primary determinant of going concern modified audit reports. More germane to our study, the estimated coefficient of *MATCH* is significantly negative. The results indicate that ethnic similarity between the auditor and the manager reduces the likelihood that the auditor will issue a going concern modified audit report by approximately 18 per cent.

| | Dependent variable = Pr (G*CAR* = 1) | |
Variable	(1) Primary sample	(2) Secondary sample
MATCH	−0.194*** (−2.69)	−0.202** (−2.18)
SIZE	−0.109*** (−3.82)	0.031 (0.70)
CR	−0.218* (−1.90)	−0.215 (−1.45)
LOWOPRSRV	0.808*** (9.68)	0.791*** (8.04)
LEVERAGE	0.871** (2.13)	−0.057 (−0.16)
FREXPR	−0.110 (−0.24)	10.326*** (6.01)
GRANT_LOSS	0.294*** (4.06)	0.393*** (4.28)
PSREV_LOSS	0.345*** (4.90)	0.378*** (4.58)
NI_LOSS	0.392*** (4.43)	0.074 (0.70)
AGE	0.006 (0.11)	0.011 (0.14)
COMPLEXITY	−0.032 (−0.80)	0.948*** (16.59)
RISK	0.543*** (7.76)	0.593*** (6.69)
FINDORQ	0.731*** (9.57)	0.495*** (5.28)
TENURE	−0.111** (−2.39)	−0.211*** (−3.75)
BING	0.119 (0.70)	−1.030*** (−4.09)
REGIONAL	−0.081 (−0.67)	−0.536*** (−3.60)
SPECIALIST	−0.062 (−0.76)	−0.342*** (−3.40)
$GCAR_{t-1}$	5.365*** (54.96)	5.310*** (29.84)
CONSTANT	−4.907*** (−8.70)	−4.759*** (−6.04)
Industry Fixed Effects	Included	Included
Year Fixed Effects	Included	Included
N	94,017	20,895
N GCAR = 1	1,599	1,560
Pr > F	<0.0001	<0.0001
Area Under ROC Curve	0.875	0.939

Notes: This table reports estimated coefficients from estimating equation (3). The samples for each column include observations where *GCAR* = 1 and financially distressed firm-years where *GCAR* = 0. For the sample in the first column, a firm is classified as financially distressed if the firm reports negative net assets, negative net income or current liabilities greater than current assets. For the sample in the second column, a firm is classified as financially distressed if it is in the bottom decile of both net assets scaled by total assets and net assets scaled by total revenues in the fiscal year. Z-statistics are reported in brackets below the coefficients and are adjusted for standard errors clustered by NFP. See Appendix for variable definitions. *; ** and ***denote statistical significance at the 10, 5 and 1% levels, respectively, using a two-tailed test

Table VI.
Ethnic matching and going concern reporting

For the sample used in Column 2 of Table VI, an observation is classified as financially distressed if it falls in the bottom decile of both net assets scaled by total assets and net assets scaled by total revenues in the fiscal year (Neuman *et al.*, 2015). The estimated coefficient on *MATCH* remains negative, of approximately the same magnitude, and statistically significant (p-value < 0.05) in this specification. In sum, the results in Table VI indicate that working with an ethnically similar manager reduces the likelihood that the audit partner will issue a going concern modified audit report to a distressed client.

6.1.2 Expense misreporting analysis. As an additional test of whether co-ethnicity influences audit quality, we examine the association between co-ethnicity and underreporting of charitable expenses. While the IRS form 990 contains a great deal of information, much attention is focused on the NFP's program service ratio (i.e. the ratio of charitable expenses to total expenses) (Yetman and Yetman, 2012). NFPs have incentives to overstate this ratio by underreporting fundraising or administrative expenses[24]. As such,

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we test whether co-ethnicity influences the underreporting of charitable expenses using the following model:

$$Charitable\ Expense\ Underreporting_{i,t} = \alpha_0 + \alpha_1 MATCH_{i,t} + \alpha_2 SIZE_{i,t} + \alpha_3 CR_{i,t}$$
$$+ \alpha_4 MUNI\_BONDS_{i,t} + \alpha_5 UBI_{i,t}$$
$$+ \alpha_6 DON\_GR_{i,t} + \alpha_7 DONAT\_INT_{i,t} + \alpha_8 AGE_{i,t}$$
$$+ \alpha_9 COMPLEXITY_{i,t} + \alpha_{10} G\_INDEX_{i,t}$$
$$+ \alpha_{11} FINDORQ_{i,t} + \alpha_{12} TENURE_{i,t} + \alpha_{13} BIGN_{i,t}$$
$$+ \alpha_{14} REGIONAL_{i,t} + \alpha_{15} SPECIALIST_{i,t}$$
$$+ Industry\ and\ Year\ Fixed\ Effects + \varepsilon_{i,t} \qquad (4)$$

If working with an ethnically similar client impairs independence and leads auditors to tolerate more expense misreporting, we expect to find that $\alpha_1 > 0$. The model is based on prior NFP research (Krishnan *et al.*, 2006; Yetman and Yetman, 2012) and controls for unrelated business income (*UBI*), the change in donations and gifts (*DON_GR*), donation intensity (*DONAT_INT*), corporate governance (*G_INDEX*) and audit partner tenure (*TENURE*). The remaining control variables are defined as previously (refer to the Appendix for detailed variable definitions).

We use four measures of charitable expense underreporting based on prior research (Krishnan *et al.*, 2006; Yetman and Yetman, 2012) – two indicator variables (*ZERO_FUNDR* and *ZERO_ADMIN*) and two continuous variables (*UNDER_FUNDR* and *UNDER_ADMIN*). *ZERO_FUNDR* (*ZERO_ADMIN*) equals 1 if the NFP reports \$0 in fundraising (administrative) expenses, 0 otherwise[25]. Prior research argues that it is unlikely an NFP can operate without fundraising or administrative expenses, meaning that reporting \$0 for these expenses is clearly a case of underreporting (Krishnan *et al.*, 2006; Yetman and Yetman, 2012)[26]. *UNDER_FUNDR* (*UNDER_ADMIN*) is a continuous measure of fundraising (administrative) expense underreporting based on the residual from a model of expected fundraising (administrative) costs. The models are based on Yetman and Yetman (2012). Please refer to the Appendix for more details on the estimation of these variables.

Table VII reports the results of estimating the expense underreporting models [equation (4)]. In general, we observe that larger firms (*SIZE*), older firms (*AGE*), firms with better monitoring (*MUNI_BONDS* and *G_INDEX*) are significantly less likely to underreport fundraising and administrative expenses. The results from Column 1 indicate that co-ethnicity is positively associated with reporting \$0 in fundraising expenses. The coefficient on *MATCH* is not significant in Column 2. The last two columns report results using measures of administrative expense underreporting. The coefficient on *MATCH* is significantly positive ($p < 0.01$) in Columns 3 and 4, indicating that co-ethnicity is positively associated with underreporting of administrative expenses. Taken together, the evidence in Table VII suggests that co-ethnicity is associated with greater underreporting of fundraising and administrative expenses.

6.2 Audit fees analysis

As additional analyses, we model ethnic similarity in the audit partner-client management relationship as a determinant of audit fees. Simunic (1980) notes that audit fee levels are

D.V. = Variable	ZERO_FUNDR (1)	UNDER_FUNDR (2)	ZERO_ADMIN (3)	UNDER_ADMIN (4)
MATCH	0.050* (1.65)	−0.004 (−1.22)	0.270*** (3.69)	0.019*** (2.59)
SIZE	−0.26*** (−20.30)	−0.038*** (−17.58)	−0.134*** (−5.21)	−0.050*** (−10.78)
CR	1.229*** (17.27)	0.019*** (5.84)	−0.810*** (−10.03)	0.030*** (4.76)
MUNI_BONDS	−0.461*** (−6.43)	−0.036*** (−7.74)	−0.416* (−1.69)	−0.035*** (−3.65)
UBI	−0.168*** (−3.08)	−0.017*** (−4.84)	−0.028 (−0.16)	0.018** (2.15)
DON_GR	0.026*** (6.49)	0.001*** (2.61)	0.002 (0.55)	0.000 (0.31)
DONAT_INT	−0.323*** (−5.93)	0.057*** (10.33)	0.102 (1.03)	0.025** (2.07)
AGE	−0.336*** (−14.08)	−0.10*** (−3.59)	−0.435*** (−9.87)	−0.036*** (−5.73)
COMPLEXITY	−0.413*** (−15.80)	0.003 (1.48)	−1.101*** (−21.69)	0.011** (2.27)
G_INDEX	−0.038*** (−7.43)	−0.002*** (−2.95)	−0.045*** (−3.97)	−0.003* (−1.91)
FINDORQ	0.104*** (3.08)	−0.012*** (−3.39)	0.051 (0.76)	0.023*** (2.78)
TENURE	0.087*** (5.46)	−0.002 (−1.58)	0.237*** (6.21)	−0.005 (−1.22)
BING	0.491***(5.94)	0.056*** (9.37)	0.097 (0.43)	−0.012 (−0.92)
REGIONAL	−0.061 (−1.25)	−0.004 (−1.05)	−0.367*** (−3.11)	0.027** (2.45)
SPECIALIST	0.078** (2.38)	0.001 (0.25)	0.091 (1.24)	0.010 (1.07)
CONSTANT	5.624*** (24.08)	0.613*** (15.90)	2.072*** (4.33)	0.552*** (6.34)
Year and Ind FE	Included	Included	Included	Included
N	82,501	73,388	71,510	65,026
PR > F	<0.0001		<0.0001	
Area under ROC Curve	0.786		0.836	
Adjusted R2		0.235		0.150

Notes: This table reports the results of estimating four specifications of equation (4). Columns (1) and (3) use logistic regression while Columns (2) and (4) use OLS. Z-statistics or t-statistics are presented in brackets below the estimated coefficients and are adjusted for NFP-level clustering. See Appendix for variable definitions. *; ** and ***denote statistical significance at the 10, 5 and 1% levels, respectively, using a two-tailed test

Table VII.
Ethnic matching and
expense reporting
quality

sensitive to the auditor's perception of client risk. We develop an audit fees model following Vermeer *et al.* (2009) and use the accounting fees variable from NCCS as the dependent variable. We control for the NFP's size (log of total assets), revenues, debt levels, receivables and inventory levels, distance to their auditor, age, auditor tenure, occurrence of loss and auditor tier. While this analysis has limitations, results demonstrate that ethnic similarity in the audit partner-client management relationship is negatively associated with audit fees (untabulated)[27]. When considered together with the expense reporting quality results discussed previously, the relationship with audit fees suggest that co-ethnicity is associated with auditors inappropriately perceiving lower risk for managers of a similar ethnic background.

7. Sensitivity analyses
7.1 Threshold for classifying manager ethnicity
As discussed previously, we classify a manager or auditor partner as belonging to one of the nine ethnic categories if the data predicts at least an 80 per cent probability that a person with that name belongs to that ethnic category. While this threshold is an arbitrary research design decision, it is worth noting that Professor Kerr's data assigns a probability of at least 80 per cent to one ethnic category for 97 per cent of our sample's personnel. Using either a 70 per cent or 90 per cent threshold, our results are qualitatively similar to those reported (untabulated). Our results are also robust to using a continuous variable version of *MATCH,*

which calculates the joint probability of an ethnic match between two parties based upon the raw categorical percentages within the data (untabulated).

7.2 Controlling for minority ethnicities

The descriptive statistics in Table II indicate that the majority of audit partners and managers in our sample are of English ethnicity. As such, it is possible that our results are capturing auditor-client alignment and reporting differences between the majority group and the minority groups. We perform sensitivity tests by adjusting Models (1), (2), (3) and (4) to include variables capturing whether each of the two parties belong to one of the eight minority ethnicities[28]. This controls for the possibility that engagement, retention and reporting systematically differ according to either the manager's or the auditor's ethnicity. We find that when we include these additional control variables, our results are qualitatively similar to those reported (untabulated).

As an additional step to reduce the prominence of the majority ethnicities in the sample, we follow the categorization adjustment of Bengtsson and Hsu (2015) and use the list of the most common Jewish surnames from Wikipedia. We re-classify any party in our sample as JEWISH (a 10th distinct ethnic category added to the nine presented in the paper) if their surname is on this list. This adjustment re-classifies approximately 3.5 per cent of the observations from the ENGLISH, EUROPEAN and RUSSIAN categories. When constructing the variables of interest using these ten ethnic categories, the results of auditor changes, going concern reporting and expense reporting analyses are qualitatively similar to those reported (untabulated).

7.3 Gender and name matching analysis

As discussed previously, there is an inherent limitation in inferring ethnicity that a person's name may not accurately reflect their ethnicity for a variety of reasons. One of these reasons is marriage as the bride traditionally assumes the groom's surname within the USA. As an additional analysis, we investigate the first names of managers and auditors within our sample and drop personnel with predominantly female first names[29]. This sample restriction allows us to focus on those observations where the methodology would be most reliable. The results of our comparative means, auditor selection, auditor retention and expense reporting quality analyses are qualitatively similar to those reported (untabulated). The estimated coefficient for *MATCH* is not statistically significant for the going concern reporting analysis. We attribute this to the sample size limitation and the infrequent nature of going concern modified audit reports within the NFP environment.

As an alternate specification, we construct a *GENDER_MATCH* variable that equals 1 if both the manager and the auditor in each observation are identified as of the same gender, 0 otherwise. We include this variable in each model. The results of our auditor selection, auditor retention and expense reporting quality analyses are quantitatively and qualitatively similar to those reported (untabulated). Estimated coefficients for the *GENDER_MATCH* variable in the analyses does not provide consistent evidence that matches according to gender impact auditor selection, auditor retention or reporting decisions in the NFP environment.

8. Conclusion

In this study we find robust and consistent evidence that co-ethnicity between the auditor partner and client manager is a significant determinant of auditor selection and retention decisions. This is consistent with our sociological inclination to interact with those that are most like ourselves. We also find that co-ethnicity is negatively associated with audit

quality when measured using either the auditor's propensity to issue a going concern opinion or the client's expense reporting quality. This is consistent with impaired independence through shared characteristics.

The findings in this study suggest that audit quality is higher when there is ethnic diversity (the opposite of co-ethnicity) in the auditor-client relationship. This diversity can only be achieved when professionals in both management and auditor roles are diverse. Our results support the initiatives of major accounting firms to recruit and develop diverse professionals. However, our results also encourage auditors (and managers) to be aware of their own partialities and inclinations to engage with and trust those who are ethnically similar to themselves. Diversity, which is valued for intra-organizational relationships, can be valuable for inter-organizational relationships as well.

This study is subject to limitations, which provide avenues for future research. First, our research design relies on the identification of ethnicity based on names. Future research may address this limitation as more refined measures of identification are developed in the social science disciplines. Second, we are unable to identify the ethnicities of the members of the audit committee. We are therefore, unable to examine if and how the ethnicity of the members of the audit committee influences auditor selection decisions. Third, our results examine an important sector of the USA economy, but it is unclear how the results generalize to other audited organizations, particularly larger entities such as public companies. The extent of diversity among clients and auditors may be greater in the NFP sector than among public company clients and engagement teams, particularly if NFPs are more likely than public companies to select minority-owned public accounting firms. It is likely that changing public accounting firms is more costly for public firms than for NFPs, therefore, it is possible that co-ethnicity is less likely to factor into the decision to change auditors among public firms than among NFPs. Regardless, these results speak to a large and important sector of the USA economy and provide an initial step for investigating the effects of diversity initiatives on the quality of services delivered by public accounting firms in the USA.

Notes

1. The Office of Management and Budget's Circular No. A-133 (2007), which governs audits of NFPs, states that "Whenever possible, auditees shall make positive efforts to use small businesses, minority-owned firms and women's business enterprises, in procuring audit services [. . .]."

2. It is also worth noting that Vermeer et al. (2014) find that NFPs engage in more aggressive earnings management compared to for-profit firms. The role of the auditor is thus very important in NFPs.

3. Hegde and Tumlinson (2014) and Bengtsson and Hsu (2015) use a similar type of analysis to examine the pairing of venture capitalists with founders of start-up companies.

4. There is debate about whether the propensity to issue a going concern modified audit report is a measure of auditor independence, and thus, audit quality. We take the view of Francis (2011), who states "In this research, the focus is not on the accuracy of the going-concern report but rather the likelihood of issuing such a report conditional on the financial circumstances of the client. The premise of this research is that a less independent auditor is less likely to issue a negative report, all things being equal, to avoid losing clients that are more likely to switch after receiving a going-concern report [. . .]". See also Berglund et al. (2018).

5. However, prior research demonstrates that non-governmental donors also use A-133 audit reports to evaluate whether NFPs use funds in accordance with their missions. NFPs experience

a decrease in donations and government grants following adverse A-133 audit reports, including the disclosure of internal control deficiencies and the issuance of going concern opinions (Keating et al., 2005; Petrovits et al., 2011; Feng, 2014).

6. As well, while audit firms tout the importance of diversity, it is unclear whether this applies to senior audit personnel or only in their hiring decisions for junior staff.

7. The threshold from 1997 to 2003 was $300,000. The threshold was raised to $500,000 in 2004, and then again to $750,000 for audits after 1 January, 2015.

8. Per the instructions for Form SF-SAC (2010), the listed auditee contact is to be someone that can attest to the accuracy and completeness of the filing. The role should be filled by "a senior representative of the auditee (e.g. Chief Executive Officer, Controller, Director of Finance, Chief Financial Officer)." The auditor contact is to be "the primary auditor that conducted the audit." Upon review of our sample, we note that "partner" is the most common title for the auditor contact. Of those observations that identify a firm-specific title, 80 per cent of refer to "Partner", "Principal" or some reference that indicates audit firm ownership (i.e. "Shareholder", "Owner" or "Sole Proprietor") and an additional 13 per cent refer to an executive position (i.e. "President", "V. P.", "Director" or "Officer"), which would most likely be held by a partner. As such, we use the term "audit partner" in our paper to refer generally to the auditor contact named on the audit filing.

9. The 80 per cent cutoff is admittedly arbitrary. We test the sensitivity of using a 70 per cent or 90 per cent cutoff in Section 7.

10. Both Webber (2007) and Elliott et al. (2009) document strong correlations between inferred and self-reported ethnicity. Kerr (2008b) documents strong evidence of association between inferred ethnicity and observed nationality for a sample of inventors residing outside of the USA.

11. The IRS and NCCS classify firms using the NTEE industry codes. We create industry indicator variables for the six major industry groups following Trussel (2002) and Feng (2010). These groups are as follows: Arts, cultural, humanities (NTEE code A); education (NTEE code B); health (NTEE codes E, F, G, H); human services (NTEE codes I, J, K, L, M, N, O, P); public and societal benefits (NTEE codes R, S, T, U, V, W); and other (NTEE codes C, D, Q, X, Y, Z).

12. We determine proximity based on the observed distance between auditors and clients in the sample. We set the cutoff at the 90th percentile of distance for the factual observations which equals 125 miles. We perform untabulated analyses with the cutoff set at the 75th percentile (37 miles) and 50th percentile (9.5 miles). The results reported later in this paper are robust to these alternate proximity thresholds.

13. When using this methodology, there is a tradeoff between restricting according to a characteristic in the counterfactual observation selection and controlling for a characteristic in the multivariate analysis. As an alternate specification, we restrict the counterfactual observations to include only those partners that match the audit firm type (e.g. Big N) that the NFP engages. This methodology views the NFP's audit firm type selection as a revealed preference and assumes that the NFP was choosing among partners within that audit firm type.

14. In our sample 13.8 per cent (7.8 per cent) of observations involve an audit partner (audit firm) change. In the sub-sample where the NFP experiences a manager change from the prior to current period, 24.1 per cent (16.7 per cent) of observations involve an audit partner (audit firm) change. This is consistent with the expectation that the auditor retention decision is most salient when there is a manager change.

15. Upon analysis of the sample, we note that it is not uncommon to observe transitory changes in the manager or audit partner roles. For example, in a three-year stretch from year $t-1$ to $t+1$, we may note one manager listed in the audit report for both years $t-1$ and $t+1$ while a different manager is listed on the report for year t. Our goal is to investigate true regime changes in the manager and audit partner roles. As such, when we identify a manager or audit partner change

from year $t-1$ to year t, we investigate whether: The incoming party had been listed on the report in the three-years prior to year t; or the outgoing party returns to the role on the report in the three years subsequent to year $t-1$. If either of these conditions hold, we consider the change from year $t-1$ to t to be transitory and do not count this as a change for the purpose of our analyses. The results of our analyses are robust to relaxing this restriction.

16. The ratio of counterfactual-to-factual observations in our analyses ranges from 154-to-1 to 48-to-1. By comparison, the samples in Hegde and Tumlinson (2014) and Bengtsson and Hsu (2015) have samples with ratios ranging from 368-to-1 to 6-to-1. Our ratio is driven upwards primarily by observations in Northeast metropolitan areas (e.g. New York City and Philadelphia) where a manager may have 600 or more unique audit partners within the restriction parameters. As a sensitivity test, we set upper and lower limits of 20 and 60 counterfactuals for each factual observation. We randomly select 60 counterfactual observations (within the restriction parameters) for those that exceed the upper limit. Results are unchanged by this methodology (untabulated).

17. Because *MATCH* and *INCUMBENT_MATCH* are dichotomous variables, to interpret the coefficients in our logistic regression analyses, we transform the estimated coefficients as follows: estimated increase in probability $= \exp(\alpha_i) - 1$.

18. The area under the ROC curves in Table V range from 0.63 to 0.68. Although these figures fall below conventional levels for logistic regression model discrimination (Hosmer and Lemeshow, 1980), these statistics are consistent with lower discrimination and model fit in changes-specification models generally.

19. See also Freeman and Huang (2014), who find that although co-ethnic scientists are more likely to work together, they tend to have weaker publications compared to co-authors of different ethnicities.

20. Other commonly used measures of audit quality that are under the direct control of the auditor among public companies are either not applicable in this setting (i.e. Securities and Exchange Commission enforcement actions) or are difficult to measure because NFPs do not have an obligation to disclose audited financial statements (i.e. restatements).

21. The percentage of observations receiving a going concern modified report ranges from 1.7 to 7.5 per cent of the sample depending on our sampling specification of financial distress.

22. We also test the sensitivity or our results to an alternative definition of distress (Table 6, Column 2).

23. Results are robust to excluding NFPs who received a going concern opinion in the previous year.

24. NFPs have incentives to overstate program ratios, given that NFPs reporting higher program ratios tend to receive more donations, pay higher managerial salaries and are significantly less likely to lose tax-exempt status (Weisbrod and Dominguez, 1986; Callen, 1994; Baber *et al.*, 2002; Yetman and Yetman, 2003; Anderson and Gevas, 2006).

25. Approximately 47.5 per cent of observations report \$0 in fundraising expenses and 4.4 per cent of observations report \$0 in administrative expenses.

26. For this analysis, we delete NFPs which received less than \$10,000 in donations, as these NFPs could plausibly have \$0 in fundraising expenses (Krishnan *et al.*, 2006; Yetman and Yetman, 2012).

27. The main limitation of this analysis is that the accounting fees variable in the NCCS data is not a clean proxy for fees paid to the external auditor. It may include other fees paid to external parties for accounting services. Nevertheless, this variable has been used as a proxy for audit fees by other studies including Tate (2007) and Garven *et al.* (2017).

28. There are eight control variables capturing whether the audit partner is of each of the eight minority ethnicities (European through Hispanic) and eight control variables capturing whether the manager is of the eight minority ethnicities, for a total of 16 additional control variables. The

English category is not included in the models to avoid perfect multicollinearity. For our analysis of Model (2), the auditor ethnicity variables loaded are those of the incumbent auditor.

29. Data for inferring a person's gender from their first name are obtained from https://github.com/ OpenGenderTracking/globalnamedata. The data uses the US Social Security Administration records for name and gender by year for births between 1880 and 2011. In each year, names with a minimum incidence of five births are counted. If at least 80 per cent of people with a given first name are female, we classify them as female.

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Appendix

Variable	Variable definition
ANY_CHANGE	1 if the NFP changes its engaged audit firm or changes its engaged audit partner (within the incumbent firm) within the analysis window, 0 otherwise
AUD_TYPE_MATCH	1 if the audit partner's firm is the same auditor type (BIGN, REGIONAL and SPECIALIST) that the audit firm engaged by the NFP in the prior period, 0 otherwise
BIGN	1 if the audit firm is one of the five largest firms in our sample (AA, D&T, E&Y, KPMG, PWC), 0 otherwise
COMPCHG	The percentage change in total officer compensation
COMPLEXITY	The number of revenue sources (public support, government contributions, and/or program revenue) that the NFP reports. For observations with tax years subsequent to 2011, the variable takes the value from the 2011 NCCS file
CONCHG	The change in total contributions scaled by total revenue
CR	1 if current assets are greater than or equal to current liabilities, 0 otherwise.
DACHG	The change in total liabilities scaled by total assets
DISTANCE	The distance in miles between the NFP's address and the audit partner's firm address
DON_GR	The percentage change in total contributions, gifts and grants from the prior to the current period
DONAT_INT	Donation intensity, calculated as total contributions, gifts and grants scaled by total revenues
ENGAGE	1 if the NFP engages the observation audit partner, 0 otherwise. ENGAGE equals 1 for factual observations, 0 for counterfactual observations
FEXPCHG	The percentage change in total federal expenditures
FIN_NEED	Net assets scaled by total assets
FINDORDQ	An indicator variable that equals 1 if the audit report discloses a major program audit finding or questioned cost, 0 otherwise
FIRM_CHANGE	1 if the NFP changes its engaged audit firm within the analysis window, 0 otherwise
FRCHG	The percentage change in fundraising expenses
FREXPR	Fundraising expenses scaled by total contributions
G_INDEX	The total governance index score (legal plus reporting) tabulated by Desai and Yetman (2015) for the state of the NFP's mailing address
GCAR	1 if the auditor issues a going concern modified audit report, 0 otherwise
GOVCHG	The change in government contributions scaled by total revenue
GRANT_LOSS	1 if NFP has a decrease in government contributions from year $t-1$ to year t, 0 otherwise
INCUMBENT_MATCH	1 if the manager in the current period and auditor in the prior period are of the same ethnicity, 0 otherwise. Ethnicities are estimated based on the name matching analysis of Kerr (2008a). If the likelihood that a person belongs to ethnicity i is at least 80 per cent, we classify the person as belonging to ethnicity i
INDUSTRY_EXP	1 if the audit partner conducts other audits in the NFP's industry (NTEE six categories) in the observation's fiscal year, 0 otherwise
LEVERAGE	Tax-exempt bond liabilities scaled by beginning-of-year total assets
LIABCHG	The percentage change in total liabilities

(*continued*)

Table AI.
Variable definitions
(in alphabetical
order)

Variable	Variable definition
LOWORSRV	1 if the operating reserve ratio is less than 0.25, 0 otherwise. The operating reserve ratio is calculated as total operating reserves (net assets less fixed assets net of mortgages) scaled by operating expenses (total functional expenses less depreciation)
MATCH	1 if the manager's ethnicity and the auditor's ethnicity are the same, 0 otherwise. Ethnicities are estimated based on the name matching analysis of Kerr (2008a). If the likelihood that a person belongs to ethnicity i is at least 80 per cent, we classify the person as belonging to ethnicity i
MUNI_BONDS	An indicator variable that equals one if the NFP reports tax-exempt bond liabilities in the current period, 0 otherwise
NCLIENT	The number of NFP audits that the audit partner conducts (other than the factual observation) in the observation's fiscal year
NI_LOSS	1 if net income is negative the current period, 0 otherwise
PARTNER_CHANGE	1 if the NFP changes its engaged audit partner (within the incumbent audit firm) within the analysis window, 0 otherwise
PSREVLOSS	1 if program service revenues decrease from year $t-1$ to year t, 0 otherwise
REGIONAL	1 if the audit firm is one of the top thirty largest firms per the inside public accounting 2012. Top 100 firms report but is not a Big N auditor, 0 otherwise
REV	The natural log of total revenues
REVCHG	The percentage change in total revenue
RISK	An indicator variable that equals 1 if the NFP is classified as "not low risk" on the audit report, 0 otherwise
SIZE	The natural log of total assets
SPECIALIST	1 if the audit firm conducts 100 or more A-133 audits in our sample, but is not a Big N or Regional auditor, 0 otherwise
TENURE	The natural log of the number of years the audit partner has been with the NFP
UBI	1 if the NFP reports unrelated business income in excess of $1,000, 0 otherwise
UNDER_ADMIN	Following Yetman and Yetman (2012), we estimate the following model:

$$Administrative\ Expenses_{i,t} = \alpha_0 + \alpha_1 Private\ Donations_{i,t+1}$$
$$+\alpha_2 Feeder\ Donations_{i,t+1}$$
$$+\alpha_3 Govt\ Grants_{i,t+1}$$
$$+\alpha_4 Total\ Expenses_{i,t+1}$$
$$+\alpha_5 Total\ Assets_{i,t+1}$$
$$+\alpha_6 Total\ Assets^2_{i,t+1}$$
$$+Industry\ and\ Year\ Fixed\ Effects + \varepsilon_{i,t}$$

We drop NFPs who report no administrative expenses in the entire sample time-series. UNDER_ADMIN is the firm-year residual from the model scaled by total assets and multiplied by negative one so that higher values indicate lower-than-expected administrative expenditures

(*continued*)

Table AI.

Variable	Variable definition
UNDER_FUNDER	Following Yetman and Yetman (2012), we estimate the following model:

$$Administrative\ Expenses_{i,t} = \alpha_0 + \alpha_1 Private\ Donations_{i,t+1}$$

$$+ \alpha_2 Feeder\ Donations_{i,t+1} + \alpha_3 Govt\ Grants_{i,t+1}$$

$$+ Industry\ and\ Year\ Fixed\ Effects + \varepsilon_{i,t}$$

	We drop observations where the NFP reports no fundraising expenses in the entire sample time-series. UNDER_FUNDR is the NFP-year residual from the model scaled by total assets and multiplied by negative one so that higher values indicate lower-than-expected fundraising expenditures
ZERO_ADMIN	1 if the NFP reports zero administrative expenses in the current period, 0 otherwise
ZERO_FUNDER	1 if the NFP reports zero fundraising expenses in the current period, 0 otherwise

Table AI.

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